



US Army Corps  
of Engineers®  
Portland District  
Walla Walla District

# Annual Fish Passage Report 2012

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**Columbia and Snake River Projects**

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**2012**

**ANNUAL FISH PASSAGE REPORT  
COLUMBIA AND SNAKE RIVERS**

*for*

**SALMON, STEELHEAD, SHAD,  
AND LAMPREY**

***BONNEVILLE DAM  
THE DALLES DAM  
JOHN DAY DAM  
McNARY DAM  
ICE HARBOR DAM  
LOWER MONUMENTAL DAM  
LITTLE GOOSE DAM  
LOWER GRANITE DAM  
PRIEST RAPIDS DAM  
ROCK ISLAND DAM  
ROCKY REACH DAM  
WELLS DAM***

**NORTHWESTERN DIVISION  
U.S. ARMY CORPS OF ENGINEERS**

**Prepared By:  
U.S. Army Engineer Districts  
Portland and Walla Walla**



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### *Columbia River*

#### **Corps of Engineers Projects**

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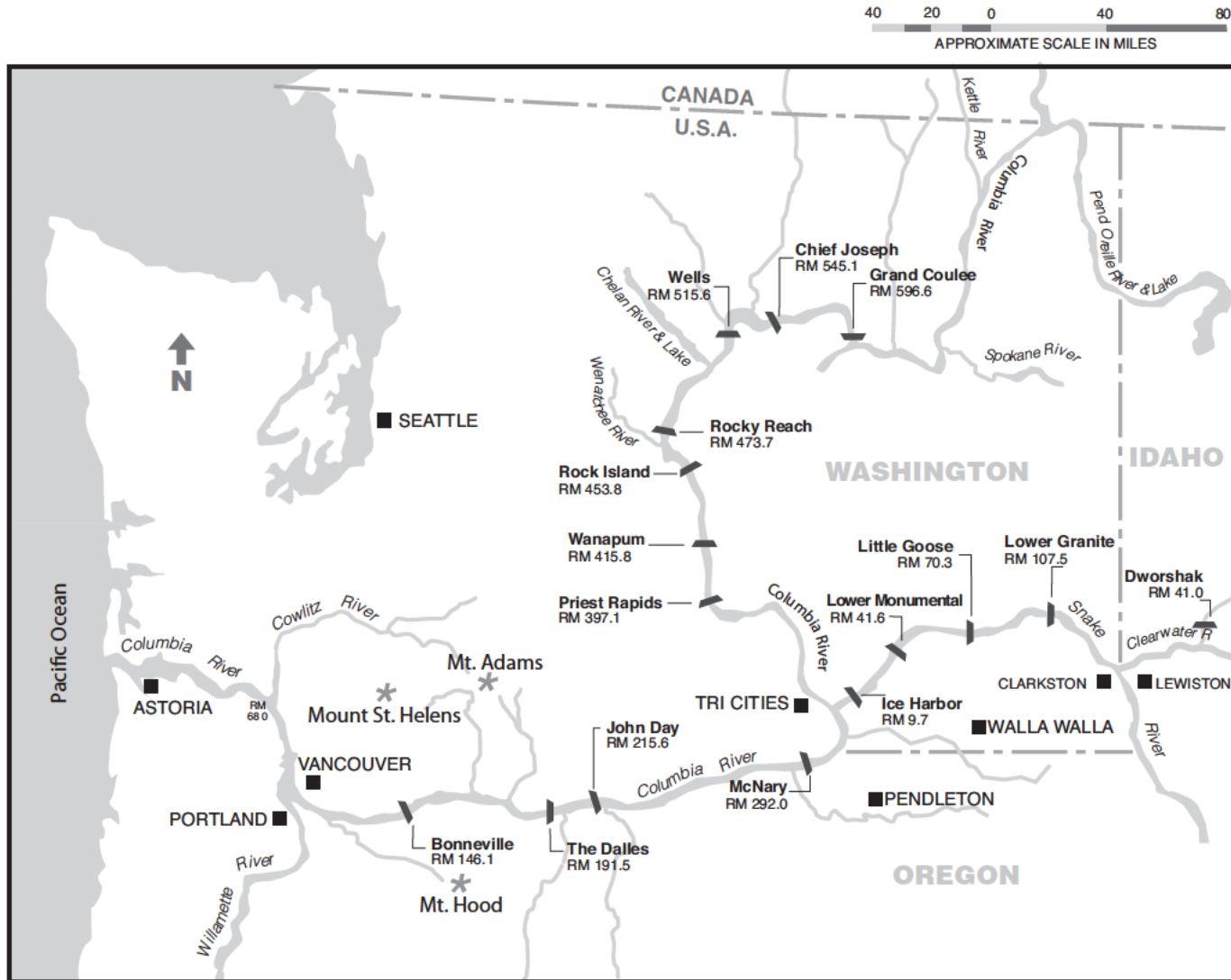


TABLE 1

## FISH ESCAPEMENT AT MAIN STEM DAMS ON THE COLUMBIA AND SNAKE RIVERS: 2008-2012

| SPECIES     | BONNEVILLE | THE DALLES | JOHN DAY | MCNARY  | ICE HARBOR | LOWER MONUMENTAL | LITTLE GOOSE | LOWER GRANITE |
|-------------|------------|------------|----------|---------|------------|------------------|--------------|---------------|
| <b>2008</b> |            |            |          |         |            |                  |              |               |
| CHINOOK*    | 587,289    | 397,766    | 342,952  | 267,979 | 123,007    | 123,018          | 108,953      | 115,632       |
| Spring*     | 143,097    | 111,239    | 96,697   | 80,213  | 60,899     | 61,397           | 58,201       | 61,092        |
| Summer*     | 89,892     | 77,279     | 77,329   | 65,974  | 28,657     | 30,233           | 26,559       | 27,684        |
| Fall*       | 354,300    | 209,248    | 168,926  | 121,792 | 33,451     | 31,388           | 24,193       | 26,856        |
| Jacks       | 68,480     | 66,298     | 60,788   | 43,295  | 24,265     | 20,240           | 18,674       | 26,246        |
| STEELHEAD   | 356,186    | 277,640    | 274,799  | 221,310 | 172,453    | 186,058          | 168,105      | 175,421       |
| SOCKEYE     | 213,607    | 177,984    | 193,409  | 146,924 | 539        | 722              | 594          | 909           |
| COHO*       | 145,913    | 42,682     | 44,898   | 21,806  | 3,003      | 4,513            | 3,806        | 4,770         |
| Adults      | 135,399    | 37,982     | 39,975   | 18,756  | 2,889      | 4,143            | 3,440        | 3,458         |
| Jacks       | 10,514     | 4,700      | 4,923    | 3,050   | 114        | 370              | 366          | 1,312         |
| SHAD        | 2,144,756  | 1,805,516  | **       | 623,010 | 119,312    | **               | **           | 3,573         |
| LAMPREY     | 14,562     | 4,599      | 6,625    | 1,530   | 264        | 145              | 104          | 61            |
| <b>2009</b> |            |            |          |         |            |                  |              |               |
| CHINOOK*    | 698,993    | 525,837    | 451,974  | 358,505 | 180,349    | 183,451          | 163,562      | 168,032       |
| Spring*     | 181,156    | 147,554    | 126,539  | 113,741 | 83,658     | 86,940           | 76,973       | 80,731        |
| Summer*     | 119,352    | 107,794    | 99,136   | 78,319  | 33,256     | 35,086           | 31,547       | 30,849        |
| Fall*       | 398,485    | 270,489    | 226,299  | 166,445 | 63,435     | 61,425           | 55,042       | 56,452        |
| Jacks       | 218,841    | 175,120    | 164,110  | 126,411 | 76,234     | 70,983           | 67,460       | 88,716        |
| STEELHEAD   | 603,264    | 515,111    | 581,645  | 408,157 | 328,105    | 317,275          | 305,436      | 323,527       |
| SOCKEYE     | 177,823    | 155,591    | 157,402  | 121,672 | 867        | 1,162            | 1,061        | 1,219         |
| COHO*       | 234,347    | 77,492     | 71,739   | 37,270  | 5,436      | 5,617            | 5,239        | 4,912         |
| Adults      | 224,597    | 68,940     | 64,893   | 33,358  | 4,947      | 4,583            | 4,548        | 4,629         |
| Jacks       | 9,750      | 8,552      | 6,846    | 3,912   | 489        | 1,034            | 691          | 283           |
| SHAD        | 1,373,738  | 1,641,362  | **       | 486,725 | 79,496     | **               | **           | 3,457         |
| LAMPREY     | 8,622      | 2,318      | 2,044    | 676     | 57         | 58               | 34           | 12            |
| <b>2010</b> |            |            |          |         |            |                  |              |               |
| CHINOOK*    | 902,121    | 618,699    | 534,247  | 463,000 | 199,092    | 200,817          | 189,451      | 189,394       |
| Spring*     | 256,996    | 201,385    | 191,240  | 163,257 | 107,235    | 103,232          | 98,446       | 100,612       |
| Summer*     | 113,207    | 93,820     | 83,430   | 74,589  | 33,086     | 39,459           | 36,378       | 34,072        |
| Fall*       | 531,918    | 323,494    | 259,577  | 225,154 | 58,771     | 58,126           | 54,627       | 54,710        |
| Jacks       | 92,609     | 75,458     | 69,502   | 44,681  | 21,780     | 25,668           | 20,912       | 24,598        |
| STEELHEAD   | 412,760    | 333,033    | 283,812  | 262,513 | 206,959    | 213,811          | 193,891      | 206,333       |
| SOCKEYE     | 386,524    | 325,132    | 324,128  | 278,799 | 1,302      | 1,652            | 1,658        | 2,201         |
| COHO*       | 127,142    | 31,374     | 23,269   | 15,089  | 1,735      | 2,003            | 2,008        | 1,902         |
| Adults      | 120,223    | 29,091     | 21,506   | 13,673  | 1,521      | 1,707            | 1,727        | 1,509         |
| Jacks       | 6,919      | 2,283      | 1,763    | 1,416   | 214        | 296              | 281          | 393           |
| SHAD        | 1,042,471  | 1,241,769  | **       | 276,673 | 70,853     | **               | **           | 3,279         |
| LAMPREY     | 6,237      | 1,726      | 1,662    | 833     | 114        | 44               | 29           | 14            |
| <b>2011</b> |            |            |          |         |            |                  |              |               |
| CHINOOK*    | 862,920    | 591,869    | 497,771  | 440,427 | 177,586    | 178,281          | 197,424      | 179,498       |
| Spring*     | 218,042    | 164,310    | 143,224  | 132,995 | 87,467     | 87,926           | 90,813       | 81,405        |
| Summer*     | 159,730    | 120,968    | 110,919  | 102,786 | 39,136     | 44,906           | 60,425       | 53,189        |
| Fall*       | 485,148    | 306,591    | 243,628  | 204,646 | 50,983     | 45,449           | 46,186       | 44,904        |
| Jacks       | 185,968    | 151,007    | 138,591  | 102,370 | 50,117     | 49,679           | 58,970       | 58,141        |
| STEELHEAD   | 366,554    | 299,007    | 257,345  | 246,069 | 198,805    | 187,272          | 175,328      | 183,522       |
| SOCKEYE     | 185,796    | 138,293    | 143,605  | 113,952 | 1,141      | 1,395            | 1,436        | 1,502         |
| COHO*       | 149,710    | 76,753     | 65,668   | 44,304  | 6,727      | 4,829            | 4,851        | 5,348         |
| Adults      | 145,138    | 72,120     | 62,795   | 42,220  | 5,914      | 4,579            | 4,445        | 5,057         |
| Jacks       | 4,572      | 4,633      | 2,873    | 2,084   | 813        | 250              | 406          | 291           |
| SHAD        | 948,070    | **         | **       | 224,905 | 37,409     | **               | **           | 174           |
| LAMPREY     | 18,305     | 4,997      | 3,566    | 868     | 269        | 99               | 80           | 48            |
| <b>2012</b> |            |            |          |         |            |                  |              |               |
| CHINOOK*    | 733,762    | 537,804    | 444,136  | 403,809 | 150,625    | 144,661          | 142,119      | 141,449       |
| Spring*     | 165,666    | 124,244    | 114,410  | 107,550 | 74,862     | 71,499           | 71,696       | 69,891        |
| Summer*     | 93,898     | 79,614     | 71,229   | 69,532  | 15,663     | 16,761           | 16,361       | 14,880        |
| Fall*       | 474,198    | 333,946    | 258,497  | 226,727 | 60,100     | 56,401           | 54,062       | 56,678        |
| Jacks       | 143,941    | 125,599    | 108,693  | 63,146  | 25,940     | 27,385           | 24,281       | 27,232        |
| STEELHEAD   | 233,002    | 197,839    | 162,083  | 146,753 | 105,269    | 101,523          | 98,278       | 110,675       |
| SOCKEYE     | 515,673    | 410,099    | 394,166  | 364,147 | 453        | 486              | 453          | 470           |
| COHO*       | 59,921     | 33,898     | 33,859   | 18,201  | 2,985      | 2,501            | 2,662        | 2,635         |
| Adults      | 54,882     | 31,037     | 30,216   | 16,776  | 2,653      | 2,216            | 2,402        | 2,433         |
| Jacks       | 5,039      | 2,861      | 3,643    | 1,425   | 332        | 285              | 260          | 202           |
| SHAD        | 2,432,394  | **         | **       | 675,421 | 175,936    | **               | **           | 7,413         |
| LAMPREY     | 29,223     | 6,241      | 4,587    | 970     | 484        | 135              | 88           | 48            |

## ASSUMED DATES FOR CHINOOK RUN

(MAY VARY FROM PREVIOUS YEARS)

|        |                      |                     |                   |                   |                    |                    |                    |                    |
|--------|----------------------|---------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| SPRING | 15 MARCH -<br>31 MAY | 1 APRIL -<br>3 JUNE | 1 APR -<br>5 JUN  | 1 APR -<br>8 JUN  | 1 APR -<br>11 JUN  | 1 APR -<br>13 JUN  | 1 APR -<br>15-Jun  | 1 MAR -<br>17 JUN  |
| SUMMER | 1 JUN -<br>31 JUL    | 4 JUN -<br>3 AUG    | 6 JUN -<br>5 AUG  | 9 JUN -<br>8 AUG  | 12 JUN -<br>11 AUG | 14 JUN -<br>13 AUG | 16 JUN -<br>15-Aug | 18 JUN -<br>17 AUG |
| FALL   | 1 AUG -<br>15 NOV    | 4 AUG -<br>31 OCT   | 6 AUG -<br>31 OCT | 9 AUG -<br>31 OCT | 12 AUG -<br>31 OCT | 14 AUG -<br>31 OCT | 16 AUG -<br>31 OCT | 18 AUG -<br>15 DEC |

\*Includes Jack Counts.

† Changes reflect counts updated on the electronic data base after the 2007 AFPR publication.

TABLE 2

## FISH ESCAPEMENT AT MID COLUMBIA RIVER DAMS: 2008 - 2012

| SPECIES     | PRIEST RAPIDS | ROCK ISLAND | ROCKY REACH | WELLS   |
|-------------|---------------|-------------|-------------|---------|
| <b>2008</b> |               |             |             |         |
| CHINOOK*    | 104,001       | 68,075      | 48,135      | 31,992  |
| Spring*     | 12,798        | 15,095      | 4,605       | 3,134   |
| Summer*     | 42,616        | 41,877      | 33,861      | 22,435  |
| Fall*       | 48,587        | 11,103      | 9,669       | 6,423   |
| Jacks       | 18,637        | 8,019       | 6,202       | 4,261   |
| STEELHEAD   | 16,725        | 16,288      | 13,871      | 9,808   |
| SOCKEYE     | 196,835       | 193,739     | 161,343     | 165,334 |
| COHO*       | 6,022         | 8,393       | 3,726       | 1,196   |
| Adults      | 5,592         | 6,736       | 2,944       | 1,191   |
| Jacks       | 430           | 1,657       | 782         | 5       |
| SHAD        | 340           | **          | **          | **      |
| LAMPREY     | 5,083         | 880         | 368         | 7       |
| <b>2009</b> |               |             |             |         |
| CHINOOK*    | 114,137       | 87,420      | 59,348      | 44,027  |
| Spring*     | 16,379        | 24,027      | 8,707       | 8,174   |
| Summer*     | 51,534        | 50,263      | 41,298      | 29,525  |
| Fall*       | 46,224        | 13,130      | 9,343       | 6,328   |
| Jacks       | 10,426        | 17,449      | 8,951       | 7,779   |
| STEELHEAD   | 40,093        | 37,800      | 29,547      | 25,443  |
| SOCKEYE     | 153,466       | 162,830     | 133,106     | 134,937 |
| COHO*       | 11,293        | 21,905      | 5,937       | 3,014   |
| Adults      | 10,884        | 19,805      | 5,611       | 2,985   |
| Jacks       | 409           | 2,100       | 326         | 29      |
| SHAD        | 295           | **          | **          | **      |
| LAMPREY     | 2,714         | 375         | 278         | 9       |
| <b>2010</b> |               |             |             |         |
| CHINOOK*    | 124,443       | 96,670      | 55,883      | 41,463  |
| Spring*     | 31,471        | 33,063      | 9,489       | 8,257   |
| Summer*     | 50,482        | 51,698      | 37,239      | 28,950  |
| Fall*       | 42,490        | 11,909      | 9,155       | 4,256   |
| Jacks       | 6,025         | 8,315       | 3,860       | 3,669   |
| STEELHEAD   | 26,476        | 22,179      | 17,871      | 12,929  |
| SOCKEYE     | 357,058       | 338,310     | 295,638     | 291,766 |
| COHO*       | 2,655         | 7,695       | 2,691       | 1,234   |
| Adults      | 2,389         | 6,209       | 2,181       | 1,224   |
| Jacks       | 266           | 1,486       | 510         | 10      |
| SHAD        | 1,815         | **          | **          | **      |
| LAMPREY     | 1,114         | 318         | 268         | 2       |
| <b>2011</b> |               |             |             |         |
| CHINOOK*    | 116,914       | 94,490      | 63,711      | 51,745  |
| Spring*     | 21,276        | 23,916      | 11,304      | 8,122   |
| Summer*     | 55,088        | 60,843      | 49,841      | 38,286  |
| Fall*       | 40,550        | 9,731       | 2,566       | 5,337   |
| Jacks       | 15,767        | 28,116      | 15,338      | 14,882  |
| STEELHEAD   | 20,757        | 19,024      | 15,280      | 12,069  |
| SOCKEYE     | 145,070       | 146,111     | 132,096     | 111,508 |
| COHO*       | 23,392        | 31,045      | 7,951       | 5,796   |
| Adults      | 22,098        | 30,341      | 7,812       | 5,784   |
| Jacks       | 1,294         | 704         | 139         | 12      |
| SHAD        | 271           | **          | **          | **      |
| LAMPREY     | 3,868         | 886         | 618         | 1       |
| <b>2012</b> |               |             |             |         |
| CHINOOK*    | 138,487       | 92,074      | 68,059      | 52,846  |
| Spring*     | 20,510        | 21,889      | 7,011       | 6,011   |
| Summer*     | 52,661        | 57,485      | 50,748      | 41,859  |
| Fall*       | 65,316        | 12,700      | 10,300      | 4,976   |
| Jacks       | 13,500        | 9,661       | 7,457       | 5,388   |
| STEELHEAD   | 17,230        | 15,454      | 13,100      | 9,778   |
| SOCKEYE     | 408,257       | 410,620     | 363,314     | 326,107 |
| COHO*       | 9,957         | 8,277       | 2,440       | 2,042   |
| Adults      | 8,380         | 8,115       | 2,397       | 2,035   |
| Jacks       | 1,577         | 162         | 43          | 7       |
| SHAD        | 1,939         | **          | **          | **      |
| LAMPREY     | 4,025         | 1,048       | 805         | 3       |

ASSUMED DATES FOR CHINOOK RUNS (MAY VARY FROM PREVIOUS YEARS)

|        |                    |                    |                    |                    |
|--------|--------------------|--------------------|--------------------|--------------------|
| SPRING | 15 APR -<br>13 JUN | 14 APR -<br>23 JUN | 14 APR -<br>23 JUN | 1 MAY -<br>28 JUN  |
| SUMMER | 14 JUN<br>13 AUG   | 24 JUN -<br>1 SEP  | 24 JUN -<br>1 SEP  | 29 JUN -<br>28 AUG |
| FALL   | 14 AUG -<br>15 NOV | 2 SEP -<br>15 NOV  | 2 SEP -<br>15 NOV  | 29 AUG -<br>15 NOV |

\*Includes Jack counts.

TABLE 3 and TABLE 4

**STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953-2010**

**BY RUN-YEAR (JUNE 1 - MAY 31)**

**Information Below Concerns the Following Two Tables**

Estimating the size of the upriver steelhead run has previously been hampered because of the calendar year approach used in the summary tables. Problems in accountability arise due to over wintering behavior of summer steelhead, especially Snake River stocks, which often have sizeable proportions of the run remaining below mainstem projects during the winter months. Migration of these steelhead commences again the following spring when warming reservoir temperatures trigger upstream movement. For this reason, an additional table has been prepared that summarizes steelhead trout counts at each project on a "fish year" basis: June 1 - May 31. Because all stocks of steelhead cross Bonneville Dam during the calendar year, those summary counts have not been modified.

**Footnotes for the Following Two Tables**

\*Because counting started at each dam early in the year after construction was complete, these figures are for the latter part of the run year only. That part of the run year starting after June 1st of the previous year passed the dams without being counted.

\*\*1981 was the last year visual counts were made at Little Goose Project until 1991.

TABLE 3  
 STEELHEAD OVER COLUMBIA AND SNAKE RIVER DAMS 1953 - 2012  
 BY RUN-YEAR (JUNE 1 - MAY 31)

| RUN-YEAR               | THE DALLES       | JOHN DAY         | M McNARY         | ICE HARBOR       | LOWER MONUMENTAL | LITTLE GOOSE**   | LOWER GRANITE    |
|------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 1953-54                |                  |                  | 8,252 *          |                  |                  |                  |                  |
| 1954-55                |                  |                  | 72,913           |                  |                  |                  |                  |
| 1955-56                |                  |                  | 84,434           |                  |                  |                  |                  |
| 1956-57                | 3,531 *          |                  | 40,660           |                  |                  |                  |                  |
| 1957-58                | 128,124          |                  | 105,136          |                  |                  |                  |                  |
| 1958-59                | 120,170          |                  | 87,413           |                  |                  |                  |                  |
| 1959-60                | 155,892          |                  | 111,288          |                  |                  |                  |                  |
| 1960-61                | 110,955          |                  | 95,556           |                  |                  |                  |                  |
| 1961-62                | 134,740          |                  | 104,679          | 9,474 *          |                  |                  |                  |
| 1962-63                | 163,125          |                  | 163,333          | 108,186          |                  |                  |                  |
| 1963-64                | 118,899          |                  | 113,676          | 76,788           |                  |                  |                  |
| 1964-65                | 110,509          |                  | 99,872           | 58,025           |                  |                  |                  |
| 1965-66                | 142,376          |                  | 120,469          | 62,566           |                  |                  |                  |
| 1966-67                | 144,267          |                  | 144,461          | 64,987           |                  |                  |                  |
| 1967-68                | 122,231          | 6,598 *          | 83,948           | 47,536           |                  |                  |                  |
| 1968-69                | 147,844          | 122,649          | 107,806          | 85,273           | 16,240 *         |                  |                  |
| 1969-70                | 111,617          | 81,623           | 74,933           | 58,172           | 63,269           | 9,256 *          |                  |
| 1970-71                | 99,319           | 81,238           | 68,598           | 54,445           | 58,430           | 54,257           |                  |
| 1971-72                | 151,329          | 117,402          | 110,450          | 66,196           | 68,704           | 70,867           |                  |
| 1972-73                | 135,730          | 149,704          | 95,837           | 63,584           | 66,650           | 63,033           |                  |
| 1973-74                | 100,924          | 93,951           | 62,158           | 37,245           | 38,288           | 37,099           |                  |
| 1974-75                | 71,336           | 40,868           | 26,191           | 12,170           | 14,851           | 13,818           | 2,789 *          |
| 1975-76                | 57,695           | 33,640           | 25,150           | 15,895           | 17,236           | 15,177           | 16,592           |
| 1976-77                | 83,194           | 59,368           | 54,409           | 24,140           | 21,801           | 21,109           | 22,562           |
| 1977-78                | 133,096          | 102,193          | 86,962           | 54,911           | 48,160           | 47,617           | 57,029           |
| 1978-79                | 58,995           | 43,554           | 34,580           | 27,252           | 19,849           | 24,050           | 26,473           |
| 1979-80                | 86,317           | 59,825           | 54,213           | 26,790           | 20,073           | 23,816           | 28,758           |
| 1980-81                | 93,309           | 77,113           | 63,957           | 47,778           | 32,599           | 36,680           | 37,996           |
| 1981-82                | 112,265          | 96,663           | 62,955           | 43,274           | 37,755           | 36,896           | 42,420           |
| 1982-83                | 116,178          | 105,438          | 72,246           | 70,236           | 60,775           | **               | 72,384           |
| 1983-84                | 172,033          | 157,602          | 126,706          | 90,030           | 82,555           |                  | 88,760           |
| 1984-85                | 221,299          | 204,595          | 142,246          | 101,008          | 92,947           |                  | 104,417          |
| 1985-86                | 274,826          | 245,087          | 181,635          | 123,187          | 104,400          |                  | 116,147          |
| 1986-87                | 280,671          | 234,651          | 193,096          | 142,273          | 121,107          |                  | 129,983          |
| 1987-88                | 219,822          | 172,290          | 151,587          | 77,565           | 64,717           |                  | 71,280           |
| 1988-89                | 197,669          | 163,283          | 150,361          | 98,950           | 81,324           |                  | 87,137           |
| 1989-90                | 236,584          | 193,951          | 170,014          | 149,361          | 131,050          | **               | 131,420          |
| 1990-91                | 128,123          | 107,117          | 94,522           | 54,370           | 44,518           | 1,070            | 56,865           |
| 1991-92                | 199,244          | 158,790          | 168,156          | 122,874          | 97,454           | 96,421           | 99,052           |
| 1992-93                | 233,430          | 197,715          | 197,739          | 166,654          | 136,820          | 118,949          | 128,265          |
| 1993-94                | 123,449          | 94,080           | 90,359           | 68,568           | 65,883           | 58,747           | 59,768           |
| 1994-95                | 111,378          | 92,362           | 92,568           | 49,450           | 48,231           | 46,258           | 47,302           |
| 1995-96                | 146,152          | 123,319          | 114,813          | 91,938           | 89,953           | 77,417           | 79,126           |
| 1996-97                | 162,447          | 156,924          | 124,820          | 101,384          | 96,785           | 82,573           | 86,898           |
| 1997-98                | 164,657          | 159,442          | 129,772          | 104,220          | 85,959           | 74,845           | 86,617           |
| 1998-99                | 116,262          | 156,628          | 98,606           | 84,135           | 65,173           | 62,641           | 70,721           |
| 1999-00                | 157,062          | 165,239          | 84,413           | 84,253           | 73,135           | 65,505           | 73,811           |
| 2000-01                | 205,801          | 219,433          | 131,330          | 126,989          | 113,454          | 102,074          | 116,490          |
| 2001-02                | 504,704          | 489,215          | 401,881          | 286,874          | 298,042          | 270,031          | 269,281          |
| 2002-03                | 389,119          | 393,339          | 292,034          | 213,944          | 230,466          | 215,586          | 222,050          |
| 2003-04                | 281,586          | 298,452          | 242,677          | 189,143          | 181,005          | 170,582          | 172,487          |
| 2004-05                | 240,134          | 232,656          | 210,249          | 169,797          | 154,386          | 146,810          | 151,634          |
| 2005-06                | 244,295          | 231,858          | 224,369          | 158,099          | 155,682          | 145,202          | 158,511          |
| 2006-07                | 250,603          | 233,841          | 210,672          | 127,216          | 135,029          | 124,052          | 148,982          |
| 2007-08                | 244,996          | 234,667          | 215,873          | 154,512          | 155,817          | 135,730          | 154,534          |
| 2008-09                | 277,551          | 276,971          | 221,319          | 172,330          | 186,748          | 170,865          | 178,491          |
| 2009-10                | 516,214          | 581,067          | 408,091          | 328,107          | 316,665          | 303,183          | 323,378          |
| 2010-11                | 332,002          | 284,018          | 262,773          | 206,948          | 213,580          | 196,969          | 208,713          |
| 2011-12                | 299,396          | 256,475          | 248,202          | 198,131          | 187,003          | 173,052          | 180,285          |
| <b>Total</b>           | <b>9,945,476</b> | <b>7,786,894</b> | <b>7,733,470</b> | <b>5,157,233</b> | <b>4,394,568</b> | <b>3,292,237</b> | <b>4,109,408</b> |
| <b>10-Year Average</b> | <b>307,590</b>   | <b>302,334</b>   | <b>253,626</b>   | <b>191,823</b>   | <b>191,638</b>   | <b>178,203</b>   | <b>189,907</b>   |

\*Partial year

\*\* 1981 was the last year visual counts were made at Little Goose Project until 1991.

Note: Extended video counts from participating projects included for 1996 - 2008.

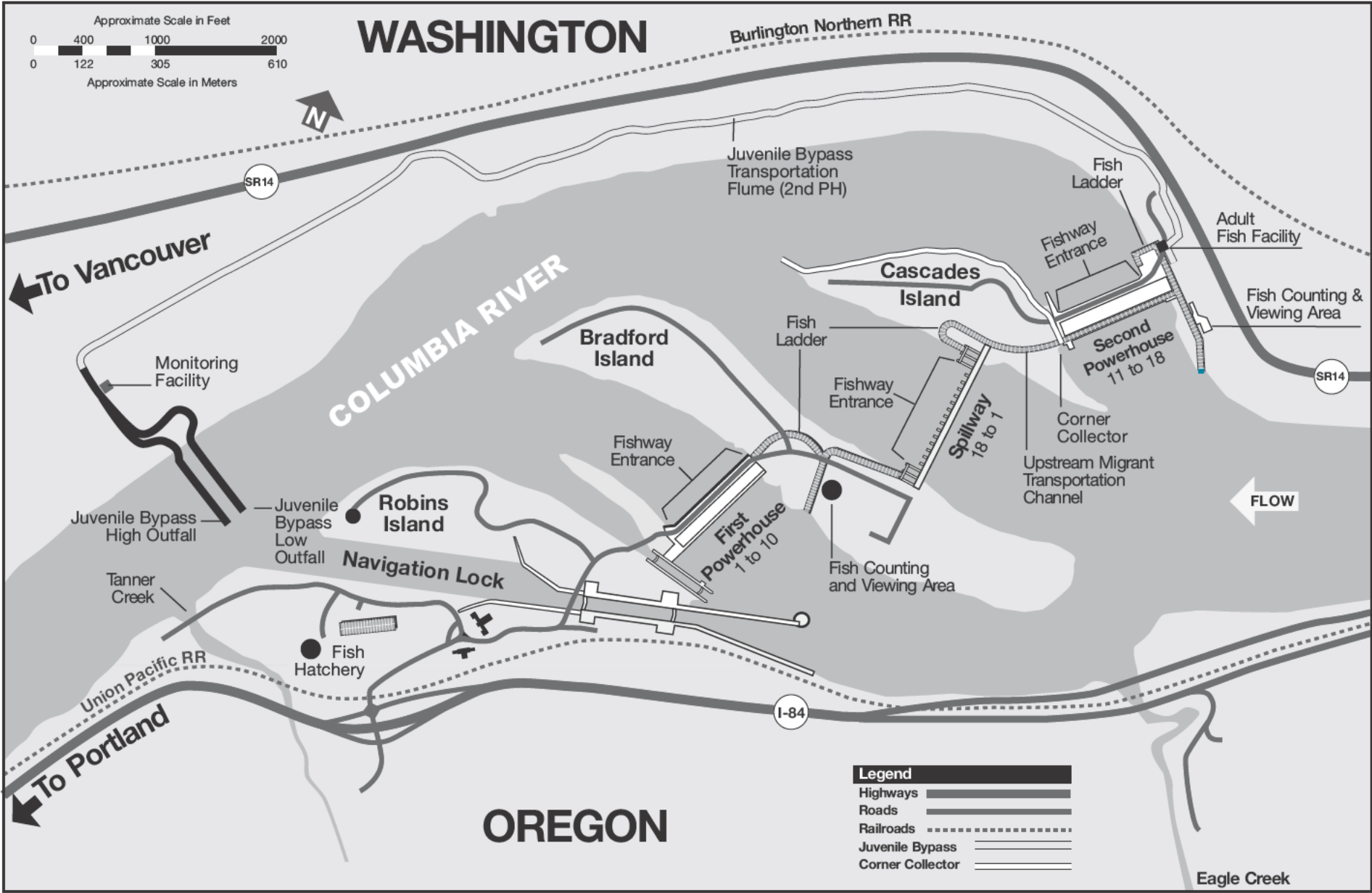
**TABLE 4**  
**STEELHEAD OVER MID COLUMBIA RIVER DAMS 1959 - 2012**  
**BY RUN-YEAR (JUNE 1 - MAY 31)**

| <b>RUN-YEAR</b>        | <b>PRIEST RAPIDS</b> | <b>ROCK ISLAND</b> | <b>ROCKY REACH</b> | <b>WELLS</b>   |
|------------------------|----------------------|--------------------|--------------------|----------------|
| 1959-60                | 810 *                |                    |                    |                |
| 1960-61                | 7,277                |                    |                    |                |
| 1961-62                | 8,970                |                    |                    |                |
| 1962-63                | 9,408                |                    |                    |                |
| 1963-64                | 8,808                |                    |                    |                |
| 1964-65                | 6,137                |                    |                    |                |
| 1965-66                | 9,055                |                    |                    |                |
| 1966-67                | 13,159               |                    |                    |                |
| 1967-68                | 8,402                |                    |                    |                |
| 1968-69                | 9,672                |                    |                    |                |
| 1969-70                | 6,140                |                    |                    |                |
| 1970-71                | 5,764                |                    |                    |                |
| 1971-72                | 11,331               |                    |                    |                |
| 1972-73                | 6,006                |                    |                    |                |
| 1973-74                | 6,881                |                    |                    |                |
| 1974-75                | 2,955                |                    |                    |                |
| 1975-76                | 2,558                |                    |                    | 44 *           |
| 1976-77                | 9,490                |                    |                    | 4,636          |
| 1977-78                | 9,632                |                    |                    | 5,464          |
| 1978-79                | 4,479                |                    |                    | 1,475          |
| 1979-80                | 8,704                |                    |                    | 3,771          |
| 1980-81                | 8,308                |                    |                    | 3,363          |
| 1981-82                | 9,122                | 7,607              | 5,567              | 4,107          |
| 1982-83                | 10,948               | 9,737              | 6,037              | 7,805          |
| 1983-84                | 32,103               | 29,885             | 19,864             | 19,540         |
| 1984-85                | 26,566               | 25,287             | 17,349             | 16,663         |
| 1985-86                | 34,007               | 31,813             | 22,621             | 19,712         |
| 1986-87                | 22,332               | 22,766             | 15,060             | 13,251         |
| 1987-88                | 14,054               | 12,887             | 7,243              | 5,565          |
| 1988-89                | 10,138               | 9,100              | 5,573              | 4,358          |
| 1989-90                | 10,720               | 9,244              | 5,991              | 4,577          |
| 1990-91                | 7,858                | 6,926              | 5,023              | 3,842          |
| 1991-92                | 14,047               | 11,125             | 7,788              | 7,823          |
| 1992-93                | 13,596               | 12,382             | 7,429              | 7,029          |
| 1993-94                | 5,405                | 4,689              | 2,738              | 2,359          |
| 1994-95                | 6,710                | 5,633              | 2,825              | 2,181          |
| 1995-96                | 4,357                | 4,168              | 1,777              | 951            |
| 1996-97                | 8,323                | 7,295              | 5,780              | 4,154          |
| 1997-98                | 8,942                | 7,718              | 6,756              | 4,074          |
| 1998-99                | 5,846                | 4,968              | 4,404              | 2,676          |
| 1999-00                | 8,267                | 6,346              | 4,848              | 3,514          |
| 2000-01                | 11,341               | 10,565             | 8,307              | 6,287          |
| 2001-02                | 30,102               | 28,614             | 22,114             | 18,519         |
| 2002-03                | 15,867               | 15,243             | 11,718             | 9,430          |
| 2003-04                | 17,729               | 17,633             | 13,919             | 10,016         |
| 2004-05                | 18,655               | 19,448             | 14,624             | 9,306          |
| 2005-06                | 12,502               | 12,413             | 9,498              | 7,168          |
| 2006-07                | 10,415               | 9,371              | 8,141              | 6,691          |
| 2007-08                | 15,257               | 13,516             | 10,487             | 7,600          |
| 2008-09                | 16,658               | 16,119             | 13,798             | 9,733          |
| 2009-10                | 40,121               | 37,821             | 29,481             | 25,468         |
| 2010-11                | 26,431               | 22,129             | 18,091             | 12,957         |
| 2011-12                | 20,806               | 19,123             | 15,418             | 12,047         |
| <b>Total</b>           | <b>653,171</b>       | <b>451,571</b>     | <b>330,269</b>     | <b>288,156</b> |
| <b>10-Year Average</b> | <b>19,444</b>        | <b>18,282</b>      | <b>14,518</b>      | <b>11,042</b>  |

\*Partial year



# Plate 2 Bonneville Lock and Dam



# BONNEVILLE DAM

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## FISH COUNTING SCHEDULE

|                |  |
|----------------|--|
| Jan 1 – Mar 31 | Video counting daily 0400-2000 hours (PST)   |
| Apr 1 – Oct 31 | Visual counting daily 0500-2100 hours (DST)  |
| Jun 1 – Sep 30 | Video Lamprey counting 2100-0500 hours (DST) |
| Nov 1 – Dec 31 | Video counting daily 0400-2000 hours (PST)   |

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## FISH FACILITIES OPERATION SCHEDULE

| Fish Facility                | OOS Date 2011 | In Service Date 2012 | OOS Date 2012 | Reason for Outage   |
|------------------------------|---------------|----------------------|---------------|---|
| BI Lamprey Passage Structure | 09 Nov 11     | 24 May 12            | 26 Nov 12     | Winter maintenance  |
| CI Lamprey Passage Structure | 15 Sep 11     | 23 May 12            | 20 Sep 12     | Winter maintenance  |
| WS Lamprey Passage Structure | 09 Nov 11     | 23 May 12            | 11 Nov 12     | Winter maintenance  |
| Bradford Island Ladder       | 13 Dec 11     | 22 Feb 12            | N/A           | Winter maintenance  |
| A-branch Ladder              | 14 Dec 11     | 22 Feb 12            | N/A           | Winter maintenance  |
| B-branch Ladder              | 17 Sep 11     | 22 Feb 12            | 25 Sep 12     | Early outage for emergency erosion repair/Winter Maintenance (2011); FV4-4 repairs (2012)                                     |
| Cascades Island ladder       | N/A           | 08 Nov 12            | N/A           | CI exit opened in lieu of early WA Shore ladder outage  |
| UMT                          | N/A           | N/A                  | 13 Nov 12     | Winter maintenance and LPS construction on N monolith   |
| WS Ladder                    | N/A           | N/A                  | 13 Nov 12     | Winter maintenance and LPS construction on N monolith   |
| DSM 2                        | 03 Nov 11     | 14 Feb 12            | 11 Nov 12     | Winter maintenance and LPS construction on N monolith   |
| B2CC                         | 01 Sep 11     | 19 Mar 12            | 16 Sep 12     | Closed for winter maintenance until 2012 fish passage season, Kelt trigger reached on 19 March, closed for repairs on 16 Sept |
| AFF                          | 12 Oct 11     | 11 Apr 12            | 07 Nov 12     | Early 2012 outage for WA Shore LPS construction   |
| JMF                          | 31 Oct 11     | 05 Mar 12            | 31 Oct 12     | System in bypass for winter   |

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## FISHWAY ACTIVITIES

The following are fishway modifications for the 2011/2012 passage year:

- Replaced PIT tag antenna in Bradford Island serpentine section.
- Dredged along the exit channel for the Bradford Island fishladder.
- Spillway erosion hole and ogee repair.

- Bradford Island fishway picket lead modifications to insure one inch spacing between leads and sill plate and prevent lead bending. Spacers installed.
- Cascades Island lamprey passage system (LPS) extension into the forebay and conversion to volitional passage system.
- Repairs to the south monolith gates and guides on B-valves 3 and 4.
- Debris removal from the Washington shore AWS and accompanying diffusers.
- B2CC bulkhead converted to permanent hoist with automatic control.
- B2CC joint repair to fix spalling and decrease channel roughness.
- Construction of new lamprey passage system at NDE on the north monolith.
- Washington shore picket lead modifications to insure 1 ½ inch spacing between leads and sill plate and prevent lead bending. Spacers installed.

### ***FISH REMOVAL***

Fish passage facilities and turbine units are taken out of service and dewatered to allow for inspection, preventative maintenance, repairs, and modifications. As facilities and turbine units are dewatered, project biologists, outside agency personnel, and other project personnel follow procedures outlined in the Fish Passage Plan and detailed in the Fish Salvage Plan to minimize impacts on fish. Fish recovered are typically released into the forebay above the new navigation lock. Salvaged sturgeon and juvenile salmonids, however, are released below the dam at Hamilton Island. The following is a summary of the number of fish that were removed during facility and turbine unit dewaterings. All fish were recovered in good condition unless otherwise noted.

Unit 5 draft tube (12/08/11): 1 sturgeon.

Bradford Island ladder (12/14/11): 9 shad, 4 rainbow trout, 1 peamouth, 2 adult steelhead, and 14 juvenile salmonids from the junction pool; and 7 steelhead and 1 shad were recovered from the A-branch ladder.

Unit 18 Scroll case (12/22/11): 200-250 white sturgeon. These fish were released into the forebay of PH2 in fair to poor condition. More information can be found in MFR BON 111228 BON U18 Scroll Case.

Navlock 2 (03/07/12): 12 yearling chinook, 20 sculpin, 7 small mouth bass, and 25 crayfish.

Unit 11 draft tube (5/16/12): 19 white sturgeon, 3 adult Chinook.

Unit 6 head gate (05/22/12): 15 juvenile steelhead, 25 yearling Chinook.

Unit 6 head gate (05/23/12): 66 juvenile salmonids (primarily yearling Chinook, some steelhead and sockeye).

Unit 4 head gate (06/04/12): 175 juvenile salmonids (Chinook, coho, steelhead, sockeye).

Unit 1 scroll case (06/05/12): 1000 juvenile salmonids (Chinook, coho, steelhead, sockeye), 1 adult Chinook.

Unit 1 draft tube (06/05/12): 35 lamprey, 3 juvenile Chinook, 1 white sturgeon, 2 adult Chinook.

Unit 11 tail logs (06/08/12): 2 lamprey, 20 sculpin, 1 catfish.

Unit 14 draft tube (06/12/12): 2 white sturgeon, 36 lamprey, and 1 juvenile salmonid.

Unit 1 tail logs (06/13/12): 4 white sturgeon, 5 juvenile salmonids, 2 bass, 1 crayfish, and approximately 50 sculpin.

Unit 11 tail logs (06/26/12): 3 sculpin, 1 catfish, 1 crayfish.

Unit 10 head gate (07/09/12): 50 subyearling Chinook, 5 mini-jacks.

Unit 10 scroll case (07/09/12): 600 subyearling Chinook, 15 American shad, 30 Chinook mini-jacks.

Unit 10 draft tube (07/10/12): 15 white sturgeon, 30 lamprey, 20 subyearling Chinook.

Unit 11 draft tube (07/24/12): 17 lamprey, 5 white sturgeon, 2 channel catfish, 12 bullhead catfish.

Tainter valve 3 (08/06/12): 80 American shad, 1 carp.

Unit 11 tail logs (8/28/12): 1 smallmouth bass.

Unit 10 tail logs (8/29/12): 2 white sturgeon, 12 sculpin, 10 crayfish.

Unit 14 tail logs (9/5/12): 1 smallmouth bass, 25 sculpin.

Unit 17 tail logs (9/20/12): 1 smallmouth bass, 26 sculpin, 1 lamprey.

Unit 11 draft tube (9/25/12): 75-100 white sturgeon.

B-branch fish ladder (9/25/12): 30-40 salmonids.

B-branch entrance bay (9/27/12): 1 adult Chinook and 1 Largescale sucker.

Unit 3 draft tube (10/3/12): 17 white sturgeon.

Unit 3 tail logs (11/8/12): 30 white sturgeon, 21 sculpin.

AFF fish ladder (11/8/12): 2 white sturgeon, 12 lamprey, 10 suckers, 13 peamouth.

WA shore to TW (11/13/12): 9 adult Chinook, 4 adult steelhead, 6 lamprey, 2 small-mouth bass, 12 suckers, 10 peamouth.

WA shore entrance pool (11/15/12): 3 white sturgeon, 1 adult Chinook, 1 trout, 4 small-mouth bass, 9 shad, 10 suckers.

PH2CC south entrance pool (11/20/12): 5 suckers, 1 small-mouth bass.

Unit 13 tail logs (11/21/12): 12 sculpin.

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TABLE 5

MONTHLY TOTALS OF SALMONID, SHAD, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER BONNEVILLE DAM.  
2012

| SPECIES      | JAN        | FEB        | MAR          | APR           | MAY            | JUN            | JUL            | AUG            | SEP            | OCT           | NOV          | DEC        | TOTAL            |
|--------------|------------|------------|--------------|---------------|----------------|----------------|----------------|----------------|----------------|---------------|--------------|------------|------------------|
| CHINOOK*     | 2          | -1         | 39           | 23,702        | 141,939        | 62,450         | 31,448         | 86,278         | 355,800        | 31,073        | 1,169        | 31         | 733,930          |
| STEELHEAD    | 280        | 669        | 1,940        | 1,312         | 1,703          | 7,943          | 72,994         | 86,419         | 49,966         | 10,478        | 1,128        | 471        | 235,303          |
| SOCKEYE      |            |            |              |               | 80             | 382,529        | 132,889        | 170            | 5              |               |              |            | 515,673          |
| COHO*        |            |            |              |               |                |                | 3              | 6,162          | 37,556         | 15,345        | 951          | 6          | 60,023           |
| CHUM         |            |            |              |               |                |                | 1              | 0              | 1              | 15            | 48           |            | 65               |
| PINK         |            |            |              |               |                |                | 0              | 0              | 1              | 0             |              |            | 1                |
| <b>TOTAL</b> | <b>282</b> | <b>668</b> | <b>1,979</b> | <b>25,014</b> | <b>143,722</b> | <b>452,922</b> | <b>237,335</b> | <b>179,029</b> | <b>443,329</b> | <b>56,911</b> | <b>3,296</b> | <b>508</b> | <b>1,544,995</b> |
| SHAD         |            |            |              |               | 18,446         | 2,331,533      | 79,282         | 3,133          |                |               |              |            | 2,432,394        |
| LAMPREY      |            |            |              | 20            | 1,141          | 8,073          | 10,780         | 6,555          | 2,583          | 81            | -10          | 1          | 29,224           |
| STURGEON     |            |            |              |               | -1             | 0              | 2              | 0              | 19             | 2             | 0            |            | 22               |
| BULL TROUT   |            |            |              |               |                |                |                |                |                |               |              |            | 0                |

\*Jacks included

note: Counts were taken from 0400-2000 PST Jan 1 - Dec 31. Visual counting occurred Apr 1 - Oct 31.

Video counting occurred Jan 1 - Mar 31 and Nov 1 - Dec 31.

TABLE 6  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| BONNEVILLE PROJECT - FISH COUNTS |               |        |      |              |            |           |         |            |            |      |      |      |         | JANUARY 2012 |            |            |             |       |
|----------------------------------|---------------|--------|------|--------------|------------|-----------|---------|------------|------------|------|------|------|---------|--------------|------------|------------|-------------|-------|
| DATE                             | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | unclipped  |            |      |      | SHAD | LAMPREY | STURGEON     | DISCH KCFS | SPILL KCFS | TURBIDITY   |       |
|                                  | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD  | STEELHEAD  | PINK | CHUM |      |         |              |            |            | SECCHI      | DEG F |
| Jan 1                            | 0             |        |      | 0            |            |           |         | 27         | 12         |      |      |      |         | 176.0        | 0.5        | 2.5        | 42.0        |       |
| Jan 2                            | 0             |        |      | 0            |            |           |         | 13         | 5          |      |      |      |         | 116.6        | 0.6        | 4.0        | 42.0        |       |
| Jan 3                            | 0             |        |      | 0            |            |           |         | 13         | 10         |      |      |      |         | 153.0        | 0.5        | 6.0        | 42.0        |       |
| Jan 4                            | 0             |        |      | 0            |            |           |         | 18         | 12         |      |      |      |         | 166.2        | 0.5        | 6.0        | 41.0        |       |
| Jan 5                            | 0             |        |      | 0            |            |           |         | 9          | 5          |      |      |      |         | 149.4        | 0.5        | 7.0        | 42.0        |       |
| Jan 6                            | 0             |        |      | 0            |            |           |         | 5          | 1          |      |      |      |         | 139.6        | 0.5        | 7.0        | 42.0        |       |
| Jan 7                            | 0             |        |      | 0            |            |           |         | 15         | 5          |      |      |      |         | 124.2        | 0.5        | 7.0        | 42.0        |       |
| Jan 8                            | 0             |        |      | 0            |            |           |         | 15         | 7          |      |      |      |         | 128.3        | 0.5        | 7.0        | 41.0        |       |
| Jan 9                            | 0             |        |      | 0            |            |           |         | 16         | 4          |      |      |      |         | 139.8        | 0.5        | 7.0        | 41.0        |       |
| Jan 10                           | 0             |        |      | 0            |            |           |         | 7          | 0          |      |      |      |         | 138.6        | 0.5        | 7.0        | 42.0        |       |
| Jan 11                           | 0             |        |      | 0            |            |           |         | 2          | 1          |      |      |      |         | 164.4        | 1.5        | 7.0        | 41.0        |       |
| Jan 12                           | 0             |        |      | 0            |            |           |         | 6          | 2          |      |      |      |         | 147.8        | 0.5        | 6.5        | 41.0        |       |
| Jan 13                           | 0             |        |      | 0            |            |           |         | 6          | 2          |      |      |      |         | 138.4        | 0.5        | 7.0        | 40.0        |       |
| Jan 14                           | 0             |        |      | 0            |            |           |         | 3          | 3          |      |      |      |         | 129.1        | 0.5        | 7.0        | 40.0        |       |
| Jan 15                           | 0             |        |      | 0            |            |           |         | 4          | 0          |      |      |      |         | 128.7        | 0.4        | 7.0        | 40.0        |       |
| Jan 16                           | 0             |        |      | 0            |            |           |         | 4          | 1          |      |      |      |         | 143.9        | 0.5        | 7.0        | 38.0        |       |
| Jan 17                           | 0             |        |      | 0            |            |           |         | 6          | 3          |      |      |      |         | 134.4        | 0.5        | 7.0        | 38.0        |       |
| Jan 18                           | 0             |        |      | 0            |            |           |         | 5          | 2          |      |      |      |         | 166.6        | 0.5        | 6.0        | 39.0        |       |
| Jan 19                           | 0             |        |      | 0            |            |           |         | 7          | 0          |      |      |      |         | 172.4        | 0.5        | 4.0        | 38.0        |       |
| Jan 20                           | 0             |        |      | 0            |            |           |         | 5          | 2          |      |      |      |         | 181.2        | 0.5        | 6.0        | 39.0        |       |
| Jan 21                           | 0             |        |      | 0            |            |           |         | 9          | 5          |      |      |      |         | 166.2        | 0.5        | 4.5        | 39.0        |       |
| Jan 22                           | 0             |        |      | 0            |            |           |         | 4          | 0          |      |      |      |         | 151.9        | 0.5        | 7.0        | 38.0        |       |
| Jan 23                           | 0             |        |      | 0            |            |           |         | 14         | 4          |      |      |      |         | 152.1        | 0.5        | 7.0        | 38.0        |       |
| Jan 24                           | 0             |        |      | 0            |            |           |         | 4          | 3          |      |      |      |         | 173.4        | 0.5        | 6.5        | 38.0        |       |
| Jan 25                           | 1             |        |      | 1            |            |           |         | 4          | 0          |      |      |      |         | 149.6        | 0.5        | 7.0        | 39.0        |       |
| Jan 26                           | 0             |        |      | 0            |            |           |         | 4          | 2          |      |      |      |         | 159.2        | 0.6        | 7.0        | 39.0        |       |
| Jan 27                           | 0             |        |      | 0            |            |           |         | 2          | 1          |      |      |      |         | 172.4        | 0.6        | *          | 38.0        |       |
| Jan 28                           | 0             |        |      | 0            |            |           |         | 14         | 4          |      |      |      |         | 172.2        | 0.5        | 6.5        | 38.0        |       |
| Jan 29                           | 0             |        |      | 0            |            |           |         | 11         | 4          |      |      |      |         | 147.7        | 0.5        | 5.0        | 38.0        |       |
| Jan 30                           | 0             |        |      | 0            |            |           |         | 24         | 8          |      |      |      |         | 137.4        | 0.5        | 6.5        | 38.0        |       |
| Jan 31                           | 0             |        |      | 0            |            |           |         | 4          | 0          |      |      |      |         | 153.0        | 0.5        | 6.5        | 38.0        |       |
| <b>TOTAL</b>                     | <b>1</b>      |        |      | <b>1</b>     |            |           |         | <b>280</b> | <b>108</b> |      |      |      |         |              |            |            |             |       |
| <b>AVG</b>                       | <b>0</b>      |        |      | <b>0</b>     |            |           |         | <b>9</b>   | <b>3</b>   |      |      |      |         | <b>150.8</b> | <b>0.5</b> | <b>6.3</b> | <b>39.7</b> |       |

\*Data unavailable

Note: January 1 to March 31 counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.

TABLE 7  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

| BONNEVILLE PROJECT - FISH COUNTS |               |        |      |         |       |      |           |           |           |      |      |         |          | FEBRUARY 2012 |               |           |        |
|----------------------------------|---------------|--------|------|---------|-------|------|-----------|-----------|-----------|------|------|---------|----------|---------------|---------------|-----------|--------|
| DATE                             | CHINOOK ADULT |        |      | CHINOOK | COHO  |      | unclipped |           |           |      |      | LAMPREY | STURGEON | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY |        |
|                                  | SPRING        | SUMMER | FALL | JACK    | ADULT | JACK | SOCKEYE   | STEELHEAD | STEELHEAD | PINK | CHUM |         |          |               |               | SHAD      | SECCHI |
| Feb 1                            |               |        |      | 0       |       |      | 8         | 2         |           |      |      | 0       |          | 148.9         | 0.5           | 6.5       | 38.0   |
| Feb 2                            |               |        |      | 0       |       |      | 16        | 5         |           |      |      | 0       |          | 140.2         | 0.5           | 6.5       | 38.0   |
| Feb 3                            |               |        |      | 0       |       |      | 8         | 4         |           |      |      | 0       |          | 140.2         | 0.5           | 5.0       | 38.0   |
| Feb 4                            |               |        |      | 0       |       |      | 5         | 0         |           |      |      | 0       |          | 138.5         | 0.5           | 5.0       | 38.0   |
| Feb 5                            |               |        |      | 0       |       |      | 11        | 2         |           |      |      | 0       |          | 137.5         | 0.5           | 5.5       | 38.0   |
| Feb 6                            |               |        |      | 0       |       |      | 1         | 0         |           |      |      | 0       |          | 136.2         | 0.5           | 6.0       | 38.0   |
| Feb 7                            |               |        |      | 0       |       |      | 4         | 2         |           |      |      | 0       |          | 142.3         | 0.5           | 4.5       | 38.0   |
| Feb 8                            |               |        |      | 0       |       |      | 1         | 1         |           |      |      | 0       |          | 146.7         | 0.5           | 7.0       | 37.0   |
| Feb 9                            |               |        |      | 0       |       |      | 8         | 1         |           |      |      | 0       |          | 129.3         | 0.5           | 6.0       | 38.0   |
| Feb 10                           |               |        |      | 0       |       |      | 17        | 2         |           |      |      | 0       |          | 135.2         | 0.5           | 7.0       | 38.0   |
| Feb 11                           |               |        |      | 0       |       |      | 17        | 3         |           |      |      | 0       |          | 138.5         | 0.5           | 5.0       | 39.0   |
| Feb 12                           |               |        |      | 0       |       |      | 28        | 10        |           |      |      | 0       |          | 138.5         | 0.5           | 6.0       | 38.0   |
| Feb 13                           |               |        |      | 0       |       |      | 9         | 3         |           |      |      | 0       |          | 137.3         | 0.5           | 6.5       | 39.0   |
| Feb 14                           |               |        |      | 0       |       |      | 4         | 1         |           |      |      | 0       |          | 155.0         | 0.5           | 6.0       | 39.0   |
| Feb 15                           |               |        |      | 0       |       |      | 9         | 4         |           |      |      | 0       |          | 150.2         | 0.6           | 5.5       | 39.0   |
| Feb 16                           |               |        |      | 0       |       |      | 8         | 2         |           |      |      | 0       |          | 170.9         | 0.6           | 5.6       | 39.0   |
| Feb 17                           |               |        |      | 0       |       |      | 9         | 2         |           |      |      | 0       |          | 136.6         | 0.6           | 5.0       | 39.0   |
| Feb 18                           |               |        |      | 0       |       |      | 9         | 3         |           |      |      | 0       |          | 124.8         | 0.6           | 5.8       | 39.0   |
| Feb 19                           |               |        |      | 0       |       |      | 10        | 4         |           |      |      | 0       |          | 129.4         | 0.6           | 6.0       | 38.0   |
| Feb 20                           |               |        |      | 0       |       |      | 5         | -1        |           |      |      | 0       |          | 148.2         | 0.6           | 7.0       | 38.0   |
| Feb 21                           |               |        |      | 0       |       |      | 18        | 4         |           |      |      | 0       |          | 134.4         | 0.6           | 6.5       | 39.0   |
| Feb 22                           |               |        |      | -1      |       |      | 110       | 32        |           |      |      | 0       |          | 149.8         | 0.6           | 4.0       | 40.0   |
| Feb 23                           |               |        |      | 0       |       |      | 108       | 38        |           |      |      | 0       |          | 201.3         | 1.1           | 4.0       | 40.0   |
| Feb 24                           |               |        |      | 0       |       |      | 131       | 46        |           |      |      | -1      |          | 168.7         | 1.1           | 4.5       | 40.0   |
| Feb 25                           |               |        |      | 0       |       |      | 37        | 12        |           |      |      | 0       |          | 131.9         | 1.1           | 5.0       | 40.0   |
| Feb 26                           |               |        |      | 0       |       |      | 15        | 4         |           |      |      | 0       |          | 162.9         | 1.2           | 5.0       | 40.0   |
| Feb 27                           |               |        |      | 0       |       |      | 25        | 14        |           |      |      | 0       |          | 176.1         | 1.2           | 6.0       | 40.0   |
| Feb 28                           |               |        |      | 0       |       |      | 26        | 8         |           |      |      | 0       |          | 185.5         | 1.1           | 6.0       | 40.0   |
| Feb 29                           |               |        |      | 0       |       |      | 12        | 6         |           |      |      | 0       |          | 145.7         | 1.5           | 7.0       | 40.0   |
| <b>TOTAL</b>                     |               |        |      | -1      |       |      | 669       | 214       |           |      |      | -1      |          |               |               |           |        |
| <b>AVG</b>                       |               |        |      | 0       |       |      | 23        | 7         |           |      |      | 0       |          | 147.7         | 0.7           | 5.7       | 38.8   |

Note: January 1 to March 31 counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.



TABLE 8  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

MARCH 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | unclipped    |            | PINK | CHUM | SHAD | LAMPREY | STURGEON | DISCH  | SPILL | TURBIDITY |  |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|--------------|------------|------|------|------|---------|----------|--------|-------|-----------|--|
|              | SPRING        | SUMMER | FALL |              |            |           |         | KCFS         | KCFS       |      |      |      |         |          | SECCHI | DEG F |           |  |
| Mar 1        | 0             |        |      | 0            |            |           |         | 13           | 5          |      |      |      |         | 135.7    | 1.4    | 6.0   | 40.0      |  |
| Mar 2        | 0             |        |      | 0            |            |           |         | 24           | 8          |      |      |      |         | 158.9    | 2.3    | 6.0   | 40.0      |  |
| Mar 3        | 0             |        |      | 0            |            |           |         | 32           | 12         |      |      |      |         | 153.0    | 2.3    | 6.0   | 40.0      |  |
| Mar 4        | 2             |        |      | 0            |            |           |         | 47           | 17         |      |      |      |         | 152.1    | 2.3    | 6.0   | 40.0      |  |
| Mar 5        | 0             |        |      | 1            |            |           |         | 60           | 20         |      |      |      |         | 152.0    | 2.0    | 6.0   | 41.0      |  |
| Mar 6        | 1             |        |      | 0            |            |           |         | 37           | 15         |      |      |      |         | 160.6    | 1.4    | 5.0   | 42.0      |  |
| Mar 7        | 3             |        |      | 0            |            |           |         | 57           | 20         |      |      |      |         | 178.3    | 2.3    | 6.0   | 42.0      |  |
| Mar 8        | 0             |        |      | 0            |            |           |         | 49           | 17         |      |      |      |         | 172.7    | 2.0    | 6.0   | 42.0      |  |
| Mar 9        | 0             |        |      | 0            |            |           |         | 41           | 16         |      |      |      |         | 176.0    | 1.1    | 6.0   | 42.0      |  |
| Mar 10       | 0             |        |      | 0            |            |           |         | 42           | 5          |      |      |      |         | 148.5    | 1.2    | 7.0   | 41.0      |  |
| Mar 11       | 4             |        |      | 0            |            |           |         | 52           | 19         |      |      |      |         | 154.5    | 1.3    | 7.0   | 42.0      |  |
| Mar 12       | 1             |        |      | 0            |            |           |         | 50           | 13         |      |      |      |         | 181.9    | 0.7    | 6.0   | 42.0      |  |
| Mar 13       | 0             |        |      | 0            |            |           |         | 55           | 20         |      |      |      |         | 193.4    | 0.8    | 6.0   | 42.0      |  |
| Mar 14       | 2             |        |      | 0            |            |           |         | 61           | 16         |      |      |      |         | 202.0    | 1.3    | 6.2   | 42.0      |  |
| Mar 15       | 3             |        |      | 0            |            |           |         | 65           | 25         |      |      |      |         | 198.8    | 1.4    | 5.8   | 41.0      |  |
| Mar 16       | 3             |        |      | 0            |            |           |         | 178          | 53         |      |      |      |         | 219.8    | 1.3    | 5.1   | 41.0      |  |
| Mar 17       | 2             |        |      | 1            |            |           |         | 145          | 45         |      |      |      |         | 222.9    | 1.2    | 5.2   | 42.0      |  |
| Mar 18       | 2             |        |      | 0            |            |           |         | 74           | 23         |      |      |      |         | 216.4    | 1.2    | 5.0   | 42.0      |  |
| Mar 19       | 3             |        |      | 0            |            |           |         | 52           | 23         |      |      |      |         | 224.7    | 1.3    | 6.0   | 42.0      |  |
| Mar 20       | 1             |        |      | 0            |            |           |         | 21           | 10         |      |      |      |         | 201.3    | 1.2    | 5.2   | 42.0      |  |
| Mar 21       | 1             |        |      | 0            |            |           |         | 21           | 8          |      |      |      |         | 233.8    | 1.2    | 6.0   | 43.0      |  |
| Mar 22       | 0             |        |      | -1           |            |           |         | 72           | 28         |      |      |      |         | 242.9    | 1.2    | 6.0   | 42.0      |  |
| Mar 23       | 1             |        |      | 0            |            |           |         | 67           | 18         |      |      |      |         | 232.5    | 1.2    | 5.0   | 42.0      |  |
| Mar 24       | 0             |        |      | 0            |            |           |         | 74           | 27         |      |      |      |         | 255.1    | 1.2    | 4.5   | 42.0      |  |
| Mar 25       | 0             |        |      | 0            |            |           |         | 82           | 20         |      |      |      |         | 259.8    | 1.3    | 6.0   | 43.0      |  |
| Mar 26       | 2             |        |      | 0            |            |           |         | 70           | 12         |      |      |      |         | 254.8    | 17.5   | 4.0   | 43.0      |  |
| Mar 27       | 1             |        |      | 0            |            |           |         | 79           | 29         |      |      |      |         | 241.4    | 40.0   | 4.0   | 44.0      |  |
| Mar 28       | 3             |        |      | 0            |            |           |         | 95           | 31         |      |      |      |         | 287.9    | 26.8   | 4.0   | 44.0      |  |
| Mar 29       | 0             |        |      | 0            |            |           |         | 86           | 25         |      |      |      |         | 293.9    | 34.8   | 4.0   | 44.0      |  |
| Mar 30       | 2             |        |      | 0            |            |           |         | 57           | 26         |      |      |      |         | 335.9    | 69.2   | 3.0   | 44.0      |  |
| Mar 31       | 1             |        |      | 0            |            |           |         | 82           | 19         |      |      |      |         | 365.2    | 97.3   | 2.0   | 43.0      |  |
| <b>TOTAL</b> | <b>38</b>     |        |      | <b>1</b>     |            |           |         | <b>1,940</b> | <b>625</b> |      |      |      |         |          |        |       |           |  |
| AVG          | 1             |        |      | 0            |            |           |         | 63           | 20         |      |      |      |         | 213.1    | 10.4   | 5.4   | 42.0      |  |

Note: January 1 to March 31 counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Visual counting started April 1. Official Spring Chinook run started March 15. January, February, and March 1-14 Chinook counts were not added to spring totals

TABLE 9  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

| BONNEVILLE PROJECT - FISH COUNTS |               |         |         |              |            |           |         |              |            |           |      |         | APRIL 2012 |               |               |                     |                      |
|----------------------------------|---------------|---------|---------|--------------|------------|-----------|---------|--------------|------------|-----------|------|---------|------------|---------------|---------------|---------------------|----------------------|
| DATE                             | CHINOOK ADULT |         |         | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | unclipped    |            |           | SHAD | LAMPREY | STURGEON   | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | TEMP<br>DEG F        |
|                                  | SPRING        | SUMMER  | FALL    |              |            |           |         | STEELHEAD    | STEELHEAD  | PINK      |      |         |            |               |               |                     |                      |
| Apr 1                            | 2             |         |         | 0            |            |           |         | 78           | 20         |           |      |         | 0          |               |               |                     | 344.0 126.9 3.0 44.0 |
| Apr 2                            | 1             |         |         | 0            |            |           |         | 91           | 22         |           |      |         | 0          |               |               |                     | 346.9 133.9 2.5 44.0 |
| Apr 3                            | 3             |         |         | 0            |            |           |         | 49           | 18         |           |      |         | 0          |               |               |                     | 346.1 136.5 3.0 44.0 |
| Apr 4                            | 4             |         |         | 0            |            |           |         | 68           | 15         |           |      |         | 0          |               |               |                     | 327.5 123.4 3.0 45.0 |
| Apr 5                            | 17            |         |         | 0            |            |           |         | 64           | 23         |           |      |         | 0          |               |               |                     | 283.4 74.6 3.0 45.0  |
| Apr 6                            | 20            |         |         | 1            |            |           |         | 42           | 6          |           |      |         | 0          |               |               |                     | 301.0 84.4 3.0 45.0  |
| Apr 7                            | 6             |         |         | 0            |            |           |         | 28           | 6          |           |      |         | 0          |               |               |                     | 337.6 108.8 5.0 45.0 |
| Apr 8                            | 6             |         |         | 0            |            |           |         | 30           | 15         |           |      |         | 0          |               |               |                     | 326.8 99.0 2.0 45.0  |
| Apr 9                            | 15            |         |         | 0            |            |           |         | 60           | 17         |           |      |         | 0          |               |               |                     | 296.7 81.6 2.5 45.0  |
| Apr 10                           | 16            |         |         | 0            |            |           |         | 33           | 11         |           |      |         | 0          |               |               |                     | 258.9 99.1 2.0 45.0  |
| Apr 11                           | 9             |         |         | 0            |            |           |         | 20           | 4          |           |      |         | 0          |               |               |                     | 316.1 115.1 2.0 46.0 |
| Apr 12                           | 41            |         |         | 0            |            |           |         | 26           | 0          |           |      |         | 0          |               |               |                     | 310.1 101.3 2.0 46.0 |
| Apr 13                           | 78            |         |         | 1            |            |           |         | 35           | 11         |           |      |         | 0          |               |               |                     | 302.9 94.2 2.8 46.0  |
| Apr 14                           | 104           |         |         | 0            |            |           |         | 58           | 18         |           |      |         | 0          |               |               |                     | 321.3 92.7 2.8 46.0  |
| Apr 15                           | 141           |         |         | 4            |            |           |         | 44           | 9          |           |      |         | 0          |               |               |                     | 303.1 93.0 3.0 48.0  |
| Apr 16                           | 120           |         |         | 6            |            |           |         | 27           | 7          |           |      |         | 0          |               |               |                     | 290.7 94.5 3.5 48.0  |
| Apr 17                           | 235           |         |         | 0            |            |           |         | 31           | 16         |           |      |         | 0          |               |               |                     | 309.1 94.9 4.0 48.0  |
| Apr 18                           | 222           |         |         | 0            |            |           |         | 35           | 5          |           |      |         | 0          |               |               |                     | 312.4 95.0 4.0 48.0  |
| Apr 19                           | 365           |         |         | 6            |            |           |         | 45           | 20         |           |      |         | 0          |               |               |                     | 323.3 94.7 4.0 47.0  |
| Apr 20                           | 655           |         |         | 9            |            |           |         | 44           | 17         |           |      |         | 0          |               |               |                     | 317.7 95.4 4.0 47.0  |
| Apr 21                           | 1,321         |         |         | 9            |            |           |         | 64           | 18         |           |      |         | 0          |               |               |                     | 320.7 95.0 4.0 48.0  |
| Apr 22                           | 2,887         |         |         | 24           |            |           |         | 52           | 20         |           |      |         | 0          |               |               |                     | 332.6 106.0 4.0 48.0 |
| Apr 23                           | 4,376         |         |         | 35           |            |           |         | 59           | 21         |           |      |         | 0          |               |               |                     | 363.0 133.3 4.0 50.0 |
| Apr 24                           | 4,873         |         |         | 50           |            |           |         | 39           | 10         |           |      |         | 0          |               |               |                     | 366.5 137.7 3.0 50.0 |
| Apr 25                           | 2,427         |         |         | 17           |            |           |         | 19           | 11         |           |      |         | 1          |               |               |                     | 388.5 162.6 3.0 50.0 |
| Apr 26                           | 1,382         |         |         | 10           |            |           |         | 19           | 6          |           |      |         | 4          |               |               |                     | 442.1 229.1 3.0 50.0 |
| Apr 27                           | 781           |         |         | 11           |            |           |         | 35           | 5          |           |      |         | 11         |               |               |                     | 418.2 211.9 2.0 50.0 |
| Apr 28                           | 603           |         |         | 11           |            |           |         | 31           | 6          |           |      |         | 0          |               |               |                     | 425.0 219.8 2.0 51.0 |
| Apr 29                           | 823           |         |         | 12           |            |           |         | 46           | 8          |           |      |         | 2          |               |               |                     | 418.5 210.2 3.0 51.0 |
| Apr 30                           | 1,930         |         |         | 33           |            |           |         | 40           | 14         |           |      |         | 2          |               |               |                     | 398.6 180.5 3.0 52.0 |
| <b>TOTAL</b>                     | <b>23,463</b> |         |         | <b>239</b>   |            |           |         | <b>1,312</b> | <b>379</b> |           |      |         | <b>20</b>  |               |               |                     |                      |
| AVG                              | 782           |         |         | 8            |            |           |         | 44           | 13         |           |      |         | 1          |               |               |                     | 338.3 124.2 3.1 47.2 |
| RUN YEAR                         |               | CHINOOK | CHINOOK |              |            |           |         |              | unclipped  |           |      |         |            |               |               |                     |                      |
| TOTALS TO DATE                   |               | ADULT   | JACK    |              |            |           |         | SOCKEYE      | STEELHEAD  | STEELHEAD |      |         | LAMPREY    |               |               |                     |                      |
| SPRING                           |               | 23,488  | 239     |              |            |           |         | 0            | 2,632      | 801       |      |         | 19         |               |               |                     |                      |

TABLE 10

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

MAY 2012

| DATE         | CHINOOK ADULT  |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | unclipped |              |            |      |      | SHAD          | LAMPREY      | STURGEON  | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | TEMP<br>DEG F |
|--------------|----------------|--------|------|--------------|------------|-----------|-----------|--------------|------------|------|------|---------------|--------------|-----------|---------------|---------------|---------------------|---------------|
|              | SPRING         | SUMMER | FALL |              |            |           | SOCKEYE   | STEELHEAD    | STEELHEAD  | PINK | CHUM |               |              |           |               |               |                     |               |
| May 1        | 2,238          |        |      | 26           |            |           | 0         | 33           | 15         |      |      | 0             | 6            | 0         | 406.9         | 167.6         | 2.9                 | 52.0          |
| May 2        | 1,746          |        |      | 29           |            |           | 0         | 28           | 3          |      |      | 0             | 6            | 0         | 421.4         | 186.3         | 2.0                 | 52.0          |
| May 3        | 2,506          |        |      | 51           |            |           | 0         | 39           | 16         |      |      | 0             | 4            | 0         | 404.0         | 176.5         | 2.5                 | 53.0          |
| May 4        | 3,393          |        |      | 59           |            |           | 0         | 35           | 6          |      |      | 0             | 1            | 0         | 419.2         | 191.4         | 6.0                 | 52.0          |
| May 5        | 3,002          |        |      | 95           |            |           | 0         | 31           | 9          |      |      | 0             | 0            | 0         | 389.0         | 168.2         | 2.0                 | 52.0          |
| May 6        | 5,959          |        |      | 130          |            |           | 0         | 30           | 10         |      |      | 0             | 2            | 0         | 394.9         | 173.4         | 7.0                 | 51.0          |
| May 7        | 9,081          |        |      | 224          |            |           | 0         | 41           | 7          |      |      | 0             | 2            | 0         | 369.3         | 154.3         | 3.0                 | 52.0          |
| May 8        | 12,000         |        |      | 294          |            |           | 0         | 40           | 13         |      |      | 0             | 2            | 0         | 350.7         | 127.0         | 3.0                 | 52.0          |
| May 9        | 18,436         |        |      | 599          |            |           | 0         | 23           | 5          |      |      | 0             | 0            | 0         | 336.7         | 114.0         | 3.0                 | 52.0          |
| May 10       | 7,200          |        |      | 299          |            |           | 0         | 32           | 9          |      |      | 0             | 1            | 0         | 357.9         | 129.2         | 3.0                 | 52.0          |
| May 11       | 5,381          |        |      | 294          |            |           | 0         | 38           | 10         |      |      | 0             | 0            | 0         | 353.6         | 120.1         | 3.0                 | 52.0          |
| May 12       | 7,284          |        |      | 280          |            |           | 0         | 47           | 10         |      |      | 0             | 2            | 0         | 351.7         | 134.3         | 2.8                 | 52.0          |
| May 13       | 8,786          |        |      | 518          |            |           | 1         | 60           | 16         |      |      | 6             | 0            | 0         | 330.0         | 116.3         | 2.4                 | 54.0          |
| May 14       | 8,224          |        |      | 674          |            |           | 0         | 77           | 27         |      |      | 10            | 8            | 0         | 308.2         | 101.2         | 2.5                 | 54.0          |
| May 15       | 7,324          |        |      | 652          |            |           | 0         | 75           | 24         |      |      | 14            | 2            | 0         | 336.5         | 124.0         | 3.5                 | 54.0          |
| May 16       | 4,036          |        |      | 459          |            |           | 0         | 73           | 24         |      |      | 82            | 54           | 0         | 333.0         | 112.6         | 4.0                 | 56.0          |
| May 17       | 4,636          |        |      | 427          |            |           | 0         | 66           | 23         |      |      | 164           | 19           | 0         | 347.1         | 113.0         | 3.0                 | 56.0          |
| May 18       | 3,118          |        |      | 349          |            |           | 0         | 84           | 23         |      |      | 764           | 31           | -1        | 380.6         | 141.5         | 3.5                 | 55.0          |
| May 19       | 2,199          |        |      | 265          |            |           | 0         | 58           | 21         |      |      | 2,387         | 70           | 0         | 391.2         | 155.5         | 3.5                 | 56.0          |
| May 20       | 2,053          |        |      | 261          |            |           | 0         | 53           | 20         |      |      | 1,321         | 150          | 0         | 378.1         | 140.1         | 6.0                 | 56.0          |
| May 21       | 1,987          |        |      | 180          |            |           | 0         | 37           | 12         |      |      | 921           | 139          | 0         | 373.2         | 143.5         | 4.0                 | 57.0          |
| May 22       | 1,097          |        |      | 146          |            |           | 0         | 45           | 22         |      |      | 958           | 141          | 0         | 348.9         | 129.2         | 3.0                 | 57.0          |
| May 23       | 960            |        |      | 114          |            |           | 0         | 45           | 6          |      |      | 828           | 136          | 0         | 378.2         | 148.3         | 3.5                 | 57.0          |
| May 24       | 1,372          |        |      | 128          |            |           | 0         | 56           | 12         |      |      | 510           | 115          | 0         | 382.4         | 143.8         | 3.0                 | 57.0          |
| May 25       | 1,406          |        |      | 163          |            |           | 2         | 66           | 18         |      |      | 3,466         | 93           | 0         | 366.3         | 126.4         | 4.0                 | 57.0          |
| May 26       | 1,160          |        |      | 106          |            |           | 1         | 76           | 16         |      |      | 1,882         | 46           | 0         | 371.7         | 133.7         | 3.5                 | 57.0          |
| May 27       | 1,144          |        |      | 84           |            |           | 3         | 58           | 15         |      |      | 1,202         | 13           | 0         | 327.8         | 99.6          | 4.0                 | 57.0          |
| May 28       | 1,383          |        |      | 107          |            |           | 1         | 90           | 27         |      |      | 1,130         | 15           | 0         | 319.2         | 99.6          | 3.0                 | 56.0          |
| May 29       | 1,494          |        |      | 88           |            |           | 10        | 103          | 26         |      |      | 872           | 25           | 0         | 300.3         | 99.5          | 4.0                 | 56.0          |
| May 30       | 1,833          |        |      | 108          |            |           | 30        | 79           | 17         |      |      | 711           | 29           | 0         | 320.4         | 99.4          | 4.0                 | 57.0          |
| May 31       | 2,149          |        |      | 143          |            |           | 32        | 85           | 17         |      |      | 1,218         | 29           | 0         | 287.6         | 97.6          | 4.2                 | 57.0          |
| <b>TOTAL</b> | <b>134,587</b> |        |      | <b>7,352</b> |            |           | <b>80</b> | <b>1,703</b> | <b>479</b> |      |      | <b>18,446</b> | <b>1,141</b> | <b>-1</b> |               |               |                     |               |

|     |       |  |  |     |  |  |   |    |    |  |  |     |    |   |       |       |     |      |
|-----|-------|--|--|-----|--|--|---|----|----|--|--|-----|----|---|-------|-------|-----|------|
| AVG | 4,342 |  |  | 237 |  |  | 3 | 55 | 15 |  |  | 595 | 37 | 0 | 359.2 | 134.4 | 3.5 | 54.5 |
|-----|-------|--|--|-----|--|--|---|----|----|--|--|-----|----|---|-------|-------|-----|------|

|                |         |         |
|----------------|---------|---------|
| RUN YEAR       | CHINOOK | CHINOOK |
| TOTALS TO DATE | ADULT   | JACK    |
| SPRING         | 158,075 | 7,591   |

|  |           |           |
|--|-----------|-----------|
|  | unclipped |           |
|  | SOCKEYE   | STEELHEAD |
|  | 80        | 4,335     |
|  |           | 1,280     |

|  |        |         |          |
|--|--------|---------|----------|
|  | SHAD   | LAMPREY | STURGEON |
|  | 18,446 | 1,160   | -1       |

TABLE 11

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |               | CHINOOK | COHO         | COHO  | unclipped |                |              |              |      |      | SHAD             | LAMPREY      | STURGEON | DISCH | SPILL | TURBIDITY |       |
|--------------|---------------|---------------|---------|--------------|-------|-----------|----------------|--------------|--------------|------|------|------------------|--------------|----------|-------|-------|-----------|-------|
|              | SPRING        | SUMMER        | FALL    | JACK         | ADULT | JACK      | SOCKEYE        | STEELHEAD    | STEELHEAD    | PINK | CHUM | SHAD             | LAMPREY      | STURGEON | KCFS  | KCFS  | SECCHI    | DEG F |
| Jun 1        |               | 2,264         |         | 131          |       |           | 83             | 81           | 23           |      |      | 1,505            | 41           |          | 292.8 | 95.3  | 5.0       | 57.0  |
| Jun 2        |               | 2,480         |         | 165          |       |           | 175            | 95           | 17           |      |      | 5,419            | 212          |          | 279.1 | 94.5  | 4.4       | 57.0  |
| Jun 3        |               | 1,864         |         | 115          |       |           | 267            | 114          | 34           |      |      | 22,613           | 244          |          | 288.3 | 94.5  | 5.0       | 57.0  |
| Jun 4        |               | 1,998         |         | 119          |       |           | 289            | 74           | 18           |      |      | 35,124           | 113          |          | 307.6 | 96.7  | 4.0       | 58.0  |
| Jun 5        |               | 1,618         |         | 132          |       |           | 334            | 90           | 29           |      |      | 54,707           | 150          |          | 313.0 | 99.0  | 4.0       | 57.0  |
| Jun 6        |               | 1,374         |         | 122          |       |           | 568            | 90           | 27           |      |      | 61,664           | 64           |          | 334.0 | 104.0 | 3.6       | 57.0  |
| Jun 7        |               | 1,386         |         | 115          |       |           | 576            | 135          | 34           |      |      | 142,265          | 180          |          | 363.5 | 128.3 | 4.0       | 57.0  |
| Jun 8        |               | 1,389         |         | 150          |       |           | 1,006          | 142          | 40           |      |      | 182,362          | 518          |          | 346.0 | 115.6 | 4.5       | 58.0  |
| Jun 9        |               | 1,796         |         | 186          |       |           | 1,619          | 175          | 51           |      |      | 126,248          | 312          |          | 369.9 | 141.4 | 4.0       | 58.0  |
| Jun 10       |               | 1,733         |         | 214          |       |           | 2,311          | 158          | 36           |      |      | 88,861           | 99           |          | 353.6 | 128.8 | 4.0       | 57.0  |
| Jun 11       |               | 1,477         |         | 169          |       |           | 2,254          | 167          | 40           |      |      | 100,189          | 134          |          | 337.8 | 132.1 | 4.5       | 57.0  |
| Jun 12       |               | 1,456         |         | 165          |       |           | 3,280          | 182          | 52           |      |      | 108,739          | 207          |          | 349.1 | 148.6 | 4.0       | 57.0  |
| Jun 13       |               | 2,375         |         | 279          |       |           | 6,863          | 187          | 57           |      |      | 104,167          | 252          |          | 348.4 | 155.4 | 4.0       | 57.0  |
| Jun 14       |               | 2,610         |         | 282          |       |           | 6,625          | 179          | 45           |      |      | 94,469           | 240          |          | 344.3 | 136.1 | 4.0       | 58.0  |
| Jun 15       |               | 2,539         |         | 283          |       |           | 6,831          | 248          | 76           |      |      | 101,215          | 134          |          | 348.4 | 135.8 | 7.0       | 59.0  |
| Jun 16       |               | 2,714         |         | 315          |       |           | 11,995         | 268          | 86           |      |      | 167,284          | 231          |          | 321.6 | 112.4 | 6.0       | 59.0  |
| Jun 17       |               | 2,643         |         | 269          |       |           | 15,633         | 326          | 99           |      |      | 176,706          | 452          |          | 325.2 | 116.6 | 5.0       | 59.0  |
| Jun 18       |               | 2,224         |         | 271          |       |           | 15,907         | 299          | 89           |      |      | 90,634           | 462          |          | 329.0 | 139.0 | 4.0       | 60.0  |
| Jun 19       |               | 2,227         |         | 335          |       |           | 19,547         | 368          | 124          |      |      | 66,598           | 255          |          | 353.4 | 160.2 | 4.5       | 60.0  |
| Jun 20       |               | 2,021         |         | 235          |       |           | 19,518         | 332          | 124          |      |      | 85,899           | 245          |          | 362.5 | 170.9 | 5.0       | 60.0  |
| Jun 21       |               | 2,000         |         | 242          |       |           | 22,164         | 302          | 98           |      |      | 96,248           | 445          |          | 356.8 | 160.9 | 4.5       | 61.0  |
| Jun 22       |               | 1,505         |         | 216          |       |           | 21,073         | 377          | 108          |      |      | 76,914           | 431          |          | 346.3 | 150.6 | 4.6       | 62.0  |
| Jun 23       |               | 1,920         |         | 345          |       |           | 26,779         | 375          | 125          |      |      | 51,540           | 342          |          | 367.2 | 169.0 | 4.2       | 61.0  |
| Jun 24       |               | 1,465         |         | 215          |       |           | 23,387         | 306          | 107          |      |      | 40,604           | 300          |          | 356.4 | 159.1 | 4.6       | 61.0  |
| Jun 25       |               | 1,522         |         | 256          |       |           | 38,756         | 462          | 140          |      |      | 42,858           | 362          |          | 409.0 | 212.3 | 5.0       | 61.0  |
| Jun 26       |               | 1,522         |         | 283          |       |           | 41,573         | 503          | 180          |      |      | 38,716           | 321          |          | 389.0 | 197.2 | 4.5       | 61.0  |
| Jun 27       |               | 1,307         |         | 243          |       |           | 31,969         | 454          | 164          |      |      | 35,793           | 242          |          | 421.0 | 215.7 | 5.0       | 61.0  |
| Jun 28       |               | 1,458         |         | 269          |       |           | 23,454         | 426          | 162          |      |      | 63,259           | 414          |          | 399.8 | 184.3 | 4.5       | 62.0  |
| Jun 29       |               | 1,534         |         | 231          |       |           | 19,933         | 506          | 209          |      |      | 44,531           | 361          |          | 388.0 | 160.1 | 4.0       | 62.0  |
| Jun 30       |               | 1,435         |         | 242          |       |           | 17,760         | 522          | 192          |      |      | 24,402           | 310          |          | 394.1 | 167.4 | 4.0       | 62.0  |
| <b>TOTAL</b> |               | <b>55,856</b> |         | <b>6,594</b> |       |           | <b>382,529</b> | <b>7,943</b> | <b>2,586</b> |      |      | <b>2,331,533</b> | <b>8,073</b> |          |       |       |           |       |
| AVG          |               | 1,862         |         | 220          |       |           | 12,751         | 265          | 86           |      |      | 77,718           | 269          |          | 349.8 | 142.7 | 4.5       | 59.1  |

| RUN YEAR       | CHINOOK        | CHINOOK       |
|----------------|----------------|---------------|
| TOTALS TO DATE | ADULT          | JACK          |
| SPRING         | 158,075        | 7,591         |
| SUMMER         | 55,856         | 6,594         |
| <b>TOTAL</b>   | <b>213,931</b> | <b>14,185</b> |

| unclipped |           |           |
|-----------|-----------|-----------|
| SOCKEYE   | STEELHEAD | STEELHEAD |
| 382,609   | 12,278    | 3,866     |

| SHAD      | LAMPREY | STURGEON |
|-----------|---------|----------|
| 2,349,979 | 9,233   | -1       |

TABLE 12

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

JULY 2012

| DATE                  | CHINOOK ADULT        |                     |      | CHINOOK COHO      |                  | COHO unclipped |                |                  | PINK             | CHUM     | SHAD          | LAMPREY          | STURGEON       | DISCH<br>KCFS   | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F       |
|-----------------------|----------------------|---------------------|------|-------------------|------------------|----------------|----------------|------------------|------------------|----------|---------------|------------------|----------------|-----------------|---------------|---------------------|-------------|
|                       | SPRING               | SUMMER              | FALL | JACK              | ADULT            | JACK           | SOCKEYE        | STEELHEAD        |                  |          |               |                  |                |                 |               |                     |             |
| Jul 1                 | 1,404                |                     |      | 236               | 0                | 0              | 18,607         | 718              | 301              | 0        | 14,966        | 219              | 0              | 401.1           | 174.9         | 4.0                 | 62.0        |
| Jul 2                 | 1,381                |                     |      | 219               | 0                | 0              | 16,471         | 664              | 294              | 0        | 8,322         | 126              | 0              | 379.7           | 158.9         | 4.5                 | 62.0        |
| Jul 3                 | 1,184                |                     |      | 273               | 0                | 0              | 15,022         | 753              | 354              | 0        | 7,121         | 175              | 0              | 362.1           | 140.6         | 4.5                 | 62.0        |
| Jul 4                 | 1,154                |                     |      | 255               | 0                | 0              | 13,197         | 688              | 311              | 0        | 6,252         | 99               | 0              | 334.0           | 105.4         | 5.0                 | 61.0        |
| Jul 5                 | 1,344                |                     |      | 230               | 0                | 0              | 11,851         | 820              | 416              | 0        | 3,986         | 123              | 0              | 367.1           | 132.7         | 5.4                 | 62.0        |
| Jul 6                 | 1,102                |                     |      | 235               | 0                | 0              | 12,371         | 874              | 425              | 0        | 4,607         | 139              | 0              | 358.7           | 147.1         | 5.0                 | 62.0        |
| Jul 7                 | 1,247                |                     |      | 272               | 0                | 0              | 11,139         | 1,114            | 496              | 0        | 4,452         | 183              | 0              | 333.8           | 124.0         | 5.3                 | 62.0        |
| Jul 8                 | 1,264                |                     |      | 256               | 0                | 0              | 8,619          | 1,154            | 557              | 1        | 7,408         | 412              | 0              | 319.7           | 115.7         | 5.1                 | 62.0        |
| Jul 9                 | 807                  |                     |      | 157               | 0                | 0              | 5,390          | 1,154            | 602              | 0        | 2,168         | 378              | 0              | 331.9           | 140.1         | 5.0                 | 64.0        |
| Jul 10                | 1,075                |                     |      | 205               | 0                | 0              | 5,079          | 1,362            | 676              | 0        | 814           | 524              | 0              | 334.2           | 148.7         | 4.2                 | 64.0        |
| Jul 11                | 1,039                |                     |      | 205               | 0                | 0              | 3,921          | 1,470            | 756              | 0        | 824           | 266              | 0              | 342.0           | 155.1         | 4.5                 | 65.0        |
| Jul 12                | 1,171                |                     |      | 222               | 0                | 0              | 3,675          | 1,926            | 912              | 0        | 1,393         | 332              | 0              | 343.1           | 151.5         | 4.5                 | 65.0        |
| Jul 13                | 1,080                |                     |      | 259               | 0                | 0              | 2,479          | 2,277            | 1,124            | 0        | 1,675         | 481              | 1              | 331.7           | 132.8         | 3.5                 | 65.0        |
| Jul 14                | 971                  |                     |      | 226               | 0                | 0              | 1,414          | 2,407            | 1,181            | 0        | 2,514         | 212              | 0              | 343.5           | 139.7         | 6.0                 | 66.0        |
| Jul 15                | 957                  |                     |      | 189               | 0                | 0              | 1,131          | 2,480            | 1,207            | 0        | 2,116         | 334              | 0              | 319.3           | 124.2         | 4.0                 | 65.0        |
| Jul 16                | 689                  |                     |      | 189               | 0                | 0              | 584            | 2,697            | 1,303            | 0        | 1,110         | 237              | 0              | 358.0           | 164.3         | 5.0                 | 66.0        |
| Jul 17                | 822                  |                     |      | 203               | 0                | 0              | 400            | 2,920            | 1,474            | 0        | 1,545         | 316              | 1              | 339.2           | 142.9         | 4.5                 | 66.0        |
| Jul 18                | 787                  |                     |      | 139               | 0                | 0              | 287            | 2,847            | 1,425            | 0        | 1,466         | 490              | 0              | 297.8           | 103.8         | 5.0                 | 66.0        |
| Jul 19                | 587                  |                     |      | 166               | 0                | 0              | 204            | 3,112            | 1,511            | 0        | 1,336         | 551              | 0              | 298.5           | 99.0          | 4.5                 | 66.0        |
| Jul 20                | 599                  |                     |      | 133               | 0                | 0              | 174            | 3,585            | 1,653            | 0        | 1,176         | 677              | 1              | 292.1           | 98.3          | 4.0                 | 66.0        |
| Jul 21                | 413                  |                     |      | 111               | 0                | 0              | 121            | 2,706            | 1,202            | 0        | 552           | 312              | 0              | 343.7           | 135.8         | 5.2                 | 66.0        |
| Jul 22                | 579                  |                     |      | 133               | 0                | 0              | 147            | 3,713            | 1,718            | 0        | 808           | 273              | 0              | 334.0           | 130.2         | 4.0                 | 67.0        |
| Jul 23                | 386                  |                     |      | 108               | 0                | 0              | 124            | 3,019            | 1,397            | 0        | 249           | 333              | 0              | 328.8           | 132.2         | 4.5                 | 67.0        |
| Jul 24                | 437                  |                     |      | 99                | 0                | 0              | 101            | 2,672            | 1,217            | 0        | 424           | 556              | 0              | 309.4           | 159.1         | 5.0                 | 67.0        |
| Jul 25                | 603                  |                     |      | 138               | 0                | 0              | 73             | 3,989            | 1,771            | 0        | 354           | 407              | 0              | 281.3           | 98.8          | 5.0                 | 67.0        |
| Jul 26                | 458                  |                     |      | 132               | 0                | 0              | 65             | 3,756            | 1,632            | 0        | 411           | 714              | 0              | 291.6           | 100.9         | 5.2                 | 68.0        |
| Jul 27                | 649                  |                     |      | 149               | 1                | 0              | 81             | 4,464            | 1,865            | 0        | 377           | 319              | 0              | 291.9           | 96.7          | 5.0                 | 68.0        |
| Jul 28                | 541                  |                     |      | 171               | 0                | 0              | 61             | 4,378            | 1,798            | 0        | 285           | 552              | 0              | 258.1           | 88.3          | 4.0                 | 67.0        |
| Jul 29                | 406                  |                     |      | 119               | 0                | 1              | 49             | 3,905            | 1,562            | 0        | 247           | 366              | 0              | 264.6           | 90.1          | 4.5                 | 68.0        |
| Jul 30                | 313                  |                     |      | 97                | 0                | 0              | 28             | 2,695            | 1,157            | 0        | 221           | 446              | -1             | 242.4           | 119.9         | 6.0                 | 68.0        |
| Jul 31                | 358                  |                     |      | 115               | 1                | 0              | 24             | 2,675            | 1,115            | 0        | 103           | 228              | 0              | 263.2           | 138.4         | 4.8                 | 67.0        |
| <b>TOTAL</b>          | <b>25,807</b>        |                     |      | <b>5,641</b>      | <b>2</b>         | <b>1</b>       | <b>132,889</b> | <b>72,994</b>    | <b>33,412</b>    | <b>1</b> | <b>79,282</b> | <b>10,780</b>    | <b>2</b>       |                 |               |                     |             |
| <b>AVG</b>            | <b>832</b>           |                     |      | <b>182</b>        | <b>0</b>         | <b>0</b>       | <b>4,287</b>   | <b>2,355</b>     | <b>1,078</b>     | <b>0</b> | <b>2,557</b>  | <b>348</b>       | <b>0</b>       | <b>322.5</b>    | <b>128.7</b>  | <b>4.7</b>          | <b>65.1</b> |
| <b>RUN YEAR</b>       | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |      | <b>COHO ADULT</b> | <b>COHO JACK</b> |                | <b>SOCKEYE</b> | <b>STEELHEAD</b> | <b>STEELHEAD</b> |          | <b>CHUM</b>   | <b>SHAD</b>      | <b>LAMPREY</b> | <b>STURGEON</b> |               |                     |             |
| <b>TOTALS TO DATE</b> | <b>158,075</b>       | <b>7,591</b>        |      | <b>2</b>          | <b>1</b>         |                | <b>515,498</b> | <b>85,272</b>    | <b>37,278</b>    |          | <b>1</b>      | <b>2,429,261</b> | <b>20,013</b>  | <b>1</b>        |               |                     |             |
| <b>SPRING</b>         | <b>81,663</b>        | <b>12,235</b>       |      |                   |                  |                |                |                  |                  |          |               |                  |                |                 |               |                     |             |
| <b>SUMMER</b>         | <b>81,663</b>        | <b>12,235</b>       |      |                   |                  |                |                |                  |                  |          |               |                  |                |                 |               |                     |             |
| <b>TOTAL</b>          | <b>239,738</b>       | <b>19,826</b>       |      |                   |                  |                |                |                  |                  |          |               |                  |                |                 |               |                     |             |

TABLE 13

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |        | CHINOOK COHO  |               | COHO         |            | unclipped  |               |               |      | SHAD | LAMPREY      | STURGEON     | DISCH SPILL TURBIDITY |       |      |        |       |
|--------------|---------------|--------|---------------|---------------|--------------|------------|------------|---------------|---------------|------|------|--------------|--------------|-----------------------|-------|------|--------|-------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT        | JACK       | SOCKEYE    | STEELHEAD     | STEELHEAD     | PINK |      |              |              | CHUM                  | KCFS  | KCFS | SECCHI | DEG F |
| Aug 1        |               |        | 722           | 237           | 5            | 1          | 32         | 5,356         | 2,086         |      |      | 200          | 129          | 0                     | 259.2 | 95.6 | 4.0    | 68.0  |
| Aug 2        |               |        | 459           | 149           | 2            | 2          | 17         | 3,738         | 1,399         |      |      | 259          | 202          | 0                     | 232.2 | 89.6 | 6.0    | 68.0  |
| Aug 3        |               |        | 490           | 146           | 1            | 0          | 12         | 3,441         | 1,277         |      |      | 156          | 158          | 0                     | 240.0 | 89.7 | 6.0    | 68.0  |
| Aug 4        |               |        | 509           | 154           | 5            | 1          | 14         | 3,595         | 1,405         |      |      | 198          | 279          | 0                     | 241.0 | 89.5 | 6.0    | 69.0  |
| Aug 5        |               |        | 448           | 112           | 2            | 1          | 23         | 3,141         | 1,220         |      |      | 361          | 332          | 0                     | 221.2 | 89.2 | 6.0    | 69.0  |
| Aug 6        |               |        | 482           | 129           | 9            | 5          | 14         | 3,904         | 1,462         |      |      | 255          | 302          | 0                     | 219.4 | 88.9 | 6.0    | 70.0  |
| Aug 7        |               |        | 619           | 178           | 10           | 1          | 11         | 4,899         | 1,806         |      |      | 295          | 437          | 0                     | 230.3 | 88.8 | 6.0    | 71.0  |
| Aug 8        |               |        | 479           | 156           | 15           | 5          | 3          | 2,976         | 1,033         |      |      | 201          | 265          | 0                     | 207.0 | 89.6 | 6.0    | 71.0  |
| Aug 9        |               |        | 732           | 158           | 22           | 2          | 4          | 3,279         | 1,182         |      |      | 128          | 334          | 0                     | 211.8 | 90.1 | 6.0    | 70.0  |
| Aug 10       |               |        | 814           | 158           | 20           | 8          | 4          | 3,313         | 1,079         |      |      | 131          | 222          | 0                     | 199.6 | 89.1 | 6.0    | 70.0  |
| Aug 11       |               |        | 609           | 124           | 24           | 6          | 7          | 2,911         | 950           |      |      | 178          | 316          | 0                     | 194.1 | 90.0 | 6.0    | 70.0  |
| Aug 12       |               |        | 794           | 150           | 27           | 16         | 5          | 2,892         | 946           |      |      | 73           | 218          | 0                     | 225.9 | 89.2 | 6.0    | 71.0  |
| Aug 13       |               |        | 806           | 143           | 44           | 10         | 3          | 2,943         | 1,076         |      |      | 94           | 348          | 0                     | 229.0 | 88.4 | 6.0    | 71.0  |
| Aug 14       |               |        | 678           | 152           | 47           | 9          | 4          | 3,413         | 1,179         |      |      | 27           | 300          | 0                     | 188.2 | 88.1 | 6.0    | 71.0  |
| Aug 15       |               |        | 665           | 132           | 27           | 11         | 7          | 3,494         | 1,002         |      |      | 47           | 223          | 0                     | 189.5 | 87.4 | *      | 72.0  |
| Aug 16       |               |        | 833           | 174           | 42           | 19         | 2          | 3,188         | 1,010         |      |      | 61           | 172          | 0                     | 188.2 | 89.9 | *      | 72.0  |
| Aug 17       |               |        | 751           | 181           | 39           | 16         | 0          | 2,894         | 868           |      |      | 81           | 399          | 0                     | 181.0 | 89.3 | *      | 72.0  |
| Aug 18       |               |        | 1,071         | 234           | 52           | 9          | 5          | 2,309         | 724           |      |      | 57           | 330          | 0                     | 194.8 | 89.7 | *      | 73.0  |
| Aug 19       |               |        | 1,224         | 360           | 43           | 16         | 0          | 2,143         | 733           |      |      | 21           | 318          | 0                     | 176.1 | 90.2 | *      | 72.0  |
| Aug 20       |               |        | 949           | 366           | 71           | 11         | -1         | 1,815         | 633           |      |      | 24           | 260          | 0                     | 193.4 | 89.3 | *      | 72.0  |
| Aug 21       |               |        | 815           | 314           | 95           | 11         | 2          | 1,710         | 546           |      |      | 45           | 184          | 0                     | 182.6 | 89.6 | *      | 72.0  |
| Aug 22       |               |        | 2,062         | 487           | 148          | 14         | 0          | 1,290         | 413           |      |      | 48           | 112          | 0                     | 197.6 | 89.6 | *      | 71.0  |
| Aug 23       |               |        | 3,152         | 770           | 314          | 28         | 0          | 1,539         | 545           |      |      | 37           | 151          | 0                     | 182.5 | 90.8 | *      | 70.0  |
| Aug 24       |               |        | 3,174         | 738           | 282          | 32         | 0          | 1,441         | 521           |      |      | 13           | 62           | 0                     | 189.9 | 92.0 | 6.0    | 70.0  |
| Aug 25       |               |        | 3,336         | 775           | 317          | 42         | 0          | 2,044         | 689           |      |      | 22           | 73           | 0                     | 184.3 | 92.2 | 6.0    | 70.0  |
| Aug 26       |               |        | 4,275         | 878           | 354          | 38         | 1          | 1,954         | 628           |      |      | 19           | 28           | 0                     | 162.1 | 91.4 | 6.0    | 70.0  |
| Aug 27       |               |        | 6,033         | 1,076         | 421          | 38         | 0          | 1,986         | 634           |      |      | 25           | 118          | 0                     | 183.1 | 91.2 | 7.0    | 70.0  |
| Aug 28       |               |        | 7,375         | 1,494         | 520          | 36         | 1          | 2,588         | 802           |      |      | 34           | 77           | 0                     | 155.6 | 90.6 | 7.0    | 70.0  |
| Aug 29       |               |        | 6,928         | 1,415         | 488          | 49         | 0          | 2,165         | 609           |      |      | 15           | 63           | 0                     | 163.3 | 91.1 | 7.0    | 70.0  |
| Aug 30       |               |        | 7,207         | 1,565         | 734          | 50         | 0          | 2,022         | 574           |      |      | 18           | 82           | 0                     | 155.1 | 91.1 | 7.0    | 70.0  |
| Aug 31       |               |        | 12,390        | 2,292         | 1,423        | 72         | 0          | 2,036         | 639           |      |      | 10           | 61           | 0                     | 164.6 | 91.6 | 7.0    | 70.0  |
| <b>TOTAL</b> |               |        | <b>70,881</b> | <b>15,397</b> | <b>5,603</b> | <b>559</b> | <b>170</b> | <b>86,419</b> | <b>29,670</b> |      |      | <b>3,133</b> | <b>6,555</b> | <b>0</b>              |       |      |        |       |

|     |  |  |       |     |     |    |   |       |     |  |  |     |     |   |       |      |     |      |
|-----|--|--|-------|-----|-----|----|---|-------|-----|--|--|-----|-----|---|-------|------|-----|------|
| AVG |  |  | 2,286 | 497 | 181 | 18 | 5 | 2,788 | 957 |  |  | 101 | 211 | 0 | 198.1 | 90.1 | 6.1 | 70.4 |
|-----|--|--|-------|-----|-----|----|---|-------|-----|--|--|-----|-----|---|-------|------|-----|------|

| RUN YEAR     | CHINOOK        |               | COHO  |       | unclipped |         |           |           | CHUM      | SHAD   | LAMPREY | STURGEON | *Data unavailable |      |        |       |  |  |
|--------------|----------------|---------------|-------|-------|-----------|---------|-----------|-----------|-----------|--------|---------|----------|-------------------|------|--------|-------|--|--|
|              | TOTALS TO DATE | ADULT         | JACK  | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD |           |        |         |          | KCFS              | KCFS | SECCHI | DEG F |  |  |
| SPRING       | 158,075        | 7,591         | 5,605 | 560   | 515,668   | 171,691 | 66,948    | 1         | 2,432,394 | 26,568 | 1       |          |                   |      |        |       |  |  |
| SUMMER       | 81,663         | 12,235        |       |       |           |         |           |           |           |        |         |          |                   |      |        |       |  |  |
| FALL         | 70,881         | 15,397        |       |       |           |         |           |           |           |        |         |          |                   |      |        |       |  |  |
| <b>TOTAL</b> | <b>310,619</b> | <b>35,223</b> |       |       |           |         |           |           |           |        |         |          |                   |      |        |       |  |  |

TABLE 14

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE           | CHINOOK ADULT |                |               | CHINOOK COHO  |              | unclipped |               |               |           |                  | LAMPREY STURGEON |                   | DISCH     | SPILL | TURBIDITY |       |      |
|----------------|---------------|----------------|---------------|---------------|--------------|-----------|---------------|---------------|-----------|------------------|------------------|-------------------|-----------|-------|-----------|-------|------|
|                | SPRING        | SUMMER         | FALL          | JACK          | ADULT        | JACK      | SOCKEYE       | STEELHEAD     | STEELHEAD | PINK             | CHUM             | SHAD              | KCFS      | KCFS  | SECCHI    | DEG F |      |
| Sep 1          |               | 14,015         | 2,869         | 2,197         | 138          | 0         | 2,655         | 707           | 0         | 0                |                  | 149               | 0         | 148.9 | 1.8       | 6.0   | 70.0 |
| Sep 2          |               | 12,686         | 2,824         | 2,416         | 115          | -1        | 2,253         | 663           | 0         | 0                |                  | 129               | 0         | 114.6 | 1.3       | 5.0   | 69.0 |
| Sep 3          |               | 11,946         | 3,078         | 2,528         | 110          | 0         | 2,450         | 739           | 0         | 1                |                  | 135               | 1         | 100.8 | 1.3       | 7.0   | 68.0 |
| Sep 4          |               | 10,828         | 2,402         | 2,195         | 98           | 2         | 2,310         | 610           | 0         | 0                |                  | 63                | 0         | 119.0 | 1.3       | 7.0   | 68.0 |
| Sep 5          |               | 9,967          | 2,312         | 1,731         | 74           | 1         | 1,969         | 562           | 0         | 0                |                  | 77                | 0         | 141.9 | 10.0      | 7.0   | 68.0 |
| Sep 6          |               | 11,487         | 2,545         | 1,626         | 39           | 0         | 1,727         | 485           | 0         | 0                |                  | 153               | 0         | 162.6 | 5.0       | 7.0   | 69.0 |
| Sep 7          |               | 12,511         | 3,677         | 1,452         | 48           | 0         | 1,834         | 497           | 0         | 0                |                  | 76                | 0         | 123.8 | 1.4       | *     | 69.0 |
| Sep 8          |               | 14,186         | 3,989         | 1,220         | 30           | 0         | 1,675         | 494           | 0         | 0                |                  | 170               | 0         | 122.0 | 1.3       | *     | 69.0 |
| Sep 9          |               | 14,675         | 4,068         | 986           | 60           | 0         | 1,802         | 549           | 0         | 0                |                  | 330               | 0         | 100.2 | 1.3       | *     | 69.0 |
| Sep 10         |               | 13,256         | 3,868         | 943           | 58           | 0         | 1,918         | 564           | 0         | 0                |                  | 230               | 1         | 110.9 | 1.3       | *     | 68.0 |
| Sep 11         |               | 8,165          | 2,741         | 506           | 66           | 0         | 1,358         | 398           | 0         | 0                |                  | 325               | 1         | 118.0 | 1.3       | 7.0   | 69.0 |
| Sep 12         |               | 7,102          | 2,265         | 405           | 43           | 0         | 1,296         | 405           | 1         | 0                |                  | 322               | 0         | 136.4 | 1.3       | 7.0   | 68.0 |
| Sep 13         |               | 14,112         | 3,281         | 1,119         | 43           | 0         | 1,330         | 367           | 0         | 0                |                  | 85                | 0         | 108.4 | 1.3       | 6.0   | 68.0 |
| Sep 14         |               | 18,027         | 5,672         | 3,492         | 69           | 0         | 2,113         | 686           | 0         | 0                |                  | 52                | 0         | 103.3 | 1.3       | 7.0   | 67.0 |
| Sep 15         |               | 15,424         | 6,230         | 3,055         | 99           | 0         | 2,613         | 730           | 0         | 0                |                  | 86                | 1         | 112.9 | 1.3       | 7.0   | 67.0 |
| Sep 16         |               | 11,797         | 4,916         | 2,351         | 87           | 0         | 2,522         | 758           | 0         | 0                |                  | 3                 | 0         | 118.6 | 1.3       | 7.0   | 67.0 |
| Sep 17         |               | 7,687          | 4,346         | 992           | 59           | 2         | 2,089         | 590           | 0         | 0                |                  | 83                | 1         | 114.1 | 1.2       | 7.0   | 68.0 |
| Sep 18         |               | 6,578          | 3,894         | 614           | 52           | 1         | 1,735         | 467           | 0         | 0                |                  | 15                | 1         | 119.2 | 1.2       | 7.0   | 68.0 |
| Sep 19         |               | 6,088          | 3,243         | 528           | 49           | 0         | 1,603         | 443           | 0         | 0                |                  | -16               | 3         | 134.8 | 1.2       | 7.0   | 68.0 |
| Sep 20         |               | 4,917          | 3,033         | 367           | 44           | 0         | 1,212         | 382           | 0         | 0                |                  | -11               | 0         | 112.1 | 1.2       | 7.0   | 68.0 |
| Sep 21         |               | 6,602          | 4,196         | 550           | 60           | 0         | 1,716         | 456           | 0         | 0                |                  | 19                | 2         | 109.6 | 1.3       | 7.0   | 68.0 |
| Sep 22         |               | 4,059          | 2,605         | 374           | 41           | 0         | 1,183         | 344           | 0         | 0                |                  | 13                | 1         | 104.3 | 1.3       | 7.0   | 68.0 |
| Sep 23         |               | 4,577          | 2,461         | 494           | 30           | 0         | 1,214         | 306           | 0         | 0                |                  | 2                 | 0         | 113.0 | 1.2       | 7.0   | 67.0 |
| Sep 24         |               | 2,639          | 1,710         | 271           | 24           | 0         | 762           | 196           | 0         | 0                |                  | -1                | 1         | 101.8 | 1.0       | 7.0   | 66.0 |
| Sep 25         |               | 2,901          | 2,450         | 320           | 59           | 0         | 879           | 253           | 0         | 0                |                  | 18                | 2         | 100.4 | 0.6       | 7.0   | 66.0 |
| Sep 26         |               | 3,933          | 3,217         | 445           | 74           | 0         | 1,326         | 372           | 0         | 0                |                  | 18                | 2         | 108.8 | 0.6       | 7.0   | 66.0 |
| Sep 27         |               | 3,606          | 2,770         | 531           | 94           | 0         | 1,351         | 372           | 0         | 0                |                  | 12                | 2         | 94.6  | 0.6       | 7.0   | 66.0 |
| Sep 28         |               | 3,335          | 2,144         | 708           | 122          | 0         | 1,268         | 351           | 0         | 0                |                  | -8                | 0         | 114.3 | 0.6       | 7.0   | 66.0 |
| Sep 29         |               | 1,957          | 1,444         | 596           | 101          | 0         | 914           | 240           | 0         | 0                |                  | 38                | 0         | 111.2 | 0.6       | 7.0   | 66.0 |
| Sep 30         |               | 1,363          | 1,124         | 470           | 88           | 0         | 889           | 259           | 0         | 0                |                  | 16                | 0         | 93.0  | 0.6       | 7.0   | 66.0 |
| <b>TOTAL</b>   |               | <b>260,426</b> | <b>95,374</b> | <b>35,482</b> | <b>2,074</b> | <b>5</b>  | <b>49,966</b> | <b>14,245</b> | <b>1</b>  | <b>1</b>         |                  | <b>2,583</b>      | <b>19</b> |       |           |       |      |
| AVG            |               | 8,681          | 3,179         | 1,183         | 69           | 0         | 1,666         | 475           | 0         | 0                |                  | 86                | 1         | 115.8 | 1.6       | 6.8   | 67.7 |
| RUN YEAR       | CHINOOK       | CHINOOK        | COHO          | COHO          | unclipped    |           |               |               |           | LAMPREY STURGEON |                  | *Data unavailable |           |       |           |       |      |
| TOTALS TO DATE | ADULT         | JACK           | ADULT         | JACK          | SOCKEYE      | STEELHEAD | STEELHEAD     | PINK          | CHUM      | SHAD             | LAMPREY          | STURGEON          |           |       |           |       |      |
| SPRING         | 158,075       | 7,591          | 41,087        | 2,634         | 515,673      | 221,657   | 81,193        | 1             | 2         | 2,432,394        | 29,151           | 20                |           |       |           |       |      |
| SUMMER         | 81,663        | 12,235         |               |               |              |           |               |               |           |                  |                  |                   |           |       |           |       |      |
| FALL           | 331,307       | 110,771        |               |               |              |           |               |               |           |                  |                  |                   |           |       |           |       |      |
| TOTAL          | 571,045       | 130,597        |               |               |              |           |               |               |           |                  |                  |                   |           |       |           |       |      |

TABLE 15

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK       | COHO          | COHO          | unclipped    |         |               |              |      |           | DISCH | SPILL     | TURBIDITY |       |      |        |       |
|--------------|---------------|--------|---------------|---------------|---------------|--------------|---------|---------------|--------------|------|-----------|-------|-----------|-----------|-------|------|--------|-------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT         | JACK         | SOCKEYE | STEELHEAD     | STEELHEAD    | PINK | CHUM      | SHAD  | LAMPREY   | STURGEON  | KCFS  | KCFS | SECCHI | DEG F |
| Oct 1        |               |        | 1,432         | 1,184         | 497           | 60           |         | 901           | 242          |      | 0         |       | 3         | 0         | 87.1  | 0.6  | 7.0    | 66.0  |
| Oct 2        |               |        | 2,082         | 1,409         | 484           | 72           |         | 937           | 263          |      | 0         |       | 18        | 0         | 88.2  | 0.6  | 7.0    | 66.0  |
| Oct 3        |               |        | 2,284         | 1,264         | 636           | 125          |         | 803           | 229          |      | 0         |       | 16        | 0         | 113.3 | 0.7  | 5.5    | 66.0  |
| Oct 4        |               |        | 1,195         | 717           | 340           | 70           |         | 512           | 147          |      | 0         |       | 16        | 1         | 104.1 | 0.6  | 7.0    | 65.0  |
| Oct 5        |               |        | 522           | 630           | 164           | 45           |         | 333           | 87           |      | 0         |       | 0         | 0         | 81.6  | 0.6  | 7.0    | 64.0  |
| Oct 6        |               |        | 750           | 901           | 239           | 39           |         | 472           | 124          |      | 0         |       | -4        | 0         | 80.0  | 0.6  | 6.5    | 64.0  |
| Oct 7        |               |        | 1,044         | 835           | 346           | 66           |         | 556           | 148          |      | 0         |       | 4         | 0         | 75.6  | 0.6  | 5.0    | 63.0  |
| Oct 8        |               |        | 687           | 663           | 312           | 69           |         | 438           | 109          |      | 0         |       | -4        | 0         | 79.3  | 0.6  | 7.0    | 62.0  |
| Oct 9        |               |        | 1,520         | 866           | 467           | 82           |         | 614           | 176          |      | 0         |       | -3        | 0         | 109.4 | 0.6  | 7.0    | 62.0  |
| Oct 10       |               |        | 888           | 560           | 449           | 119          |         | 462           | 133          |      | 0         |       | 6         | 0         | 98.6  | 0.6  | 7.0    | 62.0  |
| Oct 11       |               |        | 807           | 501           | 686           | 121          |         | 397           | 128          |      | 0         |       | 10        | 0         | 91.1  | 0.6  | 7.0    | 63.0  |
| Oct 12       |               |        | 320           | 246           | 351           | 106          |         | 307           | 84           |      | 0         |       | 1         | 0         | 80.1  | 0.6  | 6.0    | 63.0  |
| Oct 13       |               |        | 283           | 212           | 416           | 75           |         | 245           | 72           |      | 0         |       | 6         | -1        | 72.9  | 0.6  | 7.0    | 63.0  |
| Oct 14       |               |        | 485           | 306           | 958           | 157          |         | 265           | 99           |      | 0         |       | 4         | 0         | 73.1  | 0.6  | 7.0    | 62.0  |
| Oct 15       |               |        | 318           | 265           | 769           | 114          |         | 285           | 85           |      | 0         |       | -1        | 1         | 80.8  | 0.6  | 6.0    | 63.0  |
| Oct 16       |               |        | 362           | 335           | 931           | 163          |         | 326           | 104          |      | 0         |       | 2         | 0         | 80.9  | 0.6  | 7.0    | 63.0  |
| Oct 17       |               |        | 222           | 198           | 600           | 115          |         | 227           | 63           |      | 0         |       | 4         | 0         | 84.9  | 0.6  | 7.0    | 63.0  |
| Oct 18       |               |        | 391           | 199           | 605           | 53           |         | 216           | 77           |      | 0         |       | -30       | 0         | 93.5  | 0.6  | 6.0    | 62.0  |
| Oct 19       |               |        | 145           | 70            | 318           | 31           |         | 144           | 42           |      | 0         |       | 13        | 0         | 78.0  | 0.6  | 2.5    | 61.0  |
| Oct 20       |               |        | 144           | 171           | 253           | 40           |         | 203           | 76           |      | 0         |       | -1        | 0         | 80.7  | 0.5  | 4.0    | 61.0  |
| Oct 21       |               |        | 286           | 201           | 352           | 54           |         | 225           | 83           |      | 1         |       | -2        | 0         | 95.0  | 0.6  | 7.0    | 61.0  |
| Oct 22       |               |        | 325           | 203           | 402           | 73           |         | 266           | 87           |      | 0         |       | -4        | 0         | 113.8 | 0.6  | 6.0    | 60.0  |
| Oct 23       |               |        | 308           | 215           | 534           | 92           |         | 235           | 53           |      | 0         |       | 6         | 0         | 116.3 | 0.6  | 6.5    | 59.0  |
| Oct 24       |               |        | 225           | 197           | 339           | 68           |         | 169           | 55           |      | 1         |       | 0         | 1         | 113.9 | 0.6  | 7.0    | 59.0  |
| Oct 25       |               |        | 240           | 182           | 372           | 72           |         | 216           | 88           |      | 2         |       | 5         | 0         | 122.1 | 0.8  | 7.0    | 59.0  |
| Oct 26       |               |        | 143           | 113           | 239           | 63           |         | 156           | 47           |      | 1         |       | 10        | 0         | 136.5 | 1.1  | 7.0    | 59.0  |
| Oct 27       |               |        | 133           | 96            | 171           | 46           |         | 144           | 48           |      | 2         |       | 6         | 0         | 118.9 | 1.1  | 7.0    | 59.0  |
| Oct 28       |               |        | 175           | 88            | 191           | 32           |         | 125           | 35           |      | 2         |       | -8        | 1         | 107.1 | 1.1  | 7.0    | 57.0  |
| Oct 29       |               |        | 166           | 117           | 270           | 35           |         | 139           | 45           |      | 0         |       | 2         | 0         | 134.8 | 1.1  | 6.0    | 58.0  |
| Oct 30       |               |        | 87            | 47            | 181           | 19           |         | 67            | 23           |      | 4         |       | 6         | -1        | 138.5 | 1.1  | 6.0    | 58.0  |
| Oct 31       |               |        | 72            | 41            | 178           | 19           |         | 93            | 37           |      | 2         |       | 0         | 0         | 134.0 | 1.1  | 3.0    | 58.0  |
| <b>TOTAL</b> |               |        | <b>18,041</b> | <b>13,032</b> | <b>13,050</b> | <b>2,295</b> |         | <b>10,478</b> | <b>3,089</b> |      | <b>15</b> |       | <b>81</b> | <b>2</b>  |       |      |        |       |

|     |  |  |     |     |     |    |  |     |     |  |   |  |   |   |      |     |     |      |
|-----|--|--|-----|-----|-----|----|--|-----|-----|--|---|--|---|---|------|-----|-----|------|
| AVG |  |  | 582 | 420 | 421 | 74 |  | 338 | 100 |  | 0 |  | 3 | 0 | 98.8 | 0.7 | 6.3 | 61.6 |
|-----|--|--|-----|-----|-----|----|--|-----|-----|--|---|--|---|---|------|-----|-----|------|

| RUN YEAR | CHINOOK        |         | COHO | COHO  | unclipped |         |           |           |         |        |      |         |           |        |    |
|----------|----------------|---------|------|-------|-----------|---------|-----------|-----------|---------|--------|------|---------|-----------|--------|----|
|          | TOTALS TO DATE | ADULT   | JACK | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK    | CHUM   | SHAD | LAMPREY | STURGEON  |        |    |
| SPRING   | 158,075        | 7,591   |      |       |           | 54,137  | 4,929     | 515,673   | 232,135 | 84,282 | 1    | 17      | 2,432,394 | 29,232 | 22 |
| SUMMER   | 81,663         | 12,235  |      |       |           |         |           |           |         |        |      |         |           |        |    |
| FALL     | 349,348        | 123,803 |      |       |           |         |           |           |         |        |      |         |           |        |    |
| TOTAL    | 589,086        | 143,629 |      |       |           |         |           |           |         |        |      |         |           |        |    |



TABLE 16

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

NOVEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK |      | COHO  |      | unclipped |           |           |      |      |      | DISCH<br>KCF5 | SPILL<br>KCF5 | TURBIDITY<br>SECCHI | TEMP<br>DEG F |         |          |
|--------------|---------------|--------|---------|------|-------|------|-----------|-----------|-----------|------|------|------|---------------|---------------|---------------------|---------------|---------|----------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT | JACK | SOCKEYE   | STEELHEAD | STEELHEAD | PINK | CHUM | SHAD |               |               |                     |               | LAMPREY | STURGEON |
| Nov 1        |               |        | 68      | 42   | 108   | 12   |           | 89        | 30        |      | 9    |      | 0             | 0             | 124.3               | 1.1           | 3.0     | 58.0     |
| Nov 2        |               |        | 75      | 31   | 141   | 23   |           | 126       | 53        |      | 4    |      | -1            | 0             | 127.8               | 1.1           | 5.5     | 58.0     |
| Nov 3        |               |        | 67      | 34   | 76    | 2    |           | 95        | 48        |      | 3    |      | 0             | 1             | 117.5               | 1.1           | 5.0     | 58.0     |
| Nov 4        |               |        | 92      | 43   | 68    | 14   |           | 94        | 38        |      | 6    |      | 2             | 1             | 130.5               | 1.1           | 7.0     | 57.0     |
| Nov 5        |               |        | 81      | 25   | 57    | 3    |           | 71        | 28        |      | 1    |      | -1            | -1            | 123.7               | 1.1           | 7.0     | 57.0     |
| Nov 6        |               |        | 98      | 38   | 86    | 10   |           | 64        | 28        |      | 4    |      | 1             | 0             | 124.1               | 1.1           | 7.0     | 57.0     |
| Nov 7        |               |        | 48      | 19   | 51    | 6    |           | 47        | 23        |      | 1    |      | 1             | 0             | 124.5               | 1.1           | 7.0     | 57.0     |
| Nov 8        |               |        | 59      | 21   | 31    | 9    |           | 45        | 18        |      | 6    |      | -11           | 1             | 125.6               | 1.1           | 7.0     | 56.0     |
| Nov 9        |               |        | 20      | 9    | 12    | 5    |           | 34        | 18        |      | 3    |      | 0             | 0             | 123.3               | 1.1           | 6.5     | 56.0     |
| Nov 10       |               |        | 25      | 3    | 14    | 3    |           | 33        | 11        |      | 1    |      | 0             | 0             | 136.3               | 1.1           | 7.0     | 56.0     |
| Nov 11       |               |        | 25      | 9    | 10    | 1    |           | 24        | 10        |      | 1    |      | 0             | 0             | 135.1               | 1.1           | 7.0     | 55.0     |
| Nov 12       |               |        | 16      | 6    | 19    | 6    |           | 25        | 9         |      | 0    |      | 0             | 0             | 140.3               | 1.1           | 7.0     | 54.0     |
| Nov 13       |               |        | 26      | 13   | 28    | 8    |           | 55        | 20        |      | 2    |      | -1            | 0             | 135.9               | 1.1           | 7.0     | 54.0     |
| Nov 14       |               |        | 17      | 4    | 19    | 7    |           | 37        | 12        |      | 0    |      | 0             | 0             | 145.6               | 1.1           | 7.0     | 54.0     |
| Nov 15       |               |        | 18      | 15   | 25    | 1    |           | 28        | 16        |      | 1    |      | 1             | 0             | 142.1               | 1.1           | 6.0     | 54.0     |
| Nov 16       |               |        | 14      | 4    | 11    | 2    |           | 27        | 8         |      | 2    |      | 0             | 0             | 140.4               | 1.1           | 7.0     | 54.0     |
| Nov 17       |               |        | 13      | 9    | 3     | 0    |           | 21        | 11        |      | 0    |      | 0             | 0             | 137.2               | 1.1           | 6.0     | 54.0     |
| Nov 18       |               |        | 5       | 1    | 10    | 2    |           | 16        | 10        |      | 0    |      | 0             | 0             | 139.5               | 1.1           | 6.0     | 54.0     |
| Nov 19       |               |        | 9       | 8    | 6     | 3    |           | 23        | 11        |      | 1    |      | 0             | 0             | 141.4               | 1.1           | 0.5     | 53.0     |
| Nov 20       |               |        | 6       | 4    | 17    | 4    |           | 9         | 6         |      | 0    |      | 1             | -1            | 146.5               | 1.1           | 3.5     | 53.0     |
| Nov 21       |               |        | 3       | 2    | 17    | 1    |           | 15        | 7         |      | 1    |      | 0             | 0             | 134.4               | 1.1           | 4.5     | 52.0     |
| Nov 22       |               |        | 6       | 7    | 9     | 0    |           | 25        | 10        |      | 0    |      | 0             | -1            | 138.6               | 1.1           | 4.5     | 51.0     |
| Nov 23       |               |        | 2       | 2    | 2     | 0    |           | 13        | 6         |      | 1    |      | -1            | 0             | 140.2               | 1.1           | 5.0     | 52.0     |
| Nov 24       |               |        | 6       | 2    | 0     | 0    |           | 13        | 4         |      | 0    |      | 0             | 0             | 139.1               | 1.1           | 6.5     | 52.0     |
| Nov 25       |               |        | 4       | 0    | 1     | 0    |           | 17        | 13        |      | 0    |      | 0             | 0             | 137.8               | 1.1           | 7.0     | 52.0     |
| Nov 26       |               |        | 3       | 1    | 2     | 1    |           | 20        | 10        |      | 0    |      | -1            | 0             | 155.2               | 1.1           | 5.5     | 51.0     |
| Nov 27       |               |        | 0       | 0    | 1     | 0    |           | 22        | 8         |      | 1    |      | 0             | 0             | 151.6               | 1.1           | *       | 51.0     |
| Nov 28       |               |        | 4       | 3    | 0     | 2    |           | 7         | 4         |      | 0    |      | 0             | 0             | 152.1               | 1.1           | 6.0     | 50.0     |
| Nov 29       |               |        | 1       | 0    | 1     | 0    |           | 11        | 5         |      | 0    |      | 0             | 0             | 151.5               | 1.1           | 4.0     | 49.0     |
| Nov 30       |               |        | 3       | 0    | 1     | 0    |           | 22        | 7         |      | 0    |      | 0             | 0             | 149.9               | 1.1           | 7.0     | 49.0     |
| <b>TOTAL</b> |               |        | 814     | 355  | 826   | 125  |           | 1,128     | 482       |      | 48   |      | -10           | 0             |                     |               |         |          |
| <b>AVG</b>   |               |        | 27      | 12   | 28    | 4    |           | 38        | 16        |      | 2    |      | 0             | 0             | 137.1               | 1.1           | 5.8     | 53.9     |

\*Data unavailable

| RUN YEAR     | CHINOOK        |                | COHO |        | unclipped |         |           |           |      |      |           |         |          |
|--------------|----------------|----------------|------|--------|-----------|---------|-----------|-----------|------|------|-----------|---------|----------|
|              | TOTALS TO DATE | ADULT          | JACK | ADULT  | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | CHUM | SHAD      | LAMPREY | STURGEON |
| SPRING       | 158,075        | 7,591          |      | 54,882 | 5,039     | 515,673 | 233,002   | 84,644    | 1    | 65   | 2,432,394 | 29,223  | 22       |
| SUMMER       | 81,663         | 12,235         |      |        |           |         |           |           |      |      |           |         |          |
| FALL         | 350,083        | 124,115        |      |        |           |         |           |           |      |      |           |         |          |
| <b>TOTAL</b> | <b>589,821</b> | <b>143,941</b> |      |        |           |         |           |           |      |      |           |         |          |

Note: November 1 to December 31 counts were from video tape. The counts are 16-hour counts and occurred between 0400-2000 PST. Visual counting ended October 31. Official Fall Chinook run ended November 15. Counts on November 16-30 are not included in fall totals. Pink, chum, and sturgeon counts are totals for the entire calendar year.

TABLE 17

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

BONNEVILLE PROJECT - FISH COUNTS

DECEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | unclipped |         |           |           |      |      | DISCH | SPILL   | TURBIDITY |       |      |        |       |
|--------------|---------------|--------|---------|------|-------|-----------|---------|-----------|-----------|------|------|-------|---------|-----------|-------|------|--------|-------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | CHUM | SHAD  | LAMPREY | STURGEON  | KCFS  | KCFS | SECCHI | DEG F |
| Dec 1        |               |        | 1       | 3    | 0     | 1         |         | 21        | 9         |      |      |       | 0       |           | 157.6 | 1.1  | 7.0    | 49.0  |
| Dec 2        |               |        | 5       | 0    | 0     | 0         |         | 27        | 8         |      |      |       | 0       |           | 160.7 | 1.1  | 7.0    | 50.0  |
| Dec 3        |               |        | 1       | 1    | 1     | 0         |         | 14        | 5         |      |      |       | 0       |           | 165.5 | 1.1  | 7.0    | 50.0  |
| Dec 4        |               |        | 2       | 1    | 0     | 0         |         | 9         | 3         |      |      |       | 0       |           | 174.5 | 1.1  | 7.0    | 50.0  |
| Dec 5        |               |        | 0       | 0    | 1     | 0         |         | 5         | 4         |      |      |       | 0       |           | 188.0 | 1.1  | 6.0    | 50.0  |
| Dec 6        |               |        | 5       | 1    | 0     | 0         |         | 11        | 4         |      |      |       | 0       |           | 195.4 | 1.1  | 4.5    | 49.0  |
| Dec 7        |               |        | 1       | 0    | 0     | 0         |         | 2         | 0         |      |      |       | 0       |           | 199.3 | 1.1  | 5.0    | 49.0  |
| Dec 8        |               |        | 1       | 0    | 1     | 0         |         | 7         | 3         |      |      |       | 0       |           | 207.0 | 1.1  | 5.5    | 48.0  |
| Dec 9        |               |        | 1       | 0    | 0     | 0         |         | 11        | 4         |      |      |       | 0       |           | 210.3 | 1.1  | 6.5    | 48.0  |
| Dec 10       |               |        | 1       | 0    | 0     | 0         |         | 22        | 11        |      |      |       | 0       |           | 186.4 | 1.1  | 7.0    | 48.0  |
| Dec 11       |               |        | 2       | 0    | 1     | 0         |         | 13        | 6         |      |      |       | 1       |           | 203.4 | 1.0  | 6.5    | 48.0  |
| Dec 12       |               |        | 1       | 1    | 0     | 0         |         | 18        | 7         |      |      |       | 0       |           | 196.2 | 1.1  | 7.0    | 48.0  |
| Dec 13       |               |        | 0       | 1    | 0     | 0         |         | 30        | 14        |      |      |       | 0       |           | 213.4 | 1.1  | 6.0    | 48.0  |
| Dec 14       |               |        | 1       | 0    | 0     | 0         |         | 23        | 7         |      |      |       | 0       |           | 215.0 | 1.1  | 6.0    | 46.0  |
| Dec 15       |               |        | 0       | 0    | 0     | 0         |         | 16        | 6         |      |      |       | 0       |           | 198.3 | 1.1  | 7.0    | 47.0  |
| Dec 16       |               |        | -1      | 0    | 1     | 0         |         | 25        | 16        |      |      |       | 0       |           | 192.4 | 1.1  | 5.0    | 46.0  |
| Dec 17       |               |        | 1       | 0    | 0     | 0         |         | 16        | 6         |      |      |       | 0       |           | 179.3 | 1.1  | 7.0    | 46.0  |
| Dec 18       |               |        | 0       | 0    | 0     | 0         |         | 9         | 3         |      |      |       | 0       |           | 211.1 | 1.1  | 7.0    | 46.0  |
| Dec 19       |               |        | 0       | 0    | 0     | 0         |         | 8         | 3         |      |      |       | 0       |           | 193.1 | 1.1  | 7.0    | 46.0  |
| Dec 20       |               |        | 0       | 0    | 0     | 0         |         | 9         | 9         |      |      |       | 0       |           | 163.6 | 1.1  | 7.0    | 45.0  |
| Dec 21       |               |        | 0       | 0    | 0     | 0         |         | 25        | 10        |      |      |       | 0       |           | 176.7 | 1.1  | 7.0    | 46.0  |
| Dec 22       |               |        | 0       | 0    | 0     | 0         |         | 17        | 4         |      |      |       | 0       |           | 184.3 | 1.1  | 7.0    | 46.0  |
| Dec 23       |               |        | 0       | 0    | 0     | 0         |         | 18        | 8         |      |      |       | 0       |           | 159.1 | 1.1  | 7.0    | 45.0  |
| Dec 24       |               |        | 1       | 0    | 0     | 0         |         | 26        | 8         |      |      |       | 0       |           | 157.6 | 1.1  | 7.0    | 45.0  |
| Dec 25       |               |        | 0       | 0    | 0     | 0         |         | 17        | 6         |      |      |       | 0       |           | 159.7 | 1.1  | 7.0    | 45.0  |
| Dec 26       |               |        | 0       | 0    | 0     | 0         |         | 13        | 5         |      |      |       | 0       |           | 157.7 | 1.1  | 7.0    | 44.0  |
| Dec 27       |               |        | 0       | 0    | 0     | 0         |         | 17        | 2         |      |      |       | 0       |           | 167.3 | 1.1  | 7.0    | 44.0  |
| Dec 28       |               |        | 0       | 0    | 0     | 0         |         | 15        | 7         |      |      |       | 0       |           | 173.3 | 1.1  | 7.0    | 44.0  |
| Dec 29       |               |        | 0       | 0    | 0     | 0         |         | 21        | 4         |      |      |       | 0       |           | 176.2 | 1.1  | 7.0    | 43.0  |
| Dec 30       |               |        | 0       | 0    | 0     | 0         |         | -1        | -1        |      |      |       | 0       |           | 205.9 | 1.1  | 7.0    | 43.0  |
| Dec 31       |               |        | 0       | 0    | 0     | 0         |         | 7         | 2         |      |      |       | 0       |           | 203.1 | 1.0  | 7.0    | 43.0  |
| <b>TOTAL</b> |               |        | 23      | 8    | 5     | 1         |         | 471       | 183       |      |      |       | 1       |           |       |      |        |       |
| AVG          |               |        | 1       | 0    | 0     | 0         |         | 15        | 6         |      |      |       | 0       |           | 184.9 | 1.1  | 6.6    | 46.6  |

| RUN YEAR     | CHINOOK        |                | COHO |        | unclipped |         |           |           |      |      |           |         |          |
|--------------|----------------|----------------|------|--------|-----------|---------|-----------|-----------|------|------|-----------|---------|----------|
|              | TOTALS TO DATE | ADULT          | JACK | ADULT  | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | CHUM | SHAD      | LAMPREY | STURGEON |
| SPRING       | 158,075        | 7,591          |      | 54,882 | 5,039     | 515,673 | 233,002   | 84,644    | 1    | 65   | 2,432,394 | 29,223  | 22       |
| SUMMER       | 81,663         | 12,235         |      |        |           |         |           |           |      |      |           |         |          |
| FALL         | 350,083        | 124,115        |      |        |           |         |           |           |      |      |           |         |          |
| <b>TOTAL</b> | <b>589,821</b> | <b>143,941</b> |      |        |           |         |           |           |      |      |           |         |          |

Note: November 1 to December 31 counts were from video tape. The counts are 16-hour counts and occurred between 0400-2000 PST. Visual counting ended October 31. Official Fall Chinook run ended November 15. December counts were not added to fall totals. Pink, chum, and sturgeon counts are totals for the entire calendar year

TABLE 18a

## YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM

1938 - 2012

| YEAR | CHINOOK* | STEELHEAD | SOCKEYE | COHO*  | CHUM  | PINK | TOTAL SALMONID |
|------|----------|-----------|---------|--------|-------|------|----------------|
| 1938 | 271,799  | 107,003   | 75,040  | 15,185 | 2,117 | 0    | 471,144        |
| 1939 | 286,189  | 122,032   | 73,382  | 14,383 | 1,168 | 0    | 497,154        |
| 1940 | 391,587  | 185,174   | 148,807 | 11,917 | 1,729 | 0    | 739,214        |
| 1941 | 461,443  | 118,089   | 65,741  | 17,911 | 5,269 | 4    | 668,457        |
| 1942 | 401,998  | 151,800   | 55,464  | 12,402 | 1,865 | 11   | 623,540        |
| 1943 | 313,123  | 92,133    | 39,845  | 2,547  | 788   | 0    | 448,436        |
| 1944 | 240,764  | 100,518   | 15,072  | 4,207  | 954   | 1    | 361,516        |
| 1945 | 297,478  | 120,133   | 9,501   | 790    | 728   | 1    | 428,631        |
| 1946 | 446,052  | 142,807   | 74,376  | 3,898  | 1,178 | 2    | 668,313        |
| 1947 | 480,377  | 135,444   | 171,139 | 11,174 | 199   | 3    | 798,336        |
| 1948 | 419,555  | 139,062   | 131,541 | 4,081  | 3,636 | 2    | 697,877        |
| 1949 | 277,697  | 119,285   | 51,444  | 1,004  | 2,028 | 6    | 451,464        |
| 1950 | 357,375  | 114,087   | 77,993  | 10,151 | 1,069 | 8    | 560,683        |
| 1951 | 331,788  | 140,689   | 169,428 | 5,201  | 1,044 | 7    | 648,157        |
| 1952 | 420,879  | 260,990   | 184,645 | 7,768  | 1,505 | 9    | 875,796        |
| 1953 | 332,479  | 223,914   | 235,215 | 13,018 | 1,728 | 10   | 806,364        |
| 1954 | 320,947  | 176,260   | 130,107 | 4,062  | 1,569 | 4    | 632,949        |
| 1955 | 359,853  | 198,411   | 237,748 | 3,725  | 318   | 9    | 800,064        |
| 1956 | 300,917  | 131,116   | 156,418 | 6,127  | 693   | 4    | 595,275        |
| 1957 | 403,286  | 139,183   | 82,915  | 4,675  | 569   | 12   | 630,640        |
| 1958 | 426,419  | 131,437   | 122,389 | 3,673  | 455   | 6    | 684,379        |
| 1959 | 345,028  | 129,026   | 86,560  | 2,695  | 906   | 22   | 564,237        |
| 1960 | 256,049  | 113,676   | 59,713  | 3,268  | 1,026 | 0    | 433,732        |
| 1961 | 281,980  | 139,719   | 17,111  | 3,456  | 896   | 12   | 443,174        |
| 1962 | 286,625  | 164,025   | 28,179  | 14,788 | 1,013 | 27   | 494,657        |
| 1963 | 278,560  | 129,418   | 60,319  | 12,658 | 739   | 34   | 481,728        |
| 1964 | 344,422  | 117,252   | 99,856  | 53,602 | 632   | 45   | 615,809        |
| 1965 | 317,957  | 166,453   | 55,125  | 76,032 | 496   | 64   | 616,127        |
| 1966 | 340,111  | 143,661   | 156,661 | 71,891 | 872   | 58   | 713,254        |
| 1967 | 366,237  | 121,872   | 144,158 | 96,488 | 352   | 50   | 729,157        |
| 1968 | 341,154  | 106,974   | 108,207 | 63,488 | 79    | 21   | 619,923        |
| 1969 | 507,543  | 140,782   | 59,636  | 49,378 | 143   | 86   | 757,568        |
| 1970 | 384,780  | 113,510   | 70,762  | 80,116 | 209   | 150  | 649,527        |
| 1971 | 405,702  | 193,966   | 87,447  | 75,989 | 29    | 176  | 763,309        |
| 1972 | 394,456  | 185,886   | 56,323  | 65,932 | 1     | 51   | 702,649        |
| 1973 | 398,635  | 157,823   | 58,979  | 54,609 | 43    | 12   | 670,101        |
| 1974 | 366,759  | 137,054   | 43,837  | 60,955 | 23    | 2    | 608,630        |
| 1975 | 425,566  | 85,540    | 58,212  | 58,307 | 11    | 309  | 627,945        |
| 1976 | 507,773  | 124,177   | 43,611  | 53,150 | 11    | 2    | 728,724        |
| 1977 | 366,657  | 193,437   | 99,829  | 19,408 | 17    | 0    | 679,348        |
| 1978 | 394,600  | 104,431   | 18,436  | 52,590 | 28    | 0    | 570,085        |
| 1979 | 276,306  | 113,979   | 52,628  | 45,328 | 1     | 23   | 488,265        |
| 1980 | 245,518  | 129,254   | 58,882  | 22,052 | 44    | 0    | 455,750        |

TABLE 18a  
(continued)

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM  
1981 - 2012

| YEAR                   | CHINOOK*          | STEELHEAD         | SOCKEYE          | COHO*            | CHUM          | PINK         | TOTAL SALMONID    |
|------------------------|-------------------|-------------------|------------------|------------------|---------------|--------------|-------------------|
| 1981                   | 285,650           | 159,270           | 56,037           | 30,510           | 4             | 20           | 531,491           |
| 1982                   | 322,809           | 157,640           | 50,219           | 73,832           | 12            | 0            | 604,512           |
| 1983                   | 244,346           | 218,439           | 100,545          | 15,173           | 50            | 52           | 578,605           |
| 1984                   | 324,425           | 315,560           | 152,541          | 29,487           | 64            | 8            | 822,085           |
| 1985                   | 463,873           | 343,987           | 166,340          | 56,857           | 97            | 147          | 1,031,301         |
| 1986                   | 570,881           | 379,891           | 58,123           | 130,853          | 77            | 23           | 1,139,848         |
| 1987                   | 547,494           | 303,081           | 116,993          | 27,635           | 147           | 20           | 995,370           |
| 1988                   | 494,025           | 279,072           | 79,714           | 39,620           | 60            | 6            | 892,497           |
| 1989                   | 416,117           | 287,798           | 41,884           | 39,281           | 16            | 12           | 785,108           |
| 1990                   | 340,990           | 183,027           | 49,581           | 24,845           | 26            | 0            | 598,469           |
| 1991                   | 274,622           | 274,545           | 76,481           | 64,057           | 5             | 550          | 690,260           |
| 1992                   | 256,299           | 314,975           | 84,992           | 18,126           | 39            | 24           | 674,455           |
| 1993                   | 277,657           | 188,386           | 80,178           | 11,732           | 17            | 15           | 557,985           |
| 1994                   | 244,320           | 163,124           | 13,154           | 22,794           | 26            | 5            | 443,423           |
| 1995                   | 245,250           | 209,071           | 9,135            | 12,572           | 30            | 36           | 476,094           |
| 1996                   | 299,962           | 212,475           | 31,093           | 19,077           | 22            | 1            | 562,630           |
| 1997                   | 399,784           | 274,536           | 48,342           | 27,919           | 47            | 64           | 750,692           |
| 1998                   | 290,292           | 197,501           | 13,613           | 49,488           | 21            | 13           | 550,928           |
| 1999                   | 347,486           | 212,118           | 18,304           | 45,805           | 43            | 28           | 623,784           |
| 2000                   | 501,012           | 282,935           | 97,541           | 99,660           | 17            | 0            | 981,165           |
| 2001                   | 1,037,440         | 676,793           | 123,416          | 277,934          | 29            | -4           | 2,115,608         |
| 2002                   | 965,356           | 510,680           | 51,200           | 100,835          | 72            | 0            | 1,628,143         |
| 2003                   | 996,660           | 365,821           | 39,291           | 133,874          | 411           | 637          | 1,536,694         |
| 2004                   | 906,197           | 313,378           | 123,291          | 119,851          | 80            | 1            | 1,462,798         |
| 2005                   | 600,415           | 315,650           | 72,971           | 88,791           | 139           | 22           | 1,077,988         |
| 2006                   | 526,538           | 339,301           | 37,066           | 110,054          | 165           | 6            | 1,013,130         |
| 2007                   | 359,867           | 325,450           | 24,376           | 100,725          | 142           | 27           | 810,587           |
| 2008                   | 587,428           | 357,845           | 213,607          | 146,059          | 75            | 60           | 1,305,074         |
| 2009                   | 699,121           | 604,970           | 177,823          | 234,669          | 109           | 95           | 1,716,787         |
| 2010                   | 902,439           | 416,603           | 386,524          | 127,644          | 124           | 4            | 1,833,338         |
| 2011                   | 863,201           | 369,365           | 185,796          | 149,883          | 50            | 3,828        | 1,572,123         |
| 2012                   | 733,930           | 235,303           | 515,673          | 60,023           | 65            | 1            | 1,544,995         |
| <b>Total</b>           | <b>31,700,309</b> | <b>15,850,072</b> | <b>7,128,525</b> | <b>3,683,744</b> | <b>40,461</b> | <b>6,944</b> | <b>58,410,055</b> |
| <b>10-Year Average</b> | <b>717,580</b>    | <b>364,369</b>    | <b>177,642</b>   | <b>127,157</b>   | <b>136</b>    | <b>468</b>   | <b>1,387,351</b>  |

\*Jacks included

Note: Totals from 1994 - 2003 include nighttime video and 24-hour video as described in the footnotes of the monthly count tables

TABLE 18b

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM -- DAYTIME COUNTS  
1938 - 2012

| YEAR | CHINOOK* | STEELHEAD | SOCKEYE | COHO*  | CHUM  | PINK | TOTAL SALMONID |
|------|----------|-----------|---------|--------|-------|------|----------------|
| 1938 | 271,799  | 107,003   | 75,040  | 15,185 | 2,117 | 0    | 471,144        |
| 1939 | 286,189  | 122,032   | 73,382  | 14,383 | 1,168 | 0    | 497,154        |
| 1940 | 391,587  | 185,174   | 148,807 | 11,917 | 1,729 | 0    | 739,214        |
| 1941 | 461,443  | 118,089   | 65,741  | 17,911 | 5,269 | 4    | 668,457        |
| 1942 | 401,998  | 151,800   | 55,464  | 12,402 | 1,865 | 11   | 623,540        |
| 1943 | 313,123  | 92,133    | 39,845  | 2,547  | 788   | 0    | 448,436        |
| 1944 | 240,764  | 100,518   | 15,072  | 4,207  | 954   | 1    | 361,516        |
| 1945 | 297,478  | 120,133   | 9,501   | 790    | 728   | 1    | 428,631        |
| 1946 | 446,052  | 142,807   | 74,376  | 3,898  | 1,178 | 2    | 668,313        |
| 1947 | 480,377  | 135,444   | 171,139 | 11,174 | 199   | 3    | 798,336        |
| 1948 | 419,555  | 139,062   | 131,541 | 4,081  | 3,636 | 2    | 697,877        |
| 1949 | 277,697  | 119,285   | 51,444  | 1,004  | 2,028 | 6    | 451,464        |
| 1950 | 357,375  | 114,087   | 77,993  | 10,151 | 1,069 | 8    | 560,683        |
| 1951 | 331,788  | 140,689   | 169,428 | 5,201  | 1,044 | 7    | 648,157        |
| 1952 | 420,879  | 260,990   | 184,645 | 7,768  | 1,505 | 9    | 875,796        |
| 1953 | 332,479  | 223,914   | 235,215 | 13,018 | 1,728 | 10   | 806,364        |
| 1954 | 320,947  | 176,260   | 130,107 | 4,062  | 1,569 | 4    | 632,949        |
| 1955 | 359,853  | 198,411   | 237,748 | 3,725  | 318   | 9    | 800,064        |
| 1956 | 300,917  | 131,116   | 156,418 | 6,127  | 693   | 4    | 595,275        |
| 1957 | 403,286  | 139,183   | 82,915  | 4,675  | 569   | 12   | 630,640        |
| 1958 | 426,419  | 131,437   | 122,389 | 3,673  | 455   | 6    | 684,379        |
| 1959 | 345,028  | 129,026   | 86,560  | 2,695  | 906   | 22   | 564,237        |
| 1960 | 256,049  | 113,676   | 59,713  | 3,268  | 1,026 | 0    | 433,732        |
| 1961 | 281,980  | 139,719   | 17,111  | 3,456  | 896   | 12   | 443,174        |
| 1962 | 286,625  | 164,025   | 28,179  | 14,788 | 1,013 | 27   | 494,657        |
| 1963 | 278,560  | 129,418   | 60,319  | 12,658 | 739   | 34   | 481,728        |
| 1964 | 344,422  | 117,252   | 99,856  | 53,602 | 632   | 45   | 615,809        |
| 1965 | 317,957  | 166,453   | 55,125  | 76,032 | 496   | 64   | 616,127        |
| 1966 | 340,111  | 143,661   | 156,661 | 71,891 | 872   | 58   | 713,254        |
| 1967 | 366,237  | 121,872   | 144,158 | 96,488 | 352   | 50   | 729,157        |
| 1968 | 341,154  | 106,974   | 108,207 | 63,488 | 79    | 21   | 619,923        |
| 1969 | 507,543  | 140,782   | 59,636  | 49,378 | 143   | 86   | 757,568        |
| 1970 | 384,780  | 113,510   | 70,762  | 80,116 | 209   | 150  | 649,527        |
| 1971 | 405,702  | 193,966   | 87,447  | 75,989 | 29    | 176  | 763,309        |
| 1972 | 394,456  | 185,886   | 56,323  | 65,932 | 1     | 51   | 702,649        |
| 1973 | 398,635  | 157,823   | 58,979  | 54,609 | 43    | 12   | 670,101        |
| 1974 | 366,759  | 137,054   | 43,837  | 60,955 | 23    | 2    | 608,630        |
| 1975 | 425,566  | 85,540    | 58,212  | 58,307 | 11    | 309  | 627,945        |
| 1976 | 507,773  | 124,177   | 43,611  | 53,150 | 11    | 2    | 728,724        |
| 1977 | 366,657  | 193,437   | 99,829  | 19,408 | 17    | 0    | 679,348        |
| 1978 | 394,600  | 104,431   | 18,436  | 52,590 | 28    | 0    | 570,085        |
| 1979 | 276,306  | 113,979   | 52,628  | 45,328 | 1     | 23   | 488,265        |
| 1980 | 245,518  | 129,254   | 58,882  | 22,052 | 44    | 0    | 455,750        |

TABLE 18b  
(continued)

YEARLY TOTALS OF SALMONIDS COUNTED OVER BONNEVILLE DAM -- DAYTIME COUNTS  
1938 - 2012

| YEAR                   | CHINOOK*          | STEELHEAD         | SOCKEYE          | COHO*            | CHUM          | PINK         | TOTAL SALMONID    |
|------------------------|-------------------|-------------------|------------------|------------------|---------------|--------------|-------------------|
| 1981                   | 285,650           | 159,270           | 56,037           | 30,510           | 4             | 20           | 531,491           |
| 1982                   | 322,809           | 157,640           | 50,219           | 73,832           | 12            | 0            | 604,512           |
| 1983                   | 244,346           | 218,439           | 100,545          | 15,173           | 50            | 52           | 578,605           |
| 1984                   | 324,425           | 315,560           | 152,541          | 29,487           | 64            | 8            | 822,085           |
| 1985                   | 463,873           | 343,987           | 166,340          | 56,857           | 97            | 147          | 1,031,301         |
| 1986                   | 570,881           | 379,891           | 58,123           | 130,853          | 77            | 23           | 1,139,848         |
| 1987                   | 547,494           | 303,081           | 116,993          | 27,635           | 147           | 20           | 995,370           |
| 1988                   | 494,025           | 279,072           | 79,714           | 39,620           | 60            | 6            | 892,497           |
| 1989                   | 416,117           | 287,798           | 41,884           | 39,281           | 16            | 12           | 785,108           |
| 1990                   | 340,990           | 183,027           | 49,581           | 24,845           | 26            | 0            | 598,469           |
| 1991                   | 274,622           | 274,545           | 76,481           | 64,057           | 5             | 550          | 690,260           |
| 1992                   | 256,299           | 314,975           | 84,992           | 18,126           | 39            | 24           | 674,455           |
| 1993                   | 277,657           | 188,386           | 80,178           | 11,732           | 17            | 15           | 557,985           |
| 1994                   | 243,450           | 161,978           | 12,678           | 22,794           | 26            | 5            | 440,931           |
| 1995                   | 240,050           | 202,448           | 8,774            | 12,034           | 30            | 36           | 463,372           |
| 1996                   | 296,635           | 205,213           | 30,252           | 18,747           | 22            | 1            | 550,870           |
| 1997                   | 387,088           | 258,385           | 47,008           | 27,267           | 47            | 64           | 719,859           |
| 1998                   | 280,944           | 185,094           | 13,218           | 49,920           | 21            | 13           | 529,210           |
| 1999                   | 343,176           | 206,488           | 17,877           | 45,152           | 43            | 28           | 612,764           |
| 2000                   | 491,905           | 275,178           | 93,398           | 97,032           | 17            | 0            | 957,530           |
| 2001                   | 971,119           | 633,073           | 114,934          | 266,314          | 29            | -4           | 1,985,465         |
| 2002                   | 924,679           | 480,309           | 49,610           | 94,901           | 72            | 0            | 1,549,571         |
| 2003                   | 996,660           | 365,821           | 39,291           | 133,874          | 411           | 637          | 1,536,694         |
| 2004                   | 906,197           | 313,378           | 123,291          | 119,851          | 80            | 1            | 1,462,798         |
| 2005                   | 600,415           | 315,650           | 72,971           | 88,791           | 139           | 22           | 1,077,988         |
| 2006                   | 526,538           | 339,301           | 37,066           | 110,054          | 165           | 6            | 1,013,130         |
| 2007                   | 359,867           | 325,450           | 24,376           | 100,725          | 142           | 27           | 810,587           |
| 2008                   | 587,428           | 357,845           | 213,607          | 146,059          | 75            | 60           | 1,305,074         |
| 2009                   | 699,121           | 604,970           | 177,823          | 234,669          | 109           | 95           | 1,716,787         |
| 2010                   | 902,439           | 416,603           | 386,524          | 127,644          | 124           | 4            | 1,833,338         |
| 2011                   | 863,201           | 369,365           | 185,796          | 149,883          | 50            | 3,828        | 1,572,123         |
| 2012                   | 733,930           | 235,303           | 515,673          | 60,023           | 65            | 1            | 1,544,995         |
| <b>Total</b>           | <b>31,548,453</b> | <b>15,719,005</b> | <b>7,110,476</b> | <b>3,661,821</b> | <b>40,461</b> | <b>6,944</b> | <b>58,087,160</b> |
| <b>10-Year Average</b> | <b>717,580</b>    | <b>364,369</b>    | <b>177,642</b>   | <b>127,157</b>   | <b>136</b>    | <b>468</b>   | <b>1,387,351</b>  |

\*Jacks included

Note: These totals are for daytime counts and do not include night counting or 24 hour video counts.

TABLE 19

| MONTHLY COUNT OF CHINOOK SALMON |     |     |       |         |         |         |        |        |         |        |       |     | SPRING         |         |         | SUMMER         |  |  | FALL           |  |  |
|---------------------------------|-----|-----|-------|---------|---------|---------|--------|--------|---------|--------|-------|-----|----------------|---------|---------|----------------|--|--|----------------|--|--|
| BONNEVILLE DAM - 1938 - 2012    |     |     |       |         |         |         |        |        |         |        |       |     | Jan 1 - May 31 |         |         | Jun 1 - Jul 31 |  |  | Aug 1 - Dec 31 |  |  |
| YEAR                            | JAN | FEB | MAR   | APR     | MAY     | JUN     | JUL    | AUG    | SEP     | OCT    | NOV   | DEC | TOTAL*         |         |         |                |  |  |                |  |  |
| 1938                            |     |     |       |         | 22,371  | 8,221   | 6,556  | 34,765 | 197,294 | 2,302  | 263   | 27  | 271,799        | 22,371  | 14,777  | 234,651        |  |  |                |  |  |
| 1939                            | 6   | 12  | 121   | 51,410  | 25,159  | 5,602   | 17,828 | 32,909 | 150,851 | 2,197  | 78    | 16  | 286,189        | 76,708  | 23,430  | 186,051        |  |  |                |  |  |
| 1940                            |     |     | 504   | 37,253  | 28,621  | 7,027   | 14,938 | 58,643 | 240,515 | 3,765  | 287   | 34  | 391,587        | 66,378  | 21,965  | 303,244        |  |  |                |  |  |
| 1941                            | 4   |     | 1,360 | 51,486  | 19,445  | 7,013   | 9,395  | 12,590 | 351,967 | 7,179  | 866   | 138 | 461,443        | 72,295  | 16,408  | 372,740        |  |  |                |  |  |
| 1942                            | 1   | 15  | 34    | 9,506   | 30,915  | 11,816  | 12,821 | 27,581 | 303,995 | 4,485  | 639   | 190 | 401,998        | 40,471  | 24,637  | 336,890        |  |  |                |  |  |
| 1943                            | 11  | 6   | 43    | 12,172  | 53,268  | 5,440   | 8,044  | 28,985 | 201,414 | 3,354  | 365   | 21  | 313,123        | 65,500  | 13,484  | 234,139        |  |  |                |  |  |
| 1944                            | 1   | 2   | 65    | 15,671  | 15,127  | 4,363   | 8,241  | 55,468 | 139,254 | 2,388  | 164   | 20  | 240,764        | 30,866  | 12,604  | 197,294        |  |  |                |  |  |
| 1945                            | 6   | 4   | 81    | 17,148  | 26,276  | 11,293  | 16,317 | 32,254 | 189,675 | 4,281  | 137   | 6   | 297,478        | 43,515  | 27,610  | 226,353        |  |  |                |  |  |
| 1946                            | 1   | 2   | 25    | 14,196  | 53,313  | 30,253  | 20,967 | 45,422 | 277,152 | 4,523  | 173   | 25  | 446,052        | 67,537  | 51,220  | 327,295        |  |  |                |  |  |
| 1947                            |     | 2   | 141   | 83,520  | 49,899  | 25,502  | 13,358 | 43,062 | 260,385 | 3,945  | 526   | 37  | 480,377        | 133,562 | 38,860  | 307,955        |  |  |                |  |  |
| 1948                            | 10  |     | 251   | 21,205  | 20,262  | 44,137  | 23,100 | 35,934 | 270,238 | 3,928  | 467   | 23  | 419,555        | 41,728  | 67,237  | 310,590        |  |  |                |  |  |
| 1949                            |     |     | 5     | 5,765   | 44,304  | 24,232  | 22,500 | 41,500 | 137,599 | 1,571  | 215   | 6   | 277,697        | 50,074  | 46,732  | 180,891        |  |  |                |  |  |
| 1950                            |     |     | 21    | 6,630   | 50,638  | 16,667  | 32,937 | 40,462 | 205,521 | 4,356  | 143   |     | 357,375        | 57,289  | 49,604  | 250,482        |  |  |                |  |  |
| 1951                            |     |     | 32    | 28,801  | 86,055  | 54,889  | 24,394 | 33,785 | 97,131  | 6,489  | 212   |     | 331,788        | 114,888 | 79,283  | 137,617        |  |  |                |  |  |
| 1952                            |     |     | 255   | 8,130   | 107,807 | 62,491  | 21,800 | 82,290 | 135,053 | 2,576  | 477   |     | 420,879        | 116,192 | 84,291  | 220,396        |  |  |                |  |  |
| 1953                            |     |     | 1,254 | 126,450 | 42,583  | 27,228  | 30,593 | 27,398 | 75,145  | 1,495  | 333   |     | 332,479        | 170,287 | 57,821  | 104,371        |  |  |                |  |  |
| 1954                            |     | 2   | 657   | 82,877  | 51,230  | 46,801  | 32,596 | 24,969 | 80,426  | 1,189  | 200   |     | 320,947        | 134,766 | 79,397  | 106,784        |  |  |                |  |  |
| 1955                            |     |     | 1,391 | 84,436  | 85,769  | 45,502  | 37,437 | 32,833 | 70,558  | 1,803  | 124   |     | 359,853        | 171,596 | 82,939  | 105,318        |  |  |                |  |  |
| 1956                            |     |     | 161   | 8,850   | 54,438  | 64,262  | 36,938 | 42,203 | 92,030  | 1,854  | 179   | 2   | 300,917        | 63,449  | 101,200 | 136,268        |  |  |                |  |  |
| 1957                            |     |     | 328   | 90,984  | 45,128  | 104,243 | 30,790 | 34,829 | 95,457  | 1,352  | 175   |     | 403,286        | 136,440 | 135,033 | 131,813        |  |  |                |  |  |
| 1958                            |     |     | 468   | 15,361  | 59,377  | 74,375  | 27,524 | 19,735 | 227,504 | 1,948  | 127   |     | 426,419        | 75,206  | 101,899 | 249,314        |  |  |                |  |  |
| 1959                            |     |     | 182   | 26,944  | 34,007  | 39,581  | 49,371 | 24,945 | 168,187 | 1,643  | 168   |     | 345,028        | 61,133  | 88,952  | 194,943        |  |  |                |  |  |
| 1960                            |     |     | 184   | 37,064  | 32,349  | 65,247  | 19,923 | 22,719 | 76,327  | 2,012  | 224   |     | 256,049        | 69,597  | 85,170  | 101,282        |  |  |                |  |  |
| 1961                            |     |     | 476   | 72,526  | 25,693  | 41,302  | 25,159 | 22,675 | 90,688  | 3,108  | 353   |     | 281,980        | 98,695  | 66,461  | 116,824        |  |  |                |  |  |
| 1962                            |     |     | 1,278 | 56,201  | 33,637  | 52,392  | 25,093 | 23,526 | 91,320  | 2,759  | 419   |     | 286,625        | 91,116  | 77,485  | 118,024        |  |  |                |  |  |
| 1963                            |     |     | 2,802 | 43,859  | 28,810  | 36,836  | 27,178 | 28,586 | 104,415 | 5,571  | 503   |     | 278,560        | 75,471  | 64,014  | 139,075        |  |  |                |  |  |
| 1964                            |     |     | 2,418 | 69,031  | 19,979  | 35,814  | 44,717 | 26,546 | 141,525 | 4,157  | 235   |     | 344,422        | 91,428  | 80,531  | 172,463        |  |  |                |  |  |
| 1965                            |     |     | 1,238 | 47,083  | 35,945  | 38,482  | 37,515 | 38,727 | 112,664 | 6,074  | 229   |     | 317,957        | 84,266  | 75,997  | 157,694        |  |  |                |  |  |
| 1966                            |     |     | 2,168 | 92,637  | 17,864  | 40,233  | 31,764 | 20,608 | 128,421 | 6,052  | 364   |     | 340,111        | 112,669 | 71,997  | 155,445        |  |  |                |  |  |
| 1967                            |     |     | 1,620 | 71,957  | 11,358  | 41,847  | 53,812 | 25,760 | 154,323 | 5,405  | 155   |     | 366,237        | 84,935  | 95,659  | 185,643        |  |  |                |  |  |
| 1968                            |     |     | 1,342 | 69,420  | 28,425  | 46,793  | 36,126 | 27,779 | 126,994 | 4,010  | 265   |     | 341,154        | 99,187  | 82,919  | 159,048        |  |  |                |  |  |
| 1969                            |     |     | 1,910 | 65,371  | 106,281 | 59,177  | 42,976 | 38,456 | 187,502 | 5,511  | 359   |     | 507,543        | 173,562 | 102,153 | 231,828        |  |  |                |  |  |
| 1970                            |     |     | 2,020 | 78,605  | 30,351  | 35,091  | 29,811 | 44,559 | 159,710 | 4,364  | 269   |     | 384,780        | 110,976 | 64,902  | 208,902        |  |  |                |  |  |
| 1971                            |     |     | 683   | 60,849  | 63,985  | 37,757  | 40,154 | 26,749 | 166,346 | 8,820  | 359   |     | 405,702        | 125,517 | 77,911  | 202,274        |  |  |                |  |  |
| 1972                            |     |     | 426   | 154,443 | 31,271  | 36,758  | 34,072 | 23,577 | 109,820 | 3,939  | 150   |     | 394,456        | 186,140 | 70,830  | 137,486        |  |  |                |  |  |
| 1973                            |     |     | 1,585 | 128,495 | 12,068  | 24,164  | 21,196 | 31,513 | 170,895 | 8,457  | 262   |     | 398,635        | 142,148 | 45,360  | 211,127        |  |  |                |  |  |
| 1974                            |     |     | 434   | 57,516  | 76,585  | 13,424  | 32,472 | 15,554 | 156,543 | 13,923 | 308   |     | 366,759        | 134,535 | 45,896  | 186,328        |  |  |                |  |  |
| 1975                            |     |     | 162   | 48,295  | 55,647  | 16,989  | 27,362 | 37,907 | 234,145 | 4,847  | 212   |     | 425,566        | 104,104 | 44,351  | 277,111        |  |  |                |  |  |
| 1976                            |     |     | 587   | 58,978  | 53,883  | 39,130  | 29,883 | 48,776 | 262,615 | 13,395 | 526   |     | 507,773        | 113,448 | 69,013  | 325,312        |  |  |                |  |  |
| 1977                            |     |     | 3,569 | 98,710  | 17,229  | 21,790  | 19,233 | 21,992 | 171,303 | 11,805 | 1,026 |     | 366,657        | 119,508 | 41,023  | 206,126        |  |  |                |  |  |
| 1978                            |     |     | 4,291 | 100,712 | 44,860  | 27,125  | 17,198 | 23,513 | 165,411 | 11,104 | 386   |     | 394,600        | 149,863 | 44,323  | 200,414        |  |  |                |  |  |
| 1979                            |     |     | 790   | 29,751  | 20,921  | 15,924  | 18,293 | 41,273 | 142,241 | 6,865  | 248   |     | 276,306        | 51,462  | 34,217  | 190,627        |  |  |                |  |  |
| 1980                            |     |     | 535   | 30,732  | 29,720  | 15,384  | 15,681 | 26,106 | 118,669 | 8,404  | 287   |     | 245,518        | 60,987  | 31,065  | 153,466        |  |  |                |  |  |

TABLE 19

(Continued)

| MONTHLY COUNT OF CHINOOK SALMON |            |            |                |                  |                  |                  |                  |                  |                   |                |               |              | SPRING            | SUMMER            | FALL              |                   |
|---------------------------------|------------|------------|----------------|------------------|------------------|------------------|------------------|------------------|-------------------|----------------|---------------|--------------|-------------------|-------------------|-------------------|-------------------|
| BONNEVILLE DAM - 1938-2012      |            |            |                |                  |                  |                  |                  |                  |                   |                |               |              |                   | Jan 1 -<br>May 31 | Jun 1 -<br>Jul 31 | Aug 1 -<br>Dec 31 |
| YEAR                            | JAN        | FEB        | MAR            | APR              | MAY              | JUN              | JUL              | AUG              | SEP               | OCT            | NOV           | DEC          | TOTAL*            |                   |                   |                   |
| 1981                            |            |            | 1,853          | 41,917           | 21,239           | 13,262           | 13,667           | 32,519           | 154,696           | 6,288          | 209           |              | 285,650           | 65,009            | 26,929            | 193,712           |
| 1982                            |            |            | 312            | 30,282           | 45,450           | 15,439           | 11,175           | 34,058           | 174,348           | 11,487         | 258           |              | 322,809           | 76,044            | 26,614            | 220,151           |
| 1983                            |            |            | 144            | 25,423           | 31,154           | 12,793           | 10,665           | 26,147           | 116,879           | 20,458         | 683           |              | 244,346           | 56,721            | 23,458            | 164,167           |
| 1984                            |            |            | 351            | 27,185           | 23,509           | 13,060           | 15,447           | 41,909           | 180,867           | 21,673         | 424           |              | 324,425           | 51,045            | 28,507            | 244,873           |
| 1985                            |            |            | 2,036          | 52,145           | 36,780           | 16,763           | 13,107           | 64,899           | 255,020           | 22,099         | 1,024         |              | 463,873           | 90,961            | 29,870            | 343,042           |
| 1986                            |            |            | 2,292          | 82,356           | 38,395           | 18,365           | 12,676           | 38,737           | 337,721           | 39,511         | 828           |              | 570,881           | 123,043           | 31,041            | 416,797           |
| 1987                            |            |            | 2,727          | 68,866           | 30,214           | 22,728           | 14,979           | 82,500           | 298,865           | 25,614         | 1,001         |              | 547,494           | 101,807           | 37,707            | 407,980           |
| 1988                            |            |            | 2,663          | 69,689           | 22,394           | 18,191           | 18,333           | 111,905          | 236,662           | 13,656         | 532           |              | 494,025           | 94,746            | 36,524            | 362,755           |
| 1989                            |            |            | 36             | 56,583           | 30,640           | 15,659           | 17,316           | 102,573          | 181,691           | 11,218         | 401           |              | 416,117           | 87,259            | 32,975            | 295,883           |
| 1990                            |            |            | 677            | 67,536           | 28,039           | 16,990           | 11,031           | 59,066           | 149,404           | 8,015          | 232           |              | 340,990           | 96,252            | 28,021            | 216,717           |
| 1991                            |            |            | 601            | 41,431           | 19,196           | 12,755           | 9,198            | 21,959           | 159,068           | 10,116         | 298           |              | 274,622           | 61,228            | 21,953            | 191,441           |
| 1992                            |            |            | 2,188          | 68,073           | 20,321           | 11,871           | 7,374            | 28,537           | 107,620           | 10,043         | 272           |              | 256,299           | 90,582            | 19,245            | 146,472           |
| 1993                            |            |            | 226            | 77,174           | 34,772           | 15,968           | 7,648            | 37,893           | 97,693            | 6,036          | 247           |              | 277,657           | 112,172           | 23,616            | 141,869           |
| 1994                            |            |            | 505            | 13,499           | 6,562            | 9,743            | 10,458           | 47,787           | 145,801           | 9,669          | 296           |              | 244,320           | 20,566            | 20,201            | 203,553           |
| 1995                            |            |            | 206            | 7,144            | 5,511            | 8,565            | 9,226            | 47,145           | 150,990           | 15,614         | 835           | 14           | 245,250           | 12,861            | 17,791            | 214,598           |
| 1996                            | 4          |            | 110            | 20,923           | 35,571           | 11,136           | 7,768            | 58,909           | 154,420           | 10,451         | 647           | 23           | 299,962           | 56,608            | 18,904            | 224,450           |
| 1997                            |            |            | 466            | 67,577           | 49,921           | 20,162           | 10,943           | 82,123           | 158,589           | 9,488          | 516           | -1           | 399,784           | 117,964           | 31,105            | 250,715           |
| 1998                            | 0          | 1          | 695            | 24,549           | 14,587           | 14,500           | 10,396           | 58,135           | 155,716           | 11,308         | 398           | 7            | 290,292           | 39,832            | 24,896            | 225,564           |
| 1999                            |            | 2          | 251            | 19,016           | 28,831           | 14,830           | 16,121           | 66,546           | 186,880           | 14,624         | 378           | 7            | 347,486           | 48,100            | 30,951            | 268,435           |
| 2000                            |            | 4          | 3,166          | 130,193          | 71,222           | 25,864           | 19,209           | 100,658          | 139,073           | 11,380         | 227           | 16           | 501,012           | 204,585           | 45,073            | 251,354           |
| 2001                            | 0          | 25         | 16,653         | 324,800          | 98,080           | 53,860           | 45,825           | 116,981          | 351,892           | 25,875         | 3,379         | 70           | 1,037,440         | 439,558           | 99,685            | 498,197           |
| 2002                            | 74         | 207        | 4,160          | 156,379          | 128,894          | 91,120           | 47,111           | 152,200          | 358,941           | 20,509         | 5,506         | 255          | 965,356           | 289,714           | 138,231           | 537,411           |
| 2003                            | 6          | 93         | 19,283         | 120,626          | 70,020           | 81,333           | 46,833           | 90,884           | 533,913           | 30,440         | 2,827         | 402          | 996,660           | 210,028           | 128,166           | 658,466           |
| 2004                            |            | 17         | 593            | 104,978          | 73,605           | 69,622           | 35,410           | 111,550          | 473,727           | 34,858         | 1,760         | 77           | 906,197           | 179,193           | 105,032           | 621,972           |
| 2005                            | -1         | 2          | 43             | 31,504           | 46,793           | 52,917           | 30,786           | 47,880           | 363,426           | 25,199         | 1,855         | 11           | 600,415           | 78,341            | 83,703            | 438,371           |
| 2006                            | 0          | 1          | 35             | 7,030            | 92,300           | 71,473           | 30,401           | 55,410           | 236,605           | 28,653         | 4,536         | 94           | 526,538           | 99,366            | 101,874           | 325,298           |
| 2007                            | 1          | 1          | 75             | 31,919           | 51,256           | 39,619           | 21,949           | 53,174           | 136,977           | 23,968         | 893           | 35           | 359,867           | 83,252            | 61,568            | 215,047           |
| 2008                            |            | 3          | 170            | 40,547           | 102,419          | 67,117           | 22,775           | 115,815          | 222,385           | 15,479         | 710           | 8            | 587,428           | 143,139           | 89,892            | 354,397           |
| 2009                            | -5         | 0          | 164            | 23,526           | 157,489          | 88,523           | 30,829           | 148,358          | 231,702           | 17,823         | 697           | 15           | 699,121           | 181,174           | 119,352           | 398,595           |
| 2010                            | 3          | 2          | 482            | 134,447          | 122,101          | 82,577           | 30,630           | 102,676          | 395,450           | 32,845         | 1,184         | 42           | 902,439           | 257,035           | 113,207           | 532,197           |
| 2011                            | 0          | 13         | 161            | 35,139           | 182,779          | 107,352          | 52,378           | 68,563           | 372,184           | 43,169         | 1,408         | 55           | 863,201           | 218,092           | 159,730           | 485,379           |
| 2012                            | 2          | -1         | 39             | 23,702           | 141,939          | 62,450           | 31,448           | 86,278           | 355,800           | 31,073         | 1,169         | 31           | 733,930           | 165,681           | 93,898            | 474,351           |
| <b>TOTAL</b>                    | <b>124</b> | <b>415</b> | <b>101,260</b> | <b>4,297,188</b> | <b>3,644,836</b> | <b>2,639,204</b> | <b>1,801,175</b> | <b>3,723,237</b> | <b>14,614,233</b> | <b>827,844</b> | <b>49,087</b> | <b>1,706</b> | <b>31,700,309</b> | <b>8,043,823</b>  | <b>4,440,379</b>  | <b>19,216,107</b> |
| 10-Year<br>Average              |            |            | 2,105          | 55,342           | 104,070          | 72,298           | 33,344           | 88,059           | 332,217           | 28,351         | 1,704         |              | 717,580           | 161,530           | 105,642           | 450,407           |

\*Jacks included

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16.

1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15. 24 hour counts November 16 through December 31.

1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.

From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.

2003 - 2012 counts include 16 hour video counts between 0400-2000 PST January 1 through March 31 and November 1 through December 31.



TABLE 20

MONTHLY COUNT OF SOCKEYE SALMON  
BONNEVILLE DAM 1938 - 2012

| YEAR | JAN | FEB | MAR | APR | MAY   | JUN     | JUL     | AUG   | SEP | OCT | NOV | DEC | TOTAL   |
|------|-----|-----|-----|-----|-------|---------|---------|-------|-----|-----|-----|-----|---------|
| 1938 |     |     |     |     | 1,025 | 17,811  | 53,864  | 2,097 | 235 | 6   | 2   |     | 75,040  |
| 1939 |     |     |     | 48  | 189   | 29,386  | 43,124  | 616   | 19  |     |     |     | 73,382  |
| 1940 |     |     |     |     | 206   | 59,639  | 85,885  | 3,063 | 13  | 1   |     |     | 148,807 |
| 1941 |     |     |     | 299 | 1,052 | 23,536  | 39,193  | 1,615 | 46  |     |     |     | 65,741  |
| 1942 |     |     |     |     | 13    | 12,624  | 41,301  | 1,477 | 49  |     |     |     | 55,464  |
| 1943 |     |     |     |     | 9     | 4,525   | 33,613  | 1,697 | 1   |     |     |     | 39,845  |
| 1944 |     |     | 1   |     | 16    | 3,099   | 11,171  | 659   | 126 |     |     |     | 15,072  |
| 1945 |     |     | 10  | 51  | 521   | 1,507   | 6,903   | 498   | 10  | 1   |     |     | 9,501   |
| 1946 |     |     |     | 9   | 67    | 7,815   | 64,715  | 1,747 | 21  | 2   |     |     | 74,376  |
| 1947 |     |     |     |     | 5     | 59,378  | 108,175 | 3,564 | 15  | 1   |     | 1   | 171,139 |
| 1948 |     |     |     |     |       | 12,023  | 117,652 | 1,849 | 13  | 4   |     |     | 131,541 |
| 1949 |     |     |     |     | 151   | 9,013   | 41,619  | 655   | 6   |     |     |     | 51,444  |
| 1950 |     |     |     |     |       | 341     | 75,784  | 1,826 | 42  |     |     |     | 77,993  |
| 1951 |     |     |     |     | 25    | 81,045  | 87,104  | 1,214 | 40  |     |     |     | 169,428 |
| 1952 |     |     | 7   | 1   | 3     | 136,939 | 47,188  | 467   | 30  | 2   | 8   |     | 184,645 |
| 1953 |     |     | 57  | 27  | 663   | 45,711  | 186,933 | 1,774 | 50  |     |     |     | 235,215 |
| 1954 |     |     | 1   |     | 13    | 52,359  | 76,505  | 1,212 | 17  |     |     |     | 130,107 |
| 1955 |     |     |     |     | 79    | 21,923  | 214,860 | 866   | 11  | 9   |     |     | 237,748 |
| 1956 |     |     |     |     | 10    | 29,649  | 125,185 | 1,564 | 7   | 3   |     |     | 156,418 |
| 1957 |     |     |     |     | 21    | 38,616  | 43,938  | 323   | 14  | 3   |     |     | 82,915  |
| 1958 |     |     |     |     | 25    | 38,736  | 82,719  | 878   | 23  | 8   |     |     | 122,389 |
| 1959 |     |     |     | 2   | 153   | 10,155  | 75,325  | 906   | 14  | 5   |     |     | 86,560  |
| 1960 |     |     |     |     | 4     | 41,758  | 17,615  | 321   | 15  |     |     |     | 59,713  |
| 1961 |     |     |     | 3   | 22    | 7,960   | 9,059   | 56    | 9   | 2   |     |     | 17,111  |
| 1962 |     |     |     | 1   | 21    | 9,713   | 18,310  | 82    | 47  | 5   |     |     | 28,179  |
| 1963 |     |     |     |     | 492   | 25,010  | 34,275  | 216   | 304 | 17  | 5   |     | 60,319  |
| 1964 |     |     |     | 3   | 570   | 32,079  | 66,857  | 213   | 110 | 10  | 14  |     | 99,856  |
| 1965 |     |     |     |     | 457   | 21,860  | 31,776  | 744   | 285 | 3   |     |     | 55,125  |
| 1966 |     |     |     | 10  | 338   | 57,509  | 97,845  | 800   | 155 | 4   |     |     | 156,661 |
| 1967 |     |     |     | 18  | 38    | 36,091  | 107,558 | 344   | 106 | 3   |     |     | 144,158 |
| 1968 |     |     |     | 54  | 372   | 74,226  | 33,245  | 199   | 101 | 9   | 1   |     | 108,207 |
| 1969 |     |     |     | 5   | 165   | 24,238  | 34,970  | 120   | 124 | 13  | 1   |     | 59,636  |
| 1970 |     |     |     | 5   | 269   | 22,977  | 46,062  | 1,147 | 290 | 12  |     |     | 70,762  |
| 1971 |     |     |     |     | 70    | 14,789  | 72,203  | 313   | 69  | 2   | 1   |     | 87,447  |
| 1972 |     |     |     |     | 614   | 16,505  | 37,939  | 1,254 | 9   | 2   |     |     | 56,323  |
| 1973 |     |     |     |     | 17    | 29,314  | 29,308  | 337   | 3   |     |     |     | 58,979  |
| 1974 |     |     |     |     | 14    | 8,073   | 35,407  | 340   | 3   |     |     |     | 43,837  |
| 1975 |     |     |     |     | 2     | 17,961  | 40,050  | 192   | 7   |     |     |     | 58,212  |
| 1976 |     |     |     |     | 94    | 22,532  | 20,661  | 297   | 26  | 1   |     |     | 43,611  |
| 1977 |     |     |     | 1   | 38    | 74,551  | 25,178  | 61    |     |     |     |     | 99,829  |
| 1978 |     |     |     | 1   | 2     | 12,442  | 5,884   | 101   | 6   |     |     |     | 18,436  |
| 1979 |     |     |     |     | 1     | 25,474  | 26,297  | 826   | 30  |     |     |     | 52,628  |
| 1980 |     |     |     |     |       | 22,949  | 35,764  | 164   | 4   | 1   |     |     | 58,882  |

TABLE 20

(Continued)

MONTHLY COUNT OF SOCKEYE SALMON  
BONNEVILLE DAM 1938 - 2012

| YEAR                   | JAN | FEB | MAR | APR       | MAY        | JUN            | JUL              | AUG              | SEP           | OCT          | NOV        | DEC       | TOTAL    |                  |
|------------------------|-----|-----|-----|-----------|------------|----------------|------------------|------------------|---------------|--------------|------------|-----------|----------|------------------|
| 1981                   |     |     |     |           | 1          | 36,931         | 19,001           | 100              | 4             |              |            |           | 56,037   |                  |
| 1982                   |     |     |     |           | 12         | 20,731         | 29,207           | 264              | 4             | 1            |            |           | 50,219   |                  |
| 1983                   |     |     |     |           |            | 52,134         | 48,004           | 400              | 5             | 2            |            |           | 100,545  |                  |
| 1984                   |     |     |     |           | 6          | 106,892        | 45,141           | 494              | 7             | 1            |            |           | 152,541  |                  |
| 1985                   |     |     |     | 3         | 13         | 112,054        | 53,842           | 422              | 4             | 2            |            |           | 166,340  |                  |
| 1986                   |     |     |     |           | 2          | 27,303         | 30,279           | 475              | 63            | 1            |            |           | 58,123   |                  |
| 1987                   |     |     |     |           | 1          | 75,674         | 40,930           | 383              | 5             |              |            |           | 116,993  |                  |
| 1988                   |     |     |     |           | 11         | 44,409         | 35,168           | 121              | 5             |              |            |           | 79,714   |                  |
| 1989                   |     |     |     |           | 3          | 24,638         | 17,000           | 231              | 11            | 1            |            |           | 41,884   |                  |
| 1990                   |     |     |     |           |            | 26,141         | 23,244           | 195              | 1             |              |            |           | 49,581   |                  |
| 1991                   |     |     |     |           |            | 22,318         | 53,699           | 457              | 7             |              |            |           | 76,481   |                  |
| 1992                   |     |     |     |           | 20         | 54,292         | 30,409           | 271              |               |              |            |           | 84,992   |                  |
| 1993                   |     |     |     |           | 7          | 49,667         | 30,377           | 127              |               |              |            |           | 80,178   |                  |
| 1994                   |     |     |     |           | 2          | 9,835          | 3,306            | 11               |               |              |            |           | 13,154   |                  |
| 1995                   |     |     |     |           | 1          | 5,924          | 3,151            | 59               |               |              |            |           | 9,135    |                  |
| 1996                   |     |     |     |           | 3          | 23,005         | 8,044            | 41               |               |              |            |           | 31,093   |                  |
| 1997                   |     |     |     |           | 9          | 23,559         | 24,392           | 381              | 1             |              |            |           | 48,342   |                  |
| 1998                   |     |     |     |           | 1          | 7,796          | 5,723            | 93               |               |              |            |           | 13,613   |                  |
| 1999                   |     |     |     |           |            | 8,613          | 9,629            | 61               | 1             |              |            |           | 18,304   |                  |
| 2000                   |     |     |     |           | 146        | 83,479         | 13,847           | 69               | 0             |              |            |           | 97,541   |                  |
| 2001                   |     |     |     |           | 32         | 102,570        | 20,496           | 317              | 1             |              |            |           | 123,416  |                  |
| 2002                   |     |     |     |           | 3          | 32,760         | 18,349           | 85               | 3             |              |            |           | 51,200   |                  |
| 2003                   |     |     |     |           | 2          | 26,432         | 12,714           | 139              | 4             |              |            |           | 39,291   |                  |
| 2004                   |     |     |     |           | 134        | 100,702        | 22,253           | 194              | 3             |              | 5          |           | 123,291  |                  |
| 2005                   |     |     |     |           | 16         | 47,093         | 25,724           | 118              | 20            |              |            |           | 72,971   |                  |
| 2006                   |     |     |     |           | 9          | 27,398         | 9,518            | 129              | 12            |              |            |           | 37,066   |                  |
| 2007                   |     |     |     |           | 36         | 18,742         | 5,487            | 107              | 4             |              |            |           | 24,376   |                  |
| 2008                   |     |     |     |           | 53         | 188,756        | 24,735           | 46               | 17            |              |            |           | 213,607  |                  |
| 2009                   |     |     |     |           | 57         | 141,543        | 36,117           | 104              | 2             |              |            |           | 177,823  |                  |
| 2010                   |     |     |     | 1         | 169        | 297,778        | 88,415           | 156              | 5             |              |            |           | 386,524  |                  |
| 2011                   |     |     |     | 1         | 8          | 87,794         | 97,798           | 195              |               |              |            |           | 185,796  |                  |
| 2012                   |     |     |     |           | 80         | 382,529        | 132,889          | 170              | 5             |              |            |           | 515,673  |                  |
| <b>TOTAL</b>           |     |     |     | <b>76</b> | <b>543</b> | <b>8,683</b>   | <b>3,563,333</b> | <b>3,507,907</b> | <b>45,109</b> | <b>2,699</b> | <b>137</b> | <b>37</b> | <b>1</b> | <b>7,128,525</b> |
| <b>10-Year Average</b> |     |     |     |           | <b>56</b>  | <b>131,877</b> | <b>45,565</b>    | <b>136</b>       | <b>8</b>      |              |            |           |          | <b>177,642</b>   |

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16.

1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15.  
24 hour counts November 16 through December 31.

1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.

From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.

2003-2012 counts include video counts which took place between 0400-2000 PST January 1 through March 31 and November 1 through December 31.

TABLE 21

MONTHLY COUNT OF COHO SALMON  
BONNEVILLE DAM 1938 - 2012

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG    | SEP    | OCT    | NOV   | DEC | TOTAL* | JACKS  |
|------|-----|-----|-----|-----|-----|-----|-----|--------|--------|--------|-------|-----|--------|--------|
| 1938 | 3   |     |     |     |     |     |     | 3,070  | 10,995 | 972    | 141   | 7   | 15,188 |        |
| 1939 | 3   |     |     |     |     |     |     | 1,811  | 12,226 | 310    | 15    | 18  | 14,383 |        |
| 1940 | 2   |     |     |     |     |     |     | 1,451  | 10,212 | 213    | 33    | 5   | 11,916 |        |
| 1941 |     |     |     |     |     |     |     | 1,317  | 16,061 | 369    | 160   | 2   | 17,909 |        |
| 1942 |     |     |     |     |     |     |     | 1,193  | 11,062 | 147    |       |     | 12,402 |        |
| 1943 |     |     |     |     |     |     |     | 762    | 1,676  | 89     | 20    |     | 2,547  |        |
| 1944 |     |     |     |     |     |     |     | 1,052  | 3,021  | 103    | 29    | 2   | 4,207  |        |
| 1945 |     |     |     |     |     |     | 2   | 239    | 533    | 15     |       | 1   | 790    |        |
| 1946 |     | 10  | 4   |     |     |     | 22  | 228    | 3,609  | 1      |       | 24  | 3,898  |        |
| 1947 | 12  | 2   | 1   |     |     |     |     | 217    | 10,928 | 10     | 3     | 1   | 11,174 |        |
| 1948 | 1   |     |     |     |     |     | 11  | 158    | 3,893  | 10     | 3     | 5   | 4,081  |        |
| 1949 |     |     |     |     |     |     | 17  | 270    | 703    | 5      | 8     | 1   | 1,004  |        |
| 1950 |     |     |     |     |     |     |     | 1,570  | 8,545  | 36     |       |     | 10,151 |        |
| 1951 |     |     |     |     |     |     |     | 197    | 4,773  | 225    | 6     |     | 5,201  |        |
| 1952 |     |     |     |     |     |     | 10  | 2,581  | 5,131  | 22     | 24    |     | 7,768  |        |
| 1953 |     |     |     |     |     |     | 1   | 7,094  | 5,890  | 22     | 11    |     | 13,018 |        |
| 1954 |     |     |     |     |     |     |     | 668    | 3,319  | 74     | 1     |     | 4,062  |        |
| 1955 |     |     |     |     |     |     |     | 443    | 3,188  | 94     |       |     | 3,725  |        |
| 1956 |     |     |     |     |     |     | 7   | 1,158  | 4,879  | 83     |       |     | 6,127  |        |
| 1957 |     |     |     |     |     |     |     | 1,564  | 3,046  | 63     | 2     |     | 4,675  |        |
| 1958 |     |     |     |     |     |     |     | 341    | 3,220  | 99     | 13    |     | 3,673  |        |
| 1959 |     |     |     |     |     |     |     | 122    | 2,551  | 22     |       |     | 2,695  |        |
| 1960 |     |     |     |     |     |     |     | 538    | 2,502  | 224    | 4     |     | 3,268  |        |
| 1961 |     |     |     |     |     |     |     | 277    | 2,867  | 306    | 6     |     | 3,456  |        |
| 1962 |     |     |     |     |     |     | 1   | 1,116  | 13,091 | 543    | 37    |     | 14,788 |        |
| 1963 |     |     |     |     |     |     | 4   | 1,071  | 8,664  | 2,724  | 195   |     | 12,658 |        |
| 1964 |     |     |     |     |     |     | 23  | 3,776  | 46,535 | 3,069  | 199   |     | 53,602 |        |
| 1965 |     |     |     |     |     | 2   | 21  | 5,911  | 61,335 | 8,566  | 197   |     | 76,032 |        |
| 1966 |     |     |     |     |     | 46  | 874 | 4,921  | 59,457 | 6,361  | 232   |     | 71,891 | 34,919 |
| 1967 |     |     |     |     |     | 33  | 715 | 3,814  | 87,254 | 4,560  | 112   |     | 96,488 | 47,893 |
| 1968 |     |     |     |     |     | 48  | 124 | 10,450 | 50,900 | 1,868  | 98    |     | 63,488 | 20,435 |
| 1969 |     |     |     |     |     | 38  | 443 | 4,671  | 41,176 | 2,998  | 52    |     | 49,378 | 25,216 |
| 1970 |     |     |     |     |     | 2   | 128 | 6,604  | 70,631 | 2,631  | 120   |     | 80,116 | 25,248 |
| 1971 |     |     |     |     |     |     | 57  | 7,292  | 58,235 | 9,753  | 652   |     | 75,989 | 22,172 |
| 1972 |     |     |     |     |     |     | 66  | 9,481  | 52,456 | 3,792  | 137   |     | 65,932 | 31,716 |
| 1973 |     |     |     |     |     |     | 636 | 12,656 | 33,736 | 6,715  | 866   |     | 54,609 | 28,760 |
| 1974 |     |     |     |     |     |     | 539 | 8,805  | 40,761 | 8,631  | 2,219 |     | 60,955 | 29,350 |
| 1975 |     |     |     |     |     |     | 56  | 5,373  | 39,167 | 11,892 | 1,819 |     | 58,307 | 25,535 |
| 1976 |     |     |     |     |     |     | 143 | 5,970  | 40,505 | 5,417  | 1,115 |     | 53,150 | 16,484 |
| 1977 |     |     |     |     |     |     | 55  | 1,134  | 15,163 | 2,582  | 474   |     | 19,408 | 10,083 |
| 1978 |     |     |     | 1   |     |     | 2   | 2,643  | 38,308 | 10,531 | 1,105 |     | 52,590 | 22,312 |
| 1979 |     |     |     |     |     |     | 68  | 7,324  | 28,732 | 7,583  | 1,621 |     | 45,328 | 15,716 |
| 1980 |     |     |     |     |     |     | 10  | 781    | 13,601 | 3,327  | 4,333 |     | 22,052 | 9,078  |

TABLE 21

(Continued)

## MONTHLY COUNT OF COHO SALMON

BONNEVILLE DAM 1938 - 2012

| YEAR            | JAN | FEB | MAR | APR | MAY | JUN | JUL   | AUG     | SEP       | OCT     | NOV    | DEC | TOTAL*    | JACKS   |
|-----------------|-----|-----|-----|-----|-----|-----|-------|---------|-----------|---------|--------|-----|-----------|---------|
| 1981            |     |     |     |     |     |     | 4     | 3,162   | 23,962    | 3,108   | 274    |     | 30,510    | 8,575   |
| 1982            |     |     |     |     |     |     | 79    | 3,687   | 55,743    | 13,182  | 1,141  |     | 73,832    | 18,016  |
| 1983            |     |     |     |     |     |     | 44    | 319     | 7,237     | 5,020   | 2,553  |     | 15,173    | 6,775   |
| 1984            |     |     |     |     |     |     | 41    | 1,394   | 20,174    | 6,229   | 1,649  |     | 29,487    | 12,728  |
| 1985            |     |     | 1   |     |     | 7   | 92    | 3,977   | 46,749    | 5,670   | 361    |     | 56,857    | 18,307  |
| 1986            |     |     |     |     |     |     | 181   | 2,502   | 110,714   | 14,436  | 3,020  |     | 130,853   | 22,204  |
| 1987            |     |     |     |     |     |     | 464   | 2,364   | 21,002    | 3,556   | 249    |     | 27,635    | 9,713   |
| 1988            |     |     |     |     |     |     | 78    | 3,377   | 26,303    | 8,614   | 1,248  |     | 39,620    | 12,566  |
| 1989            |     |     |     |     |     |     | 60    | 2,353   | 24,089    | 9,543   | 3,236  |     | 39,281    | 11,863  |
| 1990            |     |     |     |     |     |     | 9     | 587     | 18,202    | 5,230   | 817    |     | 24,845    | 13,218  |
| 1991            |     |     |     |     |     |     | 5     | 941     | 46,331    | 13,713  | 3,067  |     | 64,057    | 5,189   |
| 1992            |     |     |     |     |     |     | 19    | 222     | 10,304    | 5,953   | 1,628  |     | 18,126    | 3,757   |
| 1993            |     |     |     |     |     |     | 15    | 448     | 8,191     | 2,786   | 292    |     | 11,732    | 1,090   |
| 1994            |     |     |     |     |     |     | 5     | 1,608   | 12,521    | 8,239   | 421    |     | 22,794    | 2,503   |
| 1995            |     |     |     |     |     |     | 118   | 978     | 7,049     | 3,969   | 458    |     | 12,572    | 1,639   |
| 1996            |     |     |     |     |     |     | 66    | 431     | 10,413    | 7,775   | 392    |     | 19,077    | 3,010   |
| 1997            |     |     |     |     |     |     | 22    | 1,441   | 19,412    | 6,755   | 289    |     | 27,919    | 3,206   |
| 1998            |     |     |     |     |     |     | 13    | 896     | 35,245    | 13,047  | 282    | 5   | 49,488    | 3,630   |
| 1999            |     | 19  |     |     |     | 1   | 3     | 951     | 34,901    | 9,673   | 252    | 5   | 45,805    | 4,468   |
| 2000            |     |     |     |     |     |     | 3     | 13,348  | 55,550    | 29,698  | 949    | 112 | 99,660    | 11,383  |
| 2001            | 15  |     |     |     |     | 2   | 145   | 34,112  | 205,352   | 34,401  | 3,907  |     | 277,934   | 6,781   |
| 2002            |     |     |     |     |     |     | 6     | 4,742   | 54,917    | 38,184  | 2,803  | 183 | 100,835   | 6,817   |
| 2003            |     |     |     |     |     |     | 10    | 11,389  | 86,621    | 35,516  | 334    | 4   | 133,874   | 8,127   |
| 2004            | 1   |     |     |     |     |     | 0     | 11,171  | 78,512    | 29,544  | 622    | 1   | 119,851   | 4,809   |
| 2005            |     |     |     |     |     |     | 0     | 3,487   | 64,253    | 20,414  | 637    | 0   | 88,791    | 5,486   |
| 2006            |     |     |     |     |     |     | 1     | 12,771  | 58,048    | 35,014  | 4,192  | 28  | 110,054   | 7,943   |
| 2007            | -2  |     |     |     |     |     | 6     | 8,888   | 55,968    | 32,607  | 3,200  | 58  | 100,725   | 12,531  |
| 2008            | -1  |     |     |     |     |     | 2     | 8,335   | 84,639    | 51,771  | 1,309  | 4   | 146,059   | 68,486  |
| 2009            | -4  |     |     |     |     |     | 7     | 37,438  | 104,294   | 89,979  | 2,936  | 19  | 234,669   | 9,776   |
| 2010            | -11 | 0   |     |     |     |     | 1     | 7,365   | 53,947    | 62,961  | 3,255  | 126 | 127,644   | 6,933   |
| 2011            |     | 0   |     |     |     |     | 6     | 12,870  | 108,156   | 28,202  | 644    | 5   | 149,883   | 4,572   |
| 2012            |     |     |     |     |     |     | 3     | 6,162   | 37,556    | 15,345  | 951    | 6   | 60,023    | 5,039   |
| TOTAL           | 19  | 31  | 6   | 1   | 0   | 179 | 5,543 | 335,830 | 2,520,892 | 757,191 | 63,430 | 622 | 3,683,744 | 686,057 |
| 10 Year Average |     |     |     |     |     |     | 4     | 11,988  | 73,199    | 40,135  | 1,808  |     | 127,157   | 13,370  |

\*Jacks included

Notes:

1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15.

24 hour counts November 16 through December 31.

1996 - 2002 counts include 24 hour video counts January 1 through March 15 and November 16 through Dec 31.

From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.

2003-12 counts include 16 hour video counts between 0400-2000 PST January 1 through March 31 and November 1 through December 31.

TABLE 22

**MONTHLY COUNT OF STEELHEAD  
BONNEVILLE DAM 1938 -2012**

| YEAR | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL     | AUG    | SEP    | OCT   | NOV   | DEC | TOTAL   | A-Run            | B-Run             |
|------|-------|-------|-------|-------|-------|--------|---------|--------|--------|-------|-------|-----|---------|------------------|-------------------|
|      |       |       |       |       |       |        |         |        |        |       |       |     |         | Jan 1-<br>Aug 25 | Aug 26-<br>Dec 31 |
| 1938 |       |       |       |       | 6,622 | 2,382  | 19,455  | 29,231 | 46,618 | 2,264 | 339   | 92  | 107,003 | 49,306           | 57,697            |
| 1939 | 23    | 19    | 570   | 8,110 | 1,587 | 1,490  | 36,681  | 38,062 | 33,891 | 1,264 | 216   | 119 | 122,032 | 80,096           | 41,936            |
| 1940 | 5     | 96    | 1,688 | 4,125 | 998   | 4,489  | 61,188  | 46,071 | 64,377 | 1,786 | 292   | 59  | 185,174 | 106,724          | 78,450            |
| 1941 | 37    | 76    | 1,641 | 6,392 | 1,518 | 996    | 21,940  | 29,600 | 50,542 | 3,980 | 1,063 | 304 | 118,089 | 58,109           | 59,980            |
| 1942 | 4     | 37    | 256   | 3,642 | 4,159 | 1,588  | 19,905  | 41,973 | 77,076 | 2,412 | 566   | 182 | 151,800 | 65,219           | 86,581            |
| 1943 | 14    | 18    | 654   | 3,374 | 4,698 | 1,564  | 7,755   | 29,894 | 41,051 | 2,444 | 573   | 94  | 92,133  | 41,219           | 50,914            |
| 1944 | 50    | 157   | 1,019 | 6,142 | 2,224 | 1,169  | 21,868  | 24,508 | 35,907 | 6,129 | 1,119 | 226 | 100,518 | 51,585           | 48,933            |
| 1945 | 1,003 | 1,078 | 3,008 | 4,685 | 1,557 | 1,109  | 24,537  | 40,593 | 40,194 | 1,925 | 302   | 142 | 120,133 | 72,685           | 47,448            |
| 1946 | 64    | 551   | 3,040 | 9,839 | 5,482 | 3,265  | 20,600  | 58,466 | 38,399 | 2,070 | 262   | 769 | 142,807 | 93,422           | 49,385            |
| 1947 | 197   | 321   | 1,968 | 6,889 | 2,025 | 1,595  | 28,134  | 40,819 | 50,025 | 2,905 | 443   | 123 | 135,444 | 75,035           | 60,409            |
| 1948 | 154   | 119   | 1,631 | 4,473 | 1,170 | 1,895  | 33,191  | 53,621 | 40,609 | 1,742 | 381   | 76  | 139,062 | 87,453           | 51,609            |
| 1949 | 1     |       | 1,689 | 3,293 | 1,712 | 1,264  | 34,314  | 54,281 | 20,786 | 1,161 | 686   | 98  | 119,285 | 90,762           | 28,523            |
| 1950 | 13    | 8     | 1,156 | 4,537 | 1,667 | 691    | 25,142  | 53,904 | 24,226 | 1,932 | 811   |     | 114,087 | 80,191           | 33,896            |
| 1951 |       |       | 375   | 2,338 | 1,568 | 5,187  | 74,980  | 39,712 | 15,357 | 947   | 225   |     | 140,689 | 121,100          | 19,589            |
| 1952 |       |       | 278   | 1,248 | 1,751 | 8,202  | 118,110 | 79,735 | 48,293 | 2,735 | 638   |     | 260,990 | 190,012          | 70,978            |
| 1953 |       |       | 1,310 | 5,308 | 1,456 | 5,313  | 106,712 | 64,006 | 36,107 | 2,797 | 905   |     | 223,914 | 173,135          | 50,779            |
| 1954 |       | 6     | 679   | 5,511 | 1,571 | 6,115  | 59,443  | 65,234 | 34,941 | 2,209 | 551   |     | 176,260 | 126,085          | 50,175            |
| 1955 |       |       | 1,006 | 2,100 | 1,149 | 2,418  | 79,124  | 84,746 | 24,239 | 3,361 | 268   |     | 198,411 | 161,614          | 36,797            |
| 1956 |       |       | 1,409 | 2,718 | 1,582 | 3,122  | 48,306  | 47,148 | 23,343 | 2,846 | 635   | 7   | 131,116 | 99,692           | 31,424            |
| 1957 |       |       | 926   | 2,081 | 760   | 8,434  | 66,738  | 34,915 | 24,029 | 1,069 | 231   |     | 139,183 | 105,179          | 34,004            |
| 1958 |       |       | 495   | 651   | 1,457 | 5,645  | 53,734  | 22,827 | 44,478 | 1,859 | 291   |     | 131,437 | 79,533           | 51,904            |
| 1959 |       |       | 219   | 746   | 1,236 | 2,562  | 60,549  | 38,417 | 23,579 | 1,540 | 178   |     | 129,026 | 98,198           | 30,828            |
| 1960 |       |       | 412   | 904   | 1,090 | 4,314  | 44,026  | 33,571 | 28,058 | 1,090 | 211   |     | 113,676 | 77,141           | 36,535            |
| 1961 |       |       | 374   | 1,161 | 692   | 2,246  | 44,379  | 41,237 | 47,409 | 1,561 | 660   |     | 139,719 | 79,269           | 60,450            |
| 1962 |       |       | 381   | 1,957 | 1,491 | 3,737  | 49,789  | 40,177 | 64,084 | 1,798 | 611   |     | 164,025 | 86,990           | 77,035            |
| 1963 |       |       | 503   | 1,035 | 1,385 | 4,192  | 51,951  | 31,441 | 35,446 | 2,920 | 545   |     | 129,418 | 83,858           | 45,560            |
| 1964 |       |       | 490   | 1,609 | 769   | 1,940  | 50,640  | 26,892 | 32,406 | 1,954 | 552   |     | 117,252 | 76,135           | 41,117            |
| 1965 |       |       | 211   | 1,516 | 1,419 | 4,265  | 89,405  | 29,506 | 37,529 | 1,971 | 631   |     | 166,453 | 120,560          | 45,893            |
| 1966 |       |       | 658   | 2,682 | 2,389 | 13,051 | 57,975  | 25,779 | 37,733 | 2,657 | 737   |     | 143,661 | 97,545           | 46,116            |
| 1967 |       |       | 416   | 1,182 | 899   | 3,062  | 40,881  | 36,787 | 35,472 | 2,701 | 472   |     | 121,872 | 78,794           | 43,078            |
| 1968 |       |       | 340   | 861   | 1,315 | 3,664  | 29,773  | 41,006 | 27,865 | 1,645 | 505   |     | 106,974 | 68,423           | 38,551            |
| 1969 |       |       | 911   | 2,164 | 2,897 | 6,889  | 63,222  | 36,077 | 26,565 | 1,484 | 573   |     | 140,782 | 104,051          | 36,731            |
| 1970 |       |       | 244   | 1,267 | 1,331 | 4,208  | 30,866  | 46,307 | 27,073 | 1,909 | 305   |     | 113,510 | 78,106           | 35,404            |
| 1971 |       |       | 463   | 1,377 | 1,810 | 4,469  | 84,877  | 58,249 | 38,619 | 3,739 | 363   |     | 193,966 | 141,054          | 52,912            |
| 1972 |       |       | 492   | 2,562 | 2,137 | 3,444  | 59,933  | 48,223 | 65,523 | 3,432 | 140   |     | 185,886 | 107,227          | 78,659            |
| 1973 |       |       | 830   | 2,534 | 1,367 | 5,360  | 53,820  | 46,399 | 43,275 | 3,918 | 320   |     | 157,823 | 100,011          | 57,812            |
| 1974 |       |       | 1,292 | 4,127 | 5,547 | 6,349  | 57,212  | 44,266 | 14,654 | 3,080 | 527   |     | 137,054 | 84,402           | 52,652            |
| 1975 |       |       | 1,080 | 4,284 | 4,324 | 6,058  | 30,823  | 28,623 | 9,106  | 904   | 338   |     | 85,540  | 71,586           | 13,954            |
| 1976 |       |       | 1,285 | 3,459 | 3,677 | 9,130  | 38,907  | 44,204 | 21,084 | 1,953 | 478   |     | 124,177 | 92,370           | 31,807            |
| 1977 |       |       | 1,159 | 4,121 | 4,115 | 11,395 | 67,554  | 35,161 | 66,084 | 3,298 | 550   |     | 193,437 | 113,682          | 79,755            |
| 1978 |       |       | 1,750 | 3,327 | 4,587 | 10,883 | 25,284  | 25,637 | 30,461 | 2,168 | 334   |     | 104,431 | 64,188           | 40,243            |
| 1979 |       |       | 1,333 | 1,905 | 1,785 | 7,585  | 33,379  | 39,399 | 23,592 | 4,710 | 291   |     | 113,979 | 79,472           | 34,507            |
| 1980 |       |       | 1,139 | 3,378 | 1,409 | 7,790  | 28,448  | 51,073 | 32,277 | 3,233 | 507   |     | 129,254 | 85,010           | 44,244            |

TABLE 22  
(Continued)

MONTHLY COUNT OF STEELHEAD  
BONNEVILLE DAM 1938 - 2012

| YEAR                   | JAN           | FEB           | MAR           | APR            | MAY            | JUN            | JUL              | AUG              | SEP              | OCT            | NOV           | DEC           | TOTAL             | Jan 1-            | Aug 26-          |
|------------------------|---------------|---------------|---------------|----------------|----------------|----------------|------------------|------------------|------------------|----------------|---------------|---------------|-------------------|-------------------|------------------|
|                        |               |               |               |                |                |                |                  |                  |                  |                |               |               |                   | Aug 25            | Dec 31           |
| 1981                   |               |               | 1,031         | 3,812          | 3,887          | 12,628         | 56,787           | 52,435           | 25,737           | 2,650          | 303           |               | 159,270           | 121,785           | 37,485           |
| 1982                   |               |               | 1,239         | 4,188          | 5,335          | 8,636          | 39,159           | 51,329           | 44,456           | 3,146          | 152           |               | 157,640           | 103,159           | 54,481           |
| 1983                   |               |               | 458           | 1,253          | 1,638          | 6,017          | 69,036           | 86,066           | 48,920           | 4,636          | 415           |               | 218,439           | 148,853           | 69,586           |
| 1984                   |               |               | 579           | 2,106          | 4,216          | 14,454         | 92,546           | 93,866           | 102,877          | 4,463          | 453           |               | 315,560           | 189,365           | 126,195          |
| 1985                   |               |               | 977           | 2,956          | 3,997          | 13,036         | 102,256          | 152,455          | 63,575           | 4,088          | 647           |               | 343,987           | 251,723           | 92,264           |
| 1986                   |               |               | 2,712         | 3,674          | 4,500          | 16,655         | 136,622          | 129,089          | 76,532           | 9,280          | 827           |               | 379,891           | 279,154           | 100,737          |
| 1987                   |               |               | 1,189         | 2,112          | 3,233          | 12,443         | 104,615          | 115,481          | 58,815           | 4,331          | 862           |               | 303,081           | 227,013           | 79,120           |
| 1988                   |               |               | 1,158         | 3,728          | 5,016          | 13,615         | 72,718           | 113,791          | 63,864           | 4,421          | 761           |               | 279,072           | 190,030           | 89,042           |
| 1989                   |               |               | 630           | 2,213          | 3,343          | 10,176         | 62,913           | 117,686          | 84,665           | 5,419          | 753           |               | 287,798           | 176,965           | 110,833          |
| 1990                   |               |               | 966           | 2,563          | 4,501          | 11,643         | 37,140           | 52,327           | 65,813           | 7,522          | 552           |               | 183,027           | 89,144            | 93,883           |
| 1991                   |               |               | 640           | 2,082          | 2,196          | 6,601          | 52,187           | 110,027          | 93,152           | 6,947          | 713           |               | 274,545           | 150,542           | 124,003          |
| 1992                   |               |               | 646           | 1,964          | 3,239          | 9,708          | 55,090           | 135,162          | 103,792          | 4,918          | 456           |               | 314,975           | 175,218           | 139,757          |
| 1993                   |               |               | 771           | 1,744          | 2,691          | 9,923          | 34,148           | 64,062           | 69,129           | 5,531          | 387           |               | 188,386           | 99,941            | 88,445           |
| 1994                   |               |               | 422           | 1,976          | 3,132          | 7,511          | 27,202           | 59,157           | 54,856           | 8,079          | 789           |               | 163,124           | 83,968            | 79,156           |
| 1995                   |               |               | 333           | 863            | 1,257          | 6,419          | 29,305           | 112,812          | 48,781           | 6,691          | 1,104         | 1,506         | 209,071           | 126,537           | 82,534           |
| 1996                   | 793           | 57            | 1,862         | 1,776          | 2,424          | 6,912          | 40,813           | 102,200          | 48,397           | 6,143          | 761           | 337           | 212,475           | 141,999           | 70,476           |
| 1997                   | 342           | 426           | 1,966         | 1,950          | 2,485          | 7,696          | 57,472           | 127,882          | 53,571           | 18,428         | 2,234         | 84            | 274,536           | 185,381           | 89,155           |
| 1998                   | 161           | 239           | 984           | 883            | 1,655          | 7,236          | 36,437           | 60,403           | 76,293           | 12,136         | 489           | 585           | 197,501           | 89,413            | 108,088          |
| 1999                   | 15            | 287           | 699           | 833            | 1,308          | 5,157          | 48,278           | 101,610          | 46,200           | 6,509          | 637           | 585           | 212,118           | 141,245           | 70,873           |
| 2000                   | 340           | 420           | 1,495         | 1,235          | 2,006          | 13,864         | 80,259           | 106,918          | 68,407           | 7,306          | 510           | 175           | 282,935           | 189,821           | 93,114           |
| 2001                   | 333           | 239           | 2,196         | 2,043          | 3,331          | 24,076         | 199,969          | 263,518          | 152,434          | 21,542         | 4,343         | 2,769         | 676,793           | 455,422           | 221,371          |
| 2002                   | 1,311         | 833           | 1,770         | 2,918          | 2,752          | 19,918         | 119,923          | 180,381          | 151,807          | 24,004         | 4,140         | 923           | 510,680           | 294,743           | 215,937          |
| 2003                   | 724           | 1,728         | 2,264         | 1,474          | 1,714          | 10,966         | 95,185           | 139,612          | 95,759           | 12,467         | 3,115         | 813           | 365,821           | 231,717           | 134,104          |
| 2004                   | 236           | 646           | 1,799         | 1,815          | 2,947          | 16,183         | 66,621           | 111,886          | 94,482           | 15,024         | 972           | 767           | 313,378           | 178,653           | 134,725          |
| 2005                   | 149           | 62            | 103           | 1,064          | 1,517          | 9,286          | 84,968           | 110,487          | 83,450           | 21,694         | 2,598         | 272           | 315,650           | 191,275           | 124,375          |
| 2006                   | 1,587         | 446           | 944           | 1,174          | 1,537          | 7,172          | 46,912           | 154,325          | 104,659          | 13,400         | 5,750         | 1,395         | 339,301           | 180,418           | 158,883          |
| 2007                   | 601           | 387           | 1,514         | 1,020          | 1,666          | 6,789          | 58,362           | 185,281          | 54,543           | 13,096         | 1,433         | 758           | 325,450           | 232,586           | 92,864           |
| 2008                   | 145           | 119           | 780           | 1,427          | 1,896          | 12,509         | 122,870          | 102,636          | 107,693          | 6,053          | 1,325         | 392           | 357,845           | 223,943           | 133,902          |
| 2009                   | 167           | 43            | 677           | 1,547          | 2,395          | 9,942          | 119,486          | 353,478          | 97,236           | 17,535         | 1,620         | 844           | 604,970           | 426,264           | 178,706          |
| 2010                   | 803           | 685           | 2,529         | 2,567          | 3,388          | 23,314         | 157,387          | 139,354          | 75,509           | 8,898          | 1,318         | 851           | 416,603           | 306,420           | 110,183          |
| 2011                   | 805           | 264           | 1,267         | 1,385          | 1,558          | 6,807          | 96,220           | 172,287          | 78,963           | 7,651          | 1,294         | 864           | 369,365           | 263,861           | 105,504          |
| 2012                   | 280           | 669           | 1,940         | 1,312          | 1,703          | 7,943          | 72,994           | 86,419           | 49,966           | 10,478         | 1,128         | 471           | 235,303           | 160,509           | 74,794           |
| <b>TOTAL</b>           | <b>10,357</b> | <b>10,036</b> | <b>79,320</b> | <b>199,271</b> | <b>182,847</b> | <b>549,761</b> | <b>4,531,430</b> | <b>5,772,199</b> | <b>4,026,715</b> | <b>407,988</b> | <b>63,466</b> | <b>16,682</b> | <b>15,850,072</b> | <b>10,303,295</b> | <b>5,549,829</b> |
| <b>10-Year Average</b> |               |               | <b>1,382</b>  | <b>1,479</b>   | <b>2,032</b>   | <b>11,091</b>  | <b>92,101</b>    | <b>155,577</b>   | <b>84,226</b>    | <b>12,630</b>  | <b>2,055</b>  |               | <b>364,369</b>    | <b>239,565</b>    | <b>124,804</b>   |

1994 counts include nighttime video counts during the hours of 2100-0500 PST June 1 through August 16  
1995 counts include nighttime video counts during the hours of 2000 and 0400 PST April 1 through November 15.  
24 hour counts November 16 through December 31.  
1996 - 2002 counts includes 24 hour video counts January 1 through March 15 and November 16 through Dec 31.  
From March 16 through November 15, video counts took place between 2000 and 0400 hours PST.  
2003 - 2012 counts include 16 hour video counts between 0400-2000 PST January 1 through March 31  
and November 1 through December 31.

TABLE 23

MONTHLY COUNT OF SHAD at  
BONNEVILLE DAM 1938 - 2012

| YEAR | JAN | FEB | MAR | APR | MAY     | JUN     | JUL     | AUG    | SEP   | OCT | NOV | DEC | TOTAL     |
|------|-----|-----|-----|-----|---------|---------|---------|--------|-------|-----|-----|-----|-----------|
| 1938 |     |     |     |     |         | 39      | 3,184   | 1,502  | 527   | 21  |     |     | 5,273     |
| 1939 |     |     |     |     | 14      | 1,539   | 3,065   | 157    | 28    |     |     |     | 4,803     |
| 1940 |     |     |     |     | 48      | 12,931  | 9,178   | 72     | 1     |     |     |     | 22,230    |
| 1941 |     |     |     |     | 5       | 2,417   | 16,010  | 197    | 12    | 16  |     |     | 18,657    |
| 1942 |     |     |     |     | 2       | 38      | 11,341  | 1,473  | 5     |     |     |     | 12,859    |
| 1943 |     |     |     |     |         | 18      | 2,545   | 265    | 20    |     |     |     | 2,848     |
| 1944 |     |     |     |     |         | 287     | 16,568  | 248    |       |     |     |     | 17,103    |
| 1945 |     |     |     |     |         | 2,801   | 90,773  | 948    | 4     |     |     |     | 94,526    |
| 1946 |     |     |     |     |         | 3,895   | 16,073  | 415    |       |     |     |     | 20,383    |
| 1947 |     |     |     |     | 8       | 5,645   | 20,280  | 105    | 3     |     |     |     | 26,041    |
| 1948 |     |     |     |     |         | 8       | 6,458   | 1,953  | 2     | 1   |     |     | 8,422     |
| 1949 |     |     |     |     |         | 2,647   | 19,609  | 322    | 1     |     |     |     | 22,579    |
| 1950 |     |     |     |     |         |         | 7,265   | 548    | 3     |     |     |     | 7,816     |
| 1951 |     |     |     |     |         | 1,269   | 6,792   | 277    | 15    |     |     |     | 8,353     |
| 1952 |     |     |     |     |         | 487     | 2,595   | 45     | 4     |     |     |     | 3,131     |
| 1953 |     |     |     |     |         | 53      | 14,856  | 1,502  | 19    |     |     |     | 16,430    |
| 1954 |     |     |     |     |         | 34      | 3,848   | 1,136  | 11    |     |     |     | 5,029     |
| 1955 |     |     |     |     |         | 21      | 4,411   | 1,358  | 18    |     |     |     | 5,808     |
| 1956 |     |     |     |     | 1       | 67      | 6,838   | 1,168  | 11    |     |     |     | 8,085     |
| 1957 |     |     |     |     |         | 1,695   | 11,039  | 422    | 1     | 2   |     |     | 13,159    |
| 1958 |     |     |     |     |         | 3,885   | 6,257   | 59     |       |     |     |     | 10,201    |
| 1959 |     |     |     |     | 3       | 32      | 6,315   | 369    | 1     |     |     |     | 6,720     |
| 1960 |     |     |     |     |         | 35,259  | 57,443  | 594    | 72    |     |     |     | 93,368    |
| 1961 |     |     |     |     |         | 18,952  | 245,471 | 1,236  | 33    | 5   |     |     | 265,697   |
| 1962 |     |     |     |     |         | 43,689  | 387,554 | 4,657  | 82    | 4   | 2   |     | 435,988   |
| 1963 |     |     |     |     | 70      | 77,961  | 307,466 | 4,044  | 217   | 14  |     |     | 389,772   |
| 1964 |     |     |     |     | 19      | 3,203   | 236,321 | 13,008 | 121   | 2   |     |     | 252,674   |
| 1965 |     |     |     |     | 1       | 33,815  | 570,432 | 12,844 | 194   | 35  | 2   |     | 617,323   |
| 1966 |     |     |     |     | 94      | 181,187 | 367,643 | 7,988  | 545   | 51  | 5   |     | 557,513   |
| 1967 |     |     |     | 1   | 1       | 6,673   | 212,681 | 2,944  | 152   | 8   |     |     | 222,460   |
| 1968 |     |     |     |     | 800     | 107,881 | 183,878 | 1,387  | 121   | 10  | 1   |     | 294,078   |
| 1969 |     |     |     | 2   | 5       | 158     | 233,018 | 81,159 | 2,846 | 163 | 7   |     | 317,358   |
| 1970 |     |     |     |     | 2       | 250     | 228,519 | 99,659 | 566   | 262 | 18  |     | 329,276   |
| 1971 |     |     |     |     | 30      | 34,345  | 154,215 | 951    | 55    | 1   |     |     | 189,597   |
| 1972 |     |     |     |     | 38      | 16,689  | 192,608 | 5,301  | 88    | 1   |     |     | 214,725   |
| 1973 |     |     |     |     | 116,057 | 377,830 | 24,701  | 577    | 38    | 4   |     |     | 519,207   |
| 1974 |     |     |     |     | 7       | 6,122   | 91,302  | 1,496  | 17    | 1   |     |     | 98,945    |
| 1975 |     |     |     |     | 11      | 43,712  | 219,133 | 1,349  | 38    | 3   |     |     | 264,246   |
| 1976 |     |     |     |     | 4       | 123,053 | 179,994 | 2,112  | 49    | 7   |     |     | 305,219   |
| 1977 |     |     |     |     | 51,709  | 431,540 | 11,818  | 568    | 76    | 12  |     |     | 495,723   |
| 1978 |     |     |     |     | 30      | 802,110 | 57,997  | 991    | 33    | 5   |     |     | 861,166   |
| 1979 |     |     |     |     | 800     | 994,253 | 43,734  | 658    | 258   | 141 | 13  |     | 1,039,857 |
| 1980 |     |     |     |     | 1,460   | 766,473 | 170,705 | 685    | 51    | 15  | 1   |     | 939,390   |

TABLE 23  
(Continued)  
MONTHLY COUNT OF SHAD at  
BONNEVILLE DAM 1938 - 2012

| YEAR                     | JAN | FEB | MAR       | APR        | MAY              | JUN               | JUL              | AUG            | SEP          | OCT        | NOV       | DEC | TOTAL             |
|--------------------------|-----|-----|-----------|------------|------------------|-------------------|------------------|----------------|--------------|------------|-----------|-----|-------------------|
| 1981                     |     |     |           | 2          | 20,976           | 708,295           | 150,730          | 1,080          | 79           | 17         |           |     | 881,179           |
| 1982                     |     |     |           | 1          | 6,888            | 655,037           | 117,325          | 914            | 37           | 9          | 1         |     | 780,212           |
| 1983                     |     |     |           |            | 78,105           | 1,224,342         | 118,975          | 1,103          | 112          | 37         |           |     | 1,422,674         |
| 1984                     |     |     |           |            | 553              | 950,406           | 320,526          | 4,097          | 153          | 55         | 1         |     | 1,275,791         |
| 1985                     |     |     |           |            | 101,770          | 816,288           | 55,233           | 1,410          | 206          | 39         | 5         |     | 974,951           |
| 1986                     |     |     |           |            | 104,724          | 722,443           | 29,622           | 1,164          | 166          | 47         | 4         |     | 858,170           |
| 1987                     |     |     |           | 28         | 254,326          | 678,850           | 10,254           | 379            | 32           | 5          | 1         |     | 943,875           |
| 1988                     |     |     |           | 20         | 408,822          | 734,635           | 20,146           | 697            |              |            |           |     | 1,164,320         |
| 1989                     |     |     |           | 1          | 199,327          | 1,651,338         | 24,697           | 2,041          |              |            |           |     | 1,877,404         |
| 1990                     |     |     |           | 4          | 532,617          | 2,296,098         | 116,799          | 2,347          |              |            |           |     | 2,947,865         |
| 1991                     |     |     |           | 1          | 37,677           | 1,566,933         | 307,835          | 1,971          |              |            |           |     | 1,914,417         |
| 1992                     |     |     |           | 256        | 685,939          | 1,767,696         | 93,446           | 4,102          |              |            |           |     | 2,551,439         |
| 1993                     |     |     | 11        | 10         | 111,459          | 1,883,831         | 167,900          | 3,463          |              |            |           |     | 2,166,674         |
| 1994                     |     |     |           | 53         | 136,547          | 1,223,421         | 195,894          | 1,640          |              |            |           |     | 1,557,555         |
| 1995                     |     |     |           | 1          | 231,973          | 1,289,390         | 193,091          | 1,724          |              |            |           |     | 1,716,179         |
| 1996                     |     |     |           |            | 24,653           | 1,676,695         | 221,795          | 1,514          |              |            |           |     | 1,924,657         |
| 1997                     |     |     |           |            | 97,507           | 1,760,507         | 312,779          | 768            |              |            |           |     | 2,171,561         |
| 1998                     |     |     |           | 1          | 185,810          | 1,660,405         | 44,656           | 120            |              |            |           |     | 1,890,992         |
| 1999                     |     |     |           |            | 132,782          | 1,374,822         | 129,625          | 1,043          |              |            |           |     | 1,638,272         |
| 2000                     |     |     |           | 6          | 229,344          | 961,587           | 52,558           | 822            |              |            |           |     | 1,244,317         |
| 2001                     |     |     |           | 9          | 704,104          | 1,550,639         | 41,596           | 1,611          |              |            |           |     | 2,297,959         |
| 2002                     |     |     |           | 0          | 382,611          | 2,670,772         | 110,780          | 393            |              |            |           |     | 3,164,556         |
| 2003                     |     |     |           |            | 420,265          | 4,025,864         | 108,226          | 4,195          |              |            |           |     | 4,558,550         |
| 2004                     |     |     |           |            | 662,249          | 4,544,400         | 142,236          | 6,792          |              |            |           |     | 5,355,677         |
| 2005                     |     |     |           |            | 288,233          | 3,768,400         | 182,603          | 2,893          |              |            |           |     | 4,242,129         |
| 2006                     |     |     |           |            | 205,664          | 3,555,887         | 197,303          | 6,400          |              |            |           |     | 3,965,254         |
| 2007                     |     |     |           | 56         | 695,605          | 1,763,670         | 112,508          | 3,438          |              |            |           |     | 2,575,277         |
| 2008                     |     |     |           |            | 67,013           | 1,856,442         | 217,538          | 3,763          |              |            |           |     | 2,144,756         |
| 2009                     |     |     |           |            | 313,849          | 1,028,718         | 30,571           | 600            |              |            |           |     | 1,373,738         |
| 2010                     |     |     |           |            | 45,038           | 943,332           | 53,049           | 1,052          |              |            |           |     | 1,042,471         |
| 2011                     |     |     |           |            | 1,857            | 766,135           | 177,334          | 2,744          |              |            |           |     | 948,070           |
| 2012                     |     |     |           |            | 18,446           | 2,331,533         | 79,282           | 3,133          |              |            |           |     | 2,432,394         |
| <b>TOTAL</b>             |     |     | <b>14</b> | <b>457</b> | <b>7,558,352</b> | <b>59,014,903</b> | <b>8,318,126</b> | <b>150,756</b> | <b>4,136</b> | <b>593</b> | <b>36</b> |     | <b>75,047,373</b> |
| <b>10 Year - Average</b> |     |     |           |            | <b>271,822</b>   | <b>2,458,438</b>  | <b>130,065</b>   | <b>3,501</b>   |              |            |           |     | <b>2,863,832</b>  |



TABLE 24a

**MONTHLY COUNT OF LAMPREY at  
BONNEVILLE DAM 1939<sup>1</sup> - 1969, 1997 - 2012**

The counts in the following table represent an approximation of trends, only. Lamprey are difficult to count. They move back and forth in the count window, spend long periods of time resting and are more likely to pass at night than salmonids. In addition, it is known that lamprey do not always use the fish ladder and may pass over a dam through several routes including the navigation lock and the auxiliary water supply.

| Year   | JAN | FEB | MAR | APR      | MAY          | JUN                | JUL            | AUG              | SEP            | OCT            | NOV           | DEC          | TOTAL            |
|--|-----|-----|-----|----------|--------------|--------------------|----------------|------------------|----------------|----------------|---------------|--------------|------------------|
| 1939   |     |     |     | 732      | 9,027        | 95,814             | 103,726        | 14,403           | 3,349          | 71             | 0             |              | 227,122          |
| 1940   |     |     |     | 338      | 24,551       | 40,642             | 67,760         | 20,554           | 2,217          | 40             | 0             |              | 156,102          |
| 1941   |     |     |     | 1,428    | 7,449        | 6,960              | 34,952         | 12,801           | 1,305          | 57             | 2             |              | 64,954           |
| 1942   |     |     |     | 13       | 1,302        | 3,457              | 28,641         | 16,270           | 2,619          | 40             | 19            |              | 52,361           |
| 1943   |     |     |     | 0        | 1,684        | 3,539              | 14,332         | 26,508           | 5,017          | 14             | 2             |              | 51,096           |
| 1944   |     |     |     | 22       | 2,189        | 1,411              | 19,288         | 11,853           | 1,342          | 86             | 18            |              | 36,209           |
| 1945   |     |     |     | 56       | 1,676        | 4,365              | 16,395         | 11,533           | 2,407          | 56             | 0             |              | 36,488           |
| 1946   |     |     |     | 57       | 684          | 13,834             | 42,772         | 15,820           | 1,565          | 93             | 0             |              | 74,825           |
| 1947   |     |     |     | 158      | 9,183        | 7,563              | 54,032         | 17,680           | 3,566          | 2,141          | 3             |              | 94,326           |
| 1948   |     |     | 1   | 82       | 295          | 13,744             | 79,507         | 44,511           | 4,948          | 725            | 2             |              | 143,815          |
| 1949   |     |     |     | 5        | 1,105        | 5,678              | 41,438         | 8,264            | 1,372          | 40             | 7             | 19           | 57,928           |
| <sup>2</sup> 1950  |     |     |     |          | 207          | 1,073              | 6,702          | 22,128           | 2,436          | 140            | 7             |              | 32,693           |
| 1951   |     |     |     | 1        | 4            | 11,001             | 8,554          | 25,078           | 420            | 51             | 1             |              | 45,110           |
| 1952   |     |     |     |          | 8            | 3,674              | 13,854         | 7,462            | 1,194          | 11             |               |              | 26,203           |
| 1953   |     |     |     | 79       | 946          | 727                | 17,917         | 26,053           | 1,381          | 25             | 1             |              | 47,129           |
| 1954   |     |     |     | 33       | 201          | 1,001              | 10,303         | 26,535           | 2,824          | 89             |               |              | 40,986           |
| 1955   |     |     |     |          | 210          | 764                | 16,368         | 21,765           | 3,341          | 154            | 1             |              | 42,603           |
| 1956   |     |     |     |          | 24           | 657                | 36,987         | 10,181           | 1,949          | 113            |               |              | 49,911           |
| 1957   |     |     |     | 19       | 185          | 17,698             | 28,506         | 5,907            | 699            | 17             |               |              | 53,031           |
| 1958   |     |     |     | 132      | 877          | 8,092              | 79,548         | 7,448            | 1,036          | 171            | 1,115         |              | 98,419           |
| 1959   |     |     |     | 23       | 67           | 6,273              | 123,104        | 79,976           | 4,006          | 1,626          | 8             |              | 215,083          |
| 1960   |     |     |     | 8        | 1,521        | 12,185             | 125,962        | 30,751           | 7,329          | 142            |               |              | 177,898          |
| 1961   |     |     |     | 30       | 649          | 16,786             | 200,722        | 126,438          | 20,110         | 70             |               |              | 364,805          |
| 1962   |     |     |     | 1        | 441          | 13,573             | 49,868         | 30,253           | 7,103          | 166            | 21            |              | 101,426          |
| 1963   |     |     |     | 21       | 20,827       | 5,803              | 28,348         | 24,639           | 7,702          | 597            |               |              | 87,937           |
| 1964   |     |     | 2   | 8        | 2,575        | 17,796             | 39,223         | 41,214           | 3,167          | 347            | 5             |              | 104,337          |
| 1965   |     |     |     | 54       | 6,674        | 8,886              | 71,027         | 16,949           | 4,617          | 772            | 8             |              | 108,987          |
| 1966   |     |     |     | 168      | 6,562        | 11,772             | 25,813         | 20,543           | 2,207          | 844            | 5             |              | 67,914           |
| 1967   |     |     |     | 211      | 4,416        | 6,348              | 38,591         | 14,792           | 1,570          | 225            | 18            |              | 66,171           |
| 1968   |     |     |     | 92       | 14,698       | 18,389             | 57,011         | 17,611           | 949            | 275            | 4             |              | 109,029          |
| 1969   |     |     |     | 44       | 24,386       | 230,096            | 87,769         | 32,908           | 4,126          | 170            | 10            |              | 379,509          |
| *** Counting lamprey was stopped after 1969. It was resumed again in 1997. *** |     |     |     |          |              |                    |                |                  |                |                |               |              |                  |
| 1997   |     |     |     | 4        | 1,691        | <sup>3</sup> ##### | 1,939          | 9,783            | 8,643          | 770            | 0             |              | 22,830           |
| 1998   |     |     |     | 103      | 2,213        | 12,851             | 14,548         | 5,304            | 2,211          | 285            | 0             |              | 37,515           |
| 1999   |     |     |     | 65       | 4,780        | 8,801              | 12,047         | 7,584            | 3,717          | 302            | 0             |              | 37,296           |
| 2000   |     |     |     | 91       | 2,204        | 7,953              | 4,184          | 3,408            | 1,038          | 123            | 1             |              | 19,002           |
| 2001   |     |     |     | 1        | 2,075        | 11,143             | 9,895          | 4,141            | 620            | 72             |               |              | 27,947           |
| 2002   |     |     |     | 0        | 1,280        | 34,070             | 39,405         | 17,380           | 7,977          | 364            |               |              | 100,476          |
| 2003   |     |     |     | 6        | 2,874        | 50,875             | 45,863         | 13,230           | 3,843          | 336            |               |              | 117,027          |
| 2004   |     |     |     | 0        | 1,670        | 27,515             | 23,607         | 6,644            | 2,170          | 174            |               |              | 61,780           |
| 2005   |     |     |     | -1       | 774          | 10,706             | 12,271         | 2,320            | 498            | 96             |               |              | 26,664           |
| 2006   |     |     |     | 1        | 446          | 8,874              | 18,603         | 6,868            | 4,013          | 122            | 13            |              | 38,940           |
| 2007   |     |     |     | 0        | 297          | 2,397              | 12,948         | 2,884            | 818            | -26            | -9            |              | 19,309           |
| 2008   |     |     |     | 0        | 444          | 3,942              | 6,276          | 3,159            | 680            | 59             | 2             |              | 14,562           |
| 2009   |     |     |     | 0        | 818          | 2,740              | 3,819          | 1,057            | 203            | -14            | 2             | -3           | 8,622            |
| 2010   |     |     |     | 0        | 11           | 1,285              | 2,793          | 1,646            | 460            | 44             | -6            | 1            | 6,234            |
| 2011   | 1   |     |     |          | 281          | 1,210              | 9,408          | 5,987            | 1,314          | 112            | -5            | 7            | 18,315           |
| 2012   |     |     |     | 20       | 1,141        | 8,073              | 10,780         | 6,555            | 2,583          | 81             | -10           | 1            | 29,224           |
| <b>TOTAL</b>   |     |     |     | <b>3</b> | <b>4,105</b> | <b>167,622</b>     | <b>782,036</b> | <b>1,797,406</b> | <b>886,778</b> | <b>148,661</b> | <b>12,268</b> | <b>1,245</b> | <b>3,800,150</b> |
| <b>10-Year Average</b>   |     |     |     | <b>3</b> | <b>876</b>   | <b>11,762</b>      | <b>14,637</b>  | <b>5,035</b>     | <b>1,658</b>   |                |               |              | <b>34,068</b>    |

<sup>1</sup>No data are available for 1938.

<sup>2</sup>Because of changes in the Washington shore counting station, lamprey counts from 1939-1949 cannot be compared with counts from 1950 on.

<sup>3</sup>Because of the heavy shad run, fish counters were not asked to count lamprey from June 1 through July 27.

TABLE 24b

## NIGHT COUNT OF LAMPREY - BONNEVILLE DAM

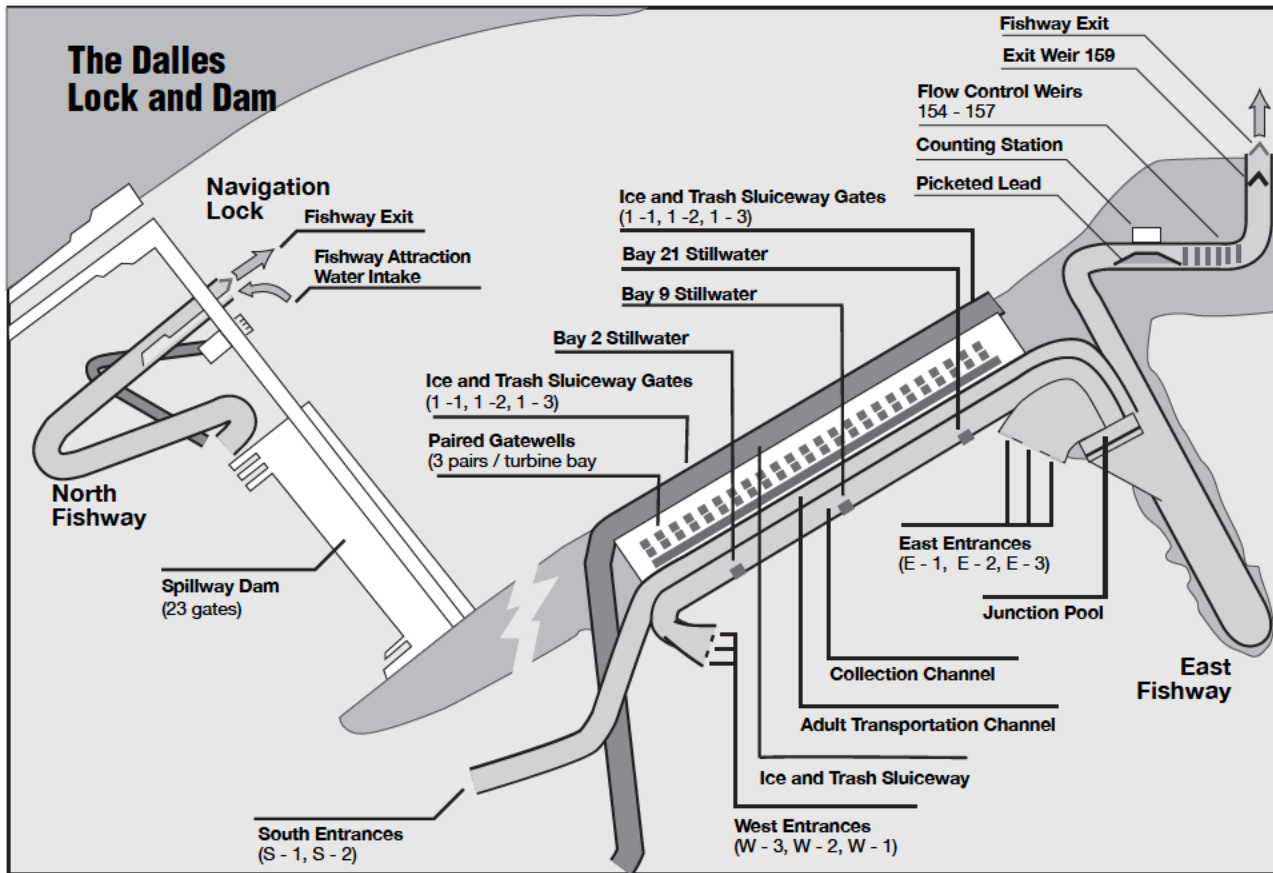
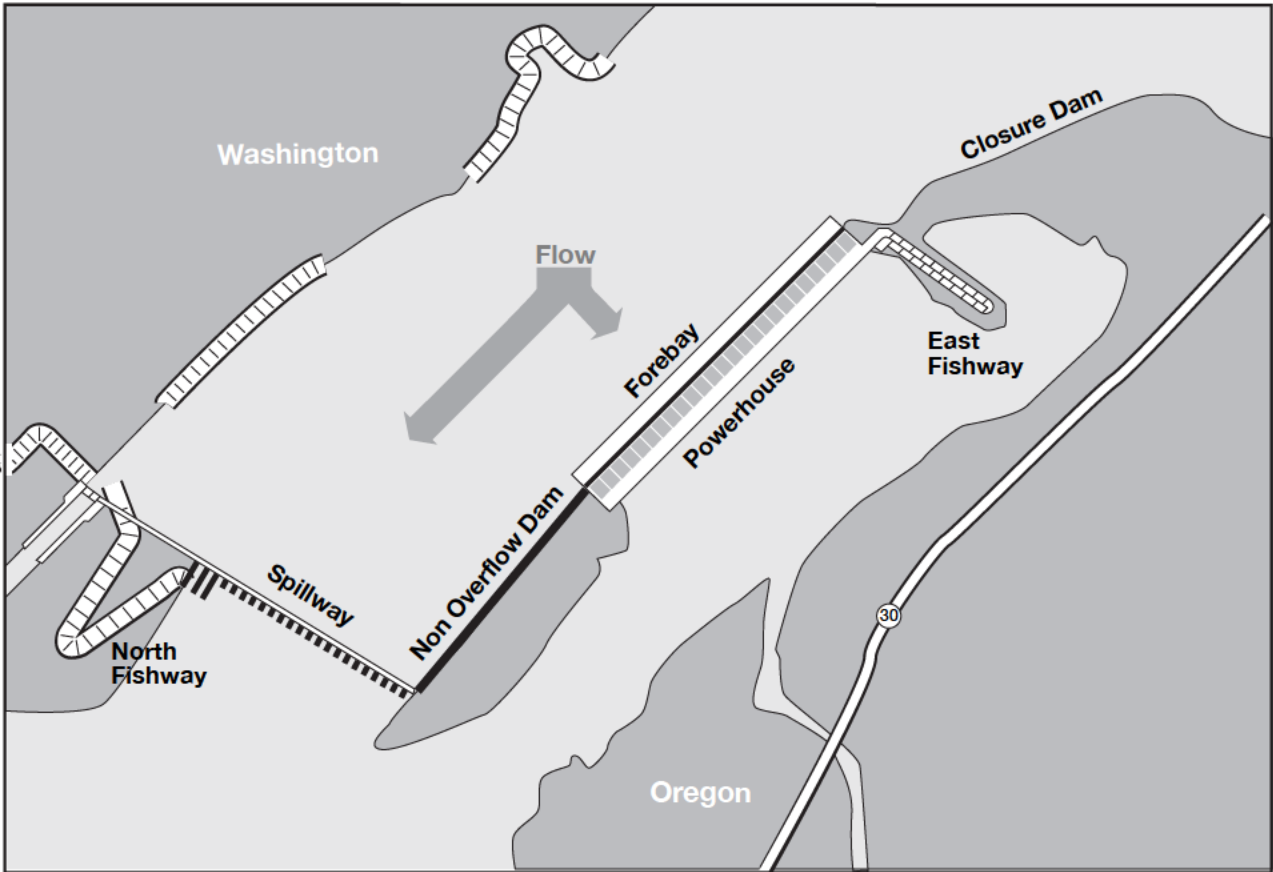
| 2009          |            |              |            |             | 2010          |            |              |            |            | 2011          |              |              |              |              | 2012          |              |               |              |            |    |
|---------------|------------|--------------|------------|-------------|---------------|------------|--------------|------------|------------|---------------|--------------|--------------|--------------|--------------|---------------|--------------|---------------|--------------|------------|----|
| Day           | JUN        | JUL          | AUG        | SEP         | Day           | JUN        | JUL          | AUG        | SEP        | Day           | JUN          | JUL          | AUG          | SEP          | Day           | JUN          | JUL           | AUG          | SEP        |    |
| 1             |            | 151          | -47        | 15          | 1             |            | 70           | 49         | 33         | 1             |              | 310          | 284          | 114          | 1             |              | 477           | 148          | 33         |    |
| 2             |            | 156          | 11         | -26         | 2             |            | 49           | 43         | 20         | 2             |              | 284          | 317          | 100          | 2             |              | 429           | 100          | 14         |    |
| 3             |            | 250          | 6          | -32         | 3             |            | 65           | 106        | 27         | 3             |              | 415          | 487          | 112          | 3             |              | 268           | 202          | 25         |    |
| 4             |            | 182          | -33        | -86         | 4             |            | 68           | 65         | 5          | 4             |              | 207          | 505          | 135          | 4             |              | 271           | 134          | 21         |    |
| 5             |            | 156          | 10         | -40         | 5             |            | 104          | 101        | -10        | 5             |              | 402          | 222          | 116          | 5             |              | 347           | -31          | 35         |    |
| 6             |            | 33           | 17         | -43         | 6             |            | 279          | 62         | -1         | 6             |              | 384          | 231          | 72           | 6             |              | 343           | 99           | 38         |    |
| 7             |            | 129          | -7         | -19         | 7             |            | 189          | 62         | 1          | 7             |              | 145          | 272          | 112          | 7             |              | 412           | 212          | 94         |    |
| 8             |            | 139          | 28         | -23         | 8             |            | 118          | 63         | 4          | 8             |              | 24           | 208          | 77           | 8             |              | 429           | 76           | 40         |    |
| 9             |            | 200          | 13         | -29         | 9             |            | -1           | 53         | 2          | 9             |              | 312          | 237          | 77           | 9             |              | 296           | 132          | 27         |    |
| 10            |            | 229          | 21         | -33         | 10            |            | 101          | 23         | -2         | 10            |              | 143          | 197          | 61           | 10            |              | 275           | 402          | 40         |    |
| 11            |            | 179          | -5         | -13         | 11            |            | 60           | 16         | 0          | 11            |              | 241          | 138          | 84           | 11            |              | 268           | 234          | 31         |    |
| 12            |            | 79           | 19         | -14         | 12            |            | -50          | 39         | 1          | 12            |              | 216          | 190          | 105          | 12            |              | 108           | 256          | 32         |    |
| 13            |            | 138          | 41         | -25         | 13            |            | -15          | 36         | 0          | 13            |              | 199          | 121          | 56           | 13            |              | 247           | 207          | 15         |    |
| 14            |            | 252          | 46         | -14         | 14            |            | 31           | 20         | 7          | 14            |              | -6           | 354          | 191          | 108           | 14           | 86            | 333          | 337        | 13 |
| 15            |            | 20           | 228        | 34          | -3            | 15         | 20           | 114        | 19         | 3             | 15           | 7            | 243          | 167          | 81            | 15           | 144           | 254          | 143        | 12 |
| 16            |            | -60          | 287        | 45          | -6            | 16         | 12           | 125        | 42         | 1             | 16           | 13           | 267          | 154          | 39            | 16           | 123           | 548          | 117        | 26 |
| 17            |            | 126          | 371        | 49          | -10           | 17         | 35           | 119        | 4          | 5             | 17           | -1           | 112          | 118          | 89            | 17           | 419           | 535          | 525        | 18 |
| 18            |            | 145          | 230        | 67          | -23           | 18         | 43           | 108        | 11         | 6             | 18           | -12          | 414          | 135          | 78            | 18           | 302           | 441          | 188        | 21 |
| 19            |            | 200          | 188        | 27          | -18           | 19         | 7            | 67         | 23         | 7             | 19           | 35           | 73           | 167          | 60            | 19           | 319           | 465          | 187        | 46 |
| 20            |            | -166         | 212        | -32         | -14           | 20         | 8            | 17         | 13         | 6             | 20           | 20           | 550          | 152          | 55            | 20           | 576           | 468          | 184        | 10 |
| 21            |            | -5           | 183        | -29         | -12           | 21         | 20           | 16         | 7          | 0             | 21           | 52           | 416          | 161          | 67            | 21           | 222           | 331          | 219        | 7  |
| 22            |            | 73           | 277        | -62         | -8            | 22         | 48           | 126        | 1          | 3             | 22           | 103          | 455          | 87           | 51            | 22           | 239           | 239          | 126        | 18 |
| 23            |            | 24           | 200        | -11         | -2            | 23         | 40           | 89         | -4         | 4             | 23           | 102          | 207          | 237          | 76            | 23           | 211           | 324          | 74         | 1  |
| 24            |            | 105          | 271        | -10         | -6            | 24         | 87           | 106        | 4          | 2             | 24           | 36           | 425          | 129          | 53            | 24           | 210           | 451          | 70         | 11 |
| 25            |            | -1           | -15        | -13         | -11           | 25         | 84           | 52         | 21         | 2             | 25           | 96           | 443          | 153          | 55            | 25           | 256           | 372          | 25         | 12 |
| 26            |            | 39           | 73         | -21         | -11           | 26         | 76           | 48         | 23         | 0             | 26           | 175          | 473          | 100          | 40            | 26           | 403           | 196          | 176        | 12 |
| 27            |            | 59           | 48         | -9          | -1            | 27         | 63           | 66         | 21         | 0             | 27           | 214          | 436          | 155          | 43            | 27           | 270           | 365          | 144        | 1  |
| 28            |            | 62           | 153        | 11          | 5             | 28         | 70           | 40         | 8          | 0             | 28           | 155          | 270          | 131          | 36            | 28           | 425           | 57           | 212        | 12 |
| 29            |            | 179          | -14        | 8           | -1            | 29         | 110          | 8          | 11         | -1            | 29           | 188          | 265          | 73           | 16            | 29           | 400           | 240          | 73         | 7  |
| 30            |            | 195          | -135       | 12          | 3             | 30         | 103          | 29         | 24         | 1             | 30           | 340          | 245          | 76           | 8             | 30           | 379           | 272          | 92         | 8  |
| 31            |            | 100          | 38         |             |               | 31         |              | 28         | 12         |               | 31           |              | 345          | 94           |               | 31           |               | 216          | 45         |    |
| <b>TOTALS</b> | <b>995</b> | <b>4,930</b> | <b>224</b> | <b>-500</b> | <b>TOTALS</b> | <b>826</b> | <b>2,226</b> | <b>978</b> | <b>126</b> | <b>TOTALS</b> | <b>1,517</b> | <b>9,275</b> | <b>5,889</b> | <b>2,176</b> | <b>TOTALS</b> | <b>4,984</b> | <b>10,277</b> | <b>5,108</b> | <b>680</b> |    |

Note: video counting for night lamprey passage at Bonneville June 15 - September 30

Not included with the Daytime total lamprey counts.

Video is eight hours from 2000 to 0400 Pacific standard time

# Plate 3 The Dalles Lock and Dam



# THE DALLES DAM

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## FISH COUNTING SCHEDULE

Apr 1 – Oct 31      Visual counting daily 0400-2000 hours Pacific Standard Time.

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## FISHWAY OPERATING SCHEDULE

The following information includes fishway operation for calendar year 2011. Total length of time for annual fishway outages can be determined by referring to previous years' annual reports.

### *East Adult Fishway*

|                |   |
|----------------|---|
| Jan 1 – Jan 31 | Dewatered for winter maintenance                                  |
| Feb 1 – Dec 2  | In full operation with attraction water                           |
| Aug 1          | Attraction water off half day for required ROV grating inspection |
| Dec 2 – Dec 31 | Dewatered for winter maintenance                                  |

### *North Adult Fishway*

|                 |   |
|-----------------|---|
| Jan 1- Feb 1    | In full operation with attraction water                           |
| Feb 2 – Feb 23  | Dewatered for winter maintenance                                  |
| Feb 24 – Dec 31 | In full operation with attraction water                           |
| Aug 1           | Attraction water off half day for required ROV grating inspection |

### *Ice/Trash Sluiceway (Juvenile)*

|                 |                               |
|-----------------|-------------------------------|
| Jan 1- Mar 8    | OOS, end gate closed          |
| Mar 1 – Dec 15  | In service with skimmer gates |
| Dec 16 – Dec 31 | OOS, end gate closed          |

### *Spillway*

|                   |                                      |
|-------------------|--------------------------------------|
| Jan 1 – April 10  | Closed, all gates on seal            |
| April 10 – Aug 31 | Spill 40%, 24/7 for juvenile passage |
| Sept 1 – Dec 31   | Closed, all gates on seal            |

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## FISH RELATED DEWATERINGS

### *FISHWAY DEWATERING PROCEDURES*

Bulkheads are installed and drain valves open to dewater various areas of fishways. Fisheries personnel enter these areas to salvage fish that become entrapped. Minimal handling of fish is applied. Fish that are reluctant to vacate an area are captured and transported to the forebay or tailwater, depending on circumstances such as fish species, age class and stress levels. A follow up inspection is made to account for possible missed fish. Efforts are made to provide continual

water supply during the entire operation to reduce fish stranding. Fishway areas not included on this list are inspected by ROV.

### **Fish Ladder Dewatering Results**

Key; adult=a, juvenile=j, carp=cp, catfish=ca, sculpin=sp, shad=sh, small mouth bass=smb, crappie=cr, pikeminnow=pm, whitefish=wf

| ate      | Event    | Steelhead | Lamprey | Shad | Sturgeon | Other       | Comments | Mort's   |
|----------|----------|-----------|---------|------|----------|-------------|----------|----------|
| 2/1/12   | N. upper | 1a, 3j    | 5       | 0    | 0        | 0           | 1.)      | 0        |
| 12/3/12  | E. upper | 1a,1j     | 8a      | 230  | 4a       | 1cp,7wf,1pm | 2.)      | 0        |
| 12/11/12 | E. lower | 1j        | 5       | 0    | 4j       | 2wf         | None     | 0        |
| 12/12/12 | E. Lower | 4j        | 29a     | 0    | 1j       | 2wf         | 3.)      | 1lamprey |

- 1.) Five adult lamprey and one adult steelhead was bagged and released to forebay. Three wild juvenile steelhead were bagged and released to tailwater.
- 2.) Tally included: 230 adult shad, 1 carp, 7 whitefish, 1 pikeminnow, 1 steelhead, 1 rainbow trout, 3 juvenile salmonids captured and returned to tailwater. Four adult sturgeon were pushed to tailwater from section below the 180 bend. Eight adult lamprey captured for Nez Perce.
- 3.) 29 adult lamprey captured for Nez Perce to augment Pacific Lamprey production in the Lower Snake/Clearwater Basins; all other fish released to tailwater.

### ***TURBINE DEWATERING PROCEDURES***

Turbine dewatering for routine maintenance usually involves low numbers of fish, due in part to operational guidelines. The most important guideline includes immediate tail log installation after unit shut down. If a turbine unit fails, dewatering guidelines cannot always be followed, which usually results in higher numbers of fish entrapment. Removal of fish from these areas has a greater fish stress risk due to handling. Procedures are continually analyzed to determine the best method for preventing fish stress or loss. Fish are removed from scroll case (sc) and draft tubes (dt) by fish bags. If numbers of fish are higher than two bags, transport tanks are placed in the draft tube gallery for transport by crane. Fish are released to tailwater either with bag and rope or tank and crane.

### **Turbine Dewatering Results**

Key; adult=a, juvenile=j, scroll case=sc, draft tube=dt, catfish=ca, sculpin=sp, crappie=cr, small mouth bass=smb

| Date    | Event   | Chinook | Steelhead | Sturgeon | Other | Comments | Morts |
|---------|---------|---------|-----------|----------|-------|----------|-------|
| 1/9/12  | MU13 sc | 0       | 0         | 1        | 0     | 1.)      | 0     |
| 1/10/12 | MU13 dt | 0       | 0         | 0        | 0     | None     | 0     |
| 2/22/12 | MU11 sc | 0       | 0         | 0        | 0     | None     | 0     |
| 3/1/12  | MU12 sc | 0       | 0         | 0        | 0     | None     | 0     |
| 3/1/12  | MU12 dt | 0       | 0         | 0        | 0     | None     | 0     |
| 3/20/12 | MU19 sc | 0       | 0         | 0        | 0     | None     | 0     |
| 3/20/12 | MU19 dt | 0       | 0         | 0        | 0     | None     | 0     |
| 5/22/12 | MU9 dt  | 5j      | 1j        | 2        | 0     | 2.)      | 5     |
| 7/30/12 | MU11 sc | 0       | 0         | 0        | 0     | None     | 2j    |
| 7/30/12 | MU11 dt | 0       | 0         | 2        | 2ca   | None     | 1ca   |
| 9/18/12 | MU15 sc | 0       | 0         | 0        | 0     | None     | 0     |
| 10/2/12 | MU2 sc  | 0       | 0         | 0        | 0     | None     | 0     |
| 10/3/12 | MU2 dt  | 0       | 0         | 3j       | 8     | 3.)      | 0     |
| 12/5/12 | FU1sc   | 0       | 0         | 0        | 0     | None     | 0     |

- 
- 1.) Sturgeon ~2' in length released to tailwater.
  - 2.) Two sturgeon and one CH1 successfully released. Three CH1 fresh mort, one CH1 old dead. 1 clipped SH fresh mort
  - 3.) Eight (8) channel catfish and three (3) juvenile channel cat fish salvaged and released to tail water.

When a unit is taken out of service for maintenance, the cooling water strainers are sometimes disassembled. Due to the concern of juvenile lamprey entrainment and the threat of zebra/quagga mussels, this area is inspected. Fisheries staff was not always notified when these are disassembled. Therefore it has been put into the preventative maintenance program as a reminder to maintenance staff.

| <b>MAIN TURBINE UNITS THIRD FLOOR COOLING WATER STRAINERS</b> |      |         |                |               |          |
|---|------|---------|----------------|---------------|----------|
| Date  | MU   | Lamprey | Quagga Mussels | Zebra Mussels | Comments |
| 9/3/12  | MU22 | 0       | 0              | 0             | None     |

### **Dewatering Fish Salvage Discussion**

All efforts are made to prevent fish mortalities. When mortalities occur, procedures are analyzed to determine how to correct for future dewaterings. One lamprey mortality from the east ladder lower dewatering occurred from being stepped on. Two juvenile salmonid mortalities in unit 11 were from unknown causes. Sufficient water was available.

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### **TRIBAL SHAD FISHERY**

Yakima tribal fishermen did not conduct a shad fishery for 2012. Alternative fishing methods were explored in other locations. There has been no indication of revisiting the east fishway exit as a fishing site again, mainly due to the documented fallback behavior of spring Chinook during the fishing activity.

### **RESEARCH**

The following are a list of fish related research and contract personnel that were on site during the 2012 passage season.

Battelle (PNNL) - Conducted juvenile passage acoustic telemetry (JSAT) monitoring of powerhouse, spillway and sluiceway as part of the overall performance testing program for the spring but were unable to complete the summer testing due to flood conditions in 2011. Summer performance testing resumed for 2012.

University of Idaho – Study involved the monitoring of movements of adult Pacific lamprey outfitted with half-duplex PIT tags at The Dalles Dam.

Oregon Dept of Fish and Wildlife – Captured via electro-shocking and fishing directly into BRZ areas using hook and line, tagged, and collected biological data from northern pikeminnow,

smallmouth bass, and walleye as part of the ODFW “Northern Pikeminnow Management Program”.

Oregon Department of Fish and Wildlife – Continued to provide once monthly fishway inspections of adult and juvenile systems.

Washington Department of Fish and Wildlife – Performed dam angling from various locations on the dam to remove northern pikeminnow.

Washington Department of Fish and Wildlife – Continued to perform fish counting at the north and east fishways via count stations.

Pacific States Marine Fish Commission – Sampled North Wasco PUD turbine juvenile bypass system per FERC requirement.

Pacific States Marine Fisheries Commission - Participated in the Northern Pikeminnow Management Program (NPMP) dam angling fishery. Angling activities in support of study included hook and line capture, holding, PIT-tagging, examination, and gastric lavage of encountered smallmouth bass.

Fisheries Field Unit – Provided over site and standardization to the piscivorous bird monitoring program at the project.

Fisheries Field Unit – Evaluation of interaction between overwintering American bald eagles and the avian array at The Dalles Dam.

U.S. Dept of Agriculture – Provided avian hazing April 15 to July via pyrotechnics and avian lines prior to juvenile passage season at Nav-lock peninsula.

U.S. Fish and Wildlife Service – Continued evaluation of adult lamprey passage and behavior using underwater video cameras and Dual Frequency Identification Sonar (DIDSON) camera to document adult lamprey as they negotiate the fish count station in the north and east fishways and the upper section of the north fishway at The Dalles Dam from 1 June through 30 October 2012.

Umatilla Tribe – Trapped lamprey between count stations picketed leads and areas of the fishway for restoring lamprey to the Umatilla Basin.

Confederated Tribes of the Umatilla Indian Reservation – Captured adult Pacific lamprey as part of the on-going project to restore lamprey to the “tribes ceded waters”. CTUIR worked with the Nez Perce and Warm Springs tribes to help with lamprey collection efforts.

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TABLE 25

MONTHLY TOTALS OF SALMONIDS, SHAD, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER THE DALLES DAM

2012

| SPECIES      | JAN | FEB | MAR        | APR          | MAY            | JUN            | JUL            | AUG            | SEP            | OCT           | NOV   | DEC | TOTAL            |
|--------------|-----|-----|------------|--------------|----------------|----------------|----------------|----------------|----------------|---------------|-------|-----|------------------|
| CHINOOK*     |     |     | 18         | 8,662        | 110,476        | 52,142         | 31,102         | 44,449         | 257,070        | 33,903        | 2,088 | 20  | 539,930          |
| STEELHEAD    |     |     | 950        | 631          | 258            | 2,809          | 49,514         | 54,567         | 71,995         | 18,065        | 2,631 | 220 | 201,640          |
| SOCKEYE      |     |     |            |              | 15             | 270,789        | 139,045        | 248            | 2              |               |       |     | 410,099          |
| COHO*        |     |     |            |              |                |                | 8              | 2,262          | 28,707         | 2,921         | 119   | 2   | 34,019           |
| CHUM         |     |     |            |              |                |                |                |                |                |               | 7     |     | 7                |
| PINK         |     |     |            |              |                |                |                | 1              | 1              |               |       |     | 2                |
| <b>TOTAL</b> |     |     | <b>968</b> | <b>9,293</b> | <b>110,749</b> | <b>325,740</b> | <b>219,669</b> | <b>101,527</b> | <b>357,775</b> | <b>54,889</b> |       |     | <b>1,185,697</b> |
| LAMPREY      |     |     |            |              |                | 140            | 2,362          | 2,943          | 755            | 41            |       |     | 6,241            |
| STURGEON     |     |     |            |              | 2              | 4              | 39             | 23             | 13             | 3             |       |     | 84               |
| BULL TROUT   |     |     |            |              |                |                |                |                |                |               |       |     | 0                |

\*Jacks included  
Shad no longer counted at The Dalles Dam.



TABLE 26

## DISCHARGE AND WATER QUALITY DATA

## THE DALLES PROJECT 2012

| JANUARY |               |               |           |       | FEBRUARY |               |               |           |        |
|---------|---------------|---------------|-----------|-------|----------|---------------|---------------|-----------|--------|
| DATE    | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY |       | DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY |        |
|         |               |               | SECCHI    | DEG F |          |               |               | SECCHI    | *DEG F |
| Jan 1   | 148.0         | 0.0           | 6.0       | 41.0  | Feb 1    | 121.5         | 0.0           | 6.0       | 37.4   |
| Jan 2   | 116.1         | 0.0           | 6.0       | 41.0  | Feb 2    | 130.1         | 0.0           | 6.0       | 37.5   |
| Jan 3   | 139.2         | 0.0           | 6.0       | 40.9  | Feb 3    | 123.1         | 0.0           | 6.0       | 37.4   |
| Jan 4   | 158.2         | 0.0           | 6.0       | 40.9  | Feb 4    | 123.2         | 0.0           | 6.0       | 37.4   |
| Jan 5   | 125.5         | 0.0           | 6.0       | 41.0  | Feb 5    | 119.4         | 0.0           | 6.0       |        |
| Jan 6   | 136.6         | 0.0           | 6.0       | 41.1  | Feb 6    | 128.6         | 0.0           | 6.0       |        |
| Jan 7   | 106.3         | 0.0           | 6.0       | 41.0  | Feb 7    | 131.5         | 0.0           | 6.0       |        |
| Jan 8   | 109.2         | 0.0           | 6.0       | 41.0  | Feb 8    | 127.5         | 0.0           | 6.0       |        |
| Jan 9   | 139.1         | 0.0           | 6.0       | 41.0  | Feb 9    | 118.4         | 0.0           | 6.0       |        |
| Jan 10  | 133.5         | 0.0           | 6.0       | 40.9  | Feb 10   | 125.2         | 0.0           | 6.0       |        |
| Jan 11  | 149.2         | 0.0           | 6.0       | 40.9  | Feb 11   | 128.8         | 0.0           | 6.0       |        |
| Jan 12  | 126.4         | 0.0           | 6.0       | 41.0  | Feb 12   | 130.7         | 0.0           | 6.0       |        |
| Jan 13  | 138.7         | 0.0           | 6.0       | 41.1  | Feb 13   | 125.1         | 0.0           | 6.0       |        |
| Jan 14  | 109.7         | 0.0           | 6.0       | 41.0  | Feb 14   | 130.5         | 0.0           | 6.0       |        |
| Jan 15  | 122.2         | 0.0           | 6.0       | 40.0  | Feb 15   | 146.0         | 0.0           | 6.0       |        |
| Jan 16  | 136.0         | 0.0           | 6.0       | 40.0  | Feb 16   | 155.7         | 0.0           | 6.0       |        |
| Jan 17  | 130.6         | 0.0           | 6.0       | 39.5  | Feb 17   | 120.3         | 0.0           | 6.0       |        |
| Jan 18  | 159.5         | 0.0           | 6.0       | 39.1  | Feb 18   | 113.6         | 0.0           | 6.0       |        |
| Jan 19  | 158.0         | 0.0           | 6.0       | 38.8  | Feb 19   | 115.5         | 0.0           | 6.0       | 39.0   |
| Jan 20  | 156.8         | 0.0           | 6.0       | 38.4  | Feb 20   | 131.2         | 0.0           | 6.0       | 38.9   |
| Jan 21  | 145.8         | 0.0           | 6.0       | 38.2  | Feb 21   | 125.7         | 0.0           | 6.0       | 39.0   |
| Jan 22  | 121.6         | 0.0           | 6.0       | 38.2  | Feb 22   | 121.3         | 0.0           | 6.0       | 39.8   |
| Jan 23  | 146.7         | 0.0           | 6.0       | 38.1  | Feb 23   | 165.5         | 0.0           | 6.0       | 39.9   |
| Jan 24  | 144.4         | 0.0           | 6.0       | 37.6  | Feb 24   | 160.7         | 0.0           | 6.0       | 39.7   |
| Jan 25  | 133.1         | 0.0           | 6.0       | 37.5  | Feb 25   | 116.8         | 0.0           | 6.0       | 39.9   |
| Jan 26  | 132.6         | 0.0           | 6.0       | 37.8  | Feb 26   | 134.7         | 0.0           | 5.0       | 39.8   |
| Jan 27  | 151.2         | 0.0           | 6.0       | 37.7  | Feb 27   | 160.3         | 0.0           | 5.0       | 39.8   |
| Jan 28  | 150.2         | 0.0           | 6.0       | 37.3  | Feb 28   | 165.6         | 0.0           | 5.0       | 39.8   |
| Jan 29  | 131.1         | 0.0           | 6.0       | 37.2  | Feb 29   | 123.0         | 0.0           | 5.0       | 40.0   |
| Jan 30  | 121.8         | 0.0           | 6.0       | 37.3  |          |               |               |           |        |
| Jan 31  | 128.6         | 0.0           | 6.0       | 37.5  |          |               |               |           |        |
| AVG.    | 135.7         | 0.0           | 6.0       | 39.5  | AVG.     | 131.7         | 0.0           | 5.9       | 39.0   |

\*Data unavailable

TABLE 27

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

## THE DALLES PROJECT - FISH COUNTS

MARCH 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO     | COHO  | TOTAL unclipped |         |            |            |      | DISCH | SPILL   | TURBIDITY |              |            |            |             |
|--------------|---------------|--------|---------|----------|-------|-----------------|---------|------------|------------|------|-------|---------|-----------|--------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL    | JACK     | ADULT | JACK            | SOCKEYE | STEELHEAD  | STEELHEAD  | PINK | CHUM  | LAMPREY | STURGEON  | KCFS         | KCFS       | SECCHI     | DEG F       |
| Mar 1        | 0             |        |         | 0        |       |                 |         | 14         | 9          |      |       |         |           | 129.6        | 0.0        | 6.0        | 40.3        |
| Mar 2        | 0             |        |         | 0        |       |                 |         | 18         | 11         |      |       |         |           | 147.2        | 0.0        | 6.0        | 40.4        |
| Mar 3        | 0             |        |         | 0        |       |                 |         | 19         | 10         |      |       |         |           | 132.7        | 0.0        | 5.0        | 40.6        |
| Mar 4        | 0             |        |         | 0        |       |                 |         | 26         | 14         |      |       |         |           | 141.9        | 0.0        | 4.5        | 41.0        |
| Mar 5        | 0             |        |         | 0        |       |                 |         | 38         | 20         |      |       |         |           | 131.4        | 0.0        | 5.0        | 41.1        |
| Mar 6        | 0             |        |         | 0        |       |                 |         | 20         | 16         |      |       |         |           | 141.8        | 0.0        | 5.0        | 40.8        |
| Mar 7        | 0             |        |         | 0        |       |                 |         | 35         | 25         |      |       |         |           | 159.9        | 0.0        | 5.5        | 40.7        |
| Mar 8        | 0             |        |         | 0        |       |                 |         | 30         | 18         |      |       |         |           | 163.2        | 0.0        | 5.0        | 40.9        |
| Mar 9        | 0             |        |         | 1        |       |                 |         | 17         | 8          |      |       |         |           | 151.8        | 0.0        | 5.0        | 41.1        |
| Mar 10       | 1             |        |         | 0        |       |                 |         | 27         | 14         |      |       |         |           | 144.4        | 0.0        | 4.0        | 41.5        |
| Mar 11       | 1             |        |         | 0        |       |                 |         | 18         | 8          |      |       |         |           | 133.3        | 0.0        | 5.0        | 41.7        |
| Mar 12       | 1             |        |         | 0        |       |                 |         | 25         | 13         |      |       |         |           | 165.4        | 0.0        | 5.0        | 41.4        |
| Mar 13       | 0             |        |         | 0        |       |                 |         | 19         | 10         |      |       |         |           | 181.7        | 0.0        | 4.5        | 41.2        |
| Mar 14       | 1             |        |         | 0        |       |                 |         | 28         | 16         |      |       |         |           | 184.6        | 0.0        | 5.0        | 41.5        |
| Mar 15       | 1             |        |         | 0        |       |                 |         | 24         | 11         |      |       |         |           | 172.6        | 0.0        | 4.5        | 41.9        |
| Mar 16       | 1             |        |         | 0        |       |                 |         | 26         | 12         |      |       |         |           | 190.6        | 0.0        | 4.5        | 42.3        |
| Mar 17       | 0             |        |         | 0        |       |                 |         | 36         | 20         |      |       |         |           | 190.1        | 0.0        | 4.0        | 42.5        |
| Mar 18       | 2             |        |         | 0        |       |                 |         | 28         | 15         |      |       |         |           | 198.6        | 0.0        | 4.0        | 42.4        |
| Mar 19       | 1             |        |         | 1        |       |                 |         | 29         | 14         |      |       |         |           | 202.9        | 0.0        | 5.5        | 42.3        |
| Mar 20       | 1             |        |         | 0        |       |                 |         | 31         | 17         |      |       |         |           | 174.4        | 0.0        | 5.5        | 42.5        |
| Mar 21       | 3             |        |         | 0        |       |                 |         | 34         | 18         |      |       |         |           | 219.3        | 0.0        | 4.5        | 42.4        |
| Mar 22       | 1             |        |         | 0        |       |                 |         | 35         | 19         |      |       |         |           | 215.9        | 0.0        | 4.0        | 42.5        |
| Mar 23       | 1             |        |         | 0        |       |                 |         | 38         | 18         |      |       |         |           | 224.0        | 0.0        | 4.5        | 42.8        |
| Mar 24       | 0             |        |         | 0        |       |                 |         | 37         | 19         |      |       |         |           | 231.4        | 0.0        | 4.5        | 43.0        |
| Mar 25       | 0             |        |         | 0        |       |                 |         | 33         | 22         |      |       |         |           | 235.1        | 0.0        | 4.5        | 43.1        |
| Mar 26       | 0             |        |         | 0        |       |                 |         | 41         | 31         |      |       |         |           | 217.9        | 11.8       | 4.5        | 43.1        |
| Mar 27       | 0             |        |         | 0        |       |                 |         | 36         | 17         |      |       |         |           | 238.6        | 13.2       | 4.5        | 43.3        |
| Mar 28       | 0             |        |         | 0        |       |                 |         | 40         | 30         |      |       |         |           | 264.3        | 25.5       | 5.0        | 43.4        |
| Mar 29       | 1             |        |         | 0        |       |                 |         | 43         | 33         |      |       |         |           | 275.9        | 45.1       | 4.5        | 43.4        |
| Mar 30       | 0             |        |         | 0        |       |                 |         | 52         | 30         |      |       |         |           | 287.3        | 55.7       | 3.0        | 43.7        |
| Mar 31       | 0             |        |         | 0        |       |                 |         | 53         | 34         |      |       |         |           | 280.9        | 42.0       | 3.0        | 43.8        |
| <b>TOTAL</b> | <b>16</b>     |        |         | <b>2</b> |       |                 |         | <b>950</b> | <b>552</b> |      |       |         |           |              |            |            |             |
| <b>AVG.</b>  | <b>1</b>      |        |         | <b>0</b> |       |                 |         | <b>31</b>  | <b>18</b>  |      |       |         |           | <b>191.2</b> | <b>6.2</b> | <b>4.7</b> | <b>42.0</b> |

Note: From February 20 to March 31, counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Video disruption occurred resulting in a loss of 7 hours at the north ladder. Official Spring Chinook run started April 1. February and March Chinook counts were not added to spring totals.

TABLE 28

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL      |                     |        | PINK | CHUM | LAMPREY | STURGEON     | DISCH KCFS   | SPILL KCFS | TURBIDITY   |  |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|------------|---------------------|--------|------|------|---------|--------------|--------------|------------|-------------|--|
|              | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD  | unclipped STEELHEAD | SECCHI |      |      |         |              |              |            | DEG F       |  |
| Apr 1        | 1             |        |      | 0            |            |           |         | 37         | 19                  |        |      |      |         | 314.6        | 89.8         | 3.5        |             |  |
| Apr 2        | 1             |        |      | 0            |            |           |         | 63         | 37                  |        |      |      |         | 306.5        | 121.2        | 3.0        |             |  |
| Apr 3        | 0             |        |      | 0            |            |           |         | 56         | 26                  |        |      |      |         | 318.2        | 133.5        | 4.0        |             |  |
| Apr 4        | 1             |        |      | 0            |            |           |         | 45         | 26                  |        |      |      |         | 292.9        | 110.3        | 4.0        |             |  |
| Apr 5        | 4             |        |      | 0            |            |           |         | 25         | 18                  |        |      |      |         | 270.3        | 103.2        | 4.0        |             |  |
| Apr 6        | 1             |        |      | 0            |            |           |         | 28         | 18                  |        |      |      |         | 289.4        | 100.2        | 4.0        |             |  |
| Apr 7        | 4             |        |      | 0            |            |           |         | 29         | 19                  |        |      |      |         | 299.9        | 101.1        | 2.3        |             |  |
| Apr 8        | 5             |        |      | 0            |            |           |         | 29         | 12                  |        |      |      |         | 290.2        | 116.7        | 2.3        | 45.3        |  |
| Apr 9        | 2             |        |      | 0            |            |           |         | 29         | 16                  |        |      |      |         | 265.0        | 64.2         | 3.0        | 45.6        |  |
| Apr 10       | 7             |        |      | 0            |            |           |         | 13         | 4                   |        |      |      |         | 258.3        | 103.0        | 3.0        | 46.0        |  |
| Apr 11       | 5             |        |      | 0            |            |           |         | 21         | 14                  |        |      |      |         | 285.7        | 114.2        | 3.0        | 46.2        |  |
| Apr 12       | 6             |        |      | 0            |            |           |         | 20         | 8                   |        |      |      |         | 280.5        | 111.8        | 3.0        | 46.3        |  |
| Apr 13       | 10            |        |      | 0            |            |           |         | 11         | 4                   |        |      |      |         | 276.2        | 104.9        | 3.0        | 46.5        |  |
| Apr 14       | 11            |        |      | 0            |            |           |         | 15         | 7                   |        |      |      |         | 292.6        | 113.4        | 3.0        | 46.9        |  |
| Apr 15       | 24            |        |      | 0            |            |           |         | 22         | 14                  |        |      |      |         | 282.9        | 104.4        | 3.0        | 47.2        |  |
| Apr 16       | 50            |        |      | 1            |            |           |         | 7          | 6                   |        |      |      |         | 268.2        | 104.5        | 3.0        | 47.1        |  |
| Apr 17       | 47            |        |      | 1            |            |           |         | 19         | 12                  |        |      |      |         | 281.5        | 108.5        | 4.8        | 47.0        |  |
| Apr 18       | 71            |        |      | 1            |            |           |         | 10         | 6                   |        |      |      |         | 287.2        | 107.4        | 3.5        | 47.4        |  |
| Apr 19       | 92            |        |      | 0            |            |           |         | 12         | 8                   |        |      |      |         | 295.7        | 103.8        | 3.5        | 47.8        |  |
| Apr 20       | 121           |        |      | 2            |            |           |         | 12         | 10                  |        |      |      |         | 301.0        | 106.1        | 3.5        | 48.1        |  |
| Apr 21       | 83            |        |      | 1            |            |           |         | 13         | 12                  |        |      |      |         | 293.5        | 100.3        | 3.0        | 48.8        |  |
| Apr 22       | 187           |        |      | 2            |            |           |         | 20         | 9                   |        |      |      |         | 310.7        | 100.7        | 3.0        | 49.4        |  |
| Apr 23       | 353           |        |      | 4            |            |           |         | 17         | 10                  |        |      |      |         | 323.9        | 120.1        | 3.0        | 49.9        |  |
| Apr 24       | 691           |        |      | 19           |            |           |         | 18         | 13                  |        |      |      |         | 339.1        | 147.5        | 3.0        | 50.6        |  |
| Apr 25       | 1,318         |        |      | 72           |            |           |         | 4          | 2                   |        |      |      |         | 387.4        | 196.7        | 3.0        | 51.0        |  |
| Apr 26       | 802           |        |      | 17           |            |           |         | 19         | 7                   |        |      |      |         | 398.3        | 184.8        | 2.0        | 51.2        |  |
| Apr 27       | 1,382         |        |      | 46           |            |           |         | 17         | 6                   |        |      |      |         | 393.8        | 150.0        | 2.0        | 51.4        |  |
| Apr 28       | 952           |        |      | 16           |            |           |         | 7          | 0                   |        |      |      |         | 411.0        | 166.2        | 2.5        | 51.5        |  |
| Apr 29       | 962           |        |      | 28           |            |           |         | 6          | 2                   |        |      |      |         | 378.6        | 140.3        | 2.5        | 51.7        |  |
| Apr 30       | 1,206         |        |      | 53           |            |           |         | 7          | 2                   |        |      |      |         | 365.7        | 174.6        | 2.0        | 51.9        |  |
| <b>TOTAL</b> | <b>8,399</b>  |        |      | <b>263</b>   |            |           |         | <b>631</b> | <b>347</b>          |        |      |      |         |              |              |            |             |  |
| <b>AVG.</b>  | <b>280</b>    |        |      | <b>9</b>     |            |           |         | <b>21</b>  | <b>12</b>           |        |      |      |         | <b>312.0</b> | <b>120.1</b> | <b>3.1</b> | <b>48.5</b> |  |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Shad counting discontinued.

TABLE 29

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT  |                      |                     | CHINOOK JACK | COHO  |                | TOTAL                  |                            |                     |      |      | DISCH           | SPILL        | TURBIDITY    |            |             |
|-----------------------|----------------|----------------------|---------------------|--------------|-------|----------------|------------------------|----------------------------|---------------------|------|------|-----------------|--------------|--------------|------------|-------------|
|                       | SPRING         | SUMMER               | FALL                |              | ADULT | JACK           | SOCKEYE                | STEELHEAD                  | unclipped STEELHEAD | PINK | CHUM |                 |              | LAMPREY      | STURGEON   | KCFS        |
| May 1                 | 973            |                      |                     | 29           |       | 0              | 1                      | 0                          |                     |      |      | 0               | 385.4        | 204.2        | 2.5        | 52.0        |
| May 2                 | 894            |                      |                     | 22           |       | 0              | 7                      | 1                          |                     |      |      | 0               | 390.6        | 201.2        | 2.5        | 52.3        |
| May 3                 | 825            |                      |                     | 34           |       | 0              | 2                      | 1                          |                     |      |      | 0               | 392.5        | 196.4        | 2.5        | 52.4        |
| May 4                 | 792            |                      |                     | 35           |       | 0              | 3                      | 2                          |                     |      |      | 0               | 388.7        | 167.4        | 2.5        | 52.0        |
| May 5                 | 1,081          |                      |                     | 53           |       | 0              | 5                      | 1                          |                     |      |      | 0               | 368.8        | 161.2        | 2.5        | 51.5        |
| May 6                 | 1,091          |                      |                     | 43           |       | 0              | 6                      | 1                          |                     |      |      | 0               | 361.5        | 145.3        | 2.3        | 51.3        |
| May 7                 | 1,669          |                      |                     | 62           |       | 0              | 5                      | 1                          |                     |      |      | 0               | 342.3        | 145.6        | 2.0        | 51.4        |
| May 8                 | 6,243          |                      |                     | 168          |       | 0              | 4                      | 0                          |                     |      |      | 0               | 318.8        | 104.7        | 2.5        | 51.5        |
| May 9                 | 4,300          |                      |                     | 192          |       | 0              | 4                      | 2                          |                     |      |      | 0               | 323.4        | 163.5        | 3.0        | 51.5        |
| May 10                | 10,265         |                      |                     | 298          |       | 0              | 7                      | 1                          |                     |      |      | 0               | 323.7        | 139.1        | 2.5        | 51.5        |
| May 11                | 12,338         |                      |                     | 472          |       | 0              | 4                      | 1                          |                     |      |      | 0               | 347.7        | 110.7        | 2.0        | 52.1        |
| May 12                | 6,654          |                      |                     | 319          |       | 0              | 6                      | 1                          |                     |      |      | 0               | 325.4        | 110.7        | 3.0        | 52.7        |
| May 13                | 5,819          |                      |                     | 316          |       | 0              | 7                      | 1                          |                     |      |      | 1               | 298.2        | 99.7         | 4.0        | 53.3        |
| May 14                | 6,322          |                      |                     | 297          |       | 0              | 5                      | 0                          |                     |      |      | 0               | 280.7        | 99.5         | 3.5        | 54.1        |
| May 15                | 7,452          |                      |                     | 535          |       | 0              | 20                     | 5                          |                     |      |      | 0               | 313.6        | 95.2         | 4.0        | 54.6        |
| May 16                | 5,949          |                      |                     | 610          |       | 0              | 14                     | 1                          |                     |      |      | 0               | 304.4        | 106.8        | 3.5        | 54.8        |
| May 17                | 4,849          |                      |                     | 533          |       | 0              | 14                     | 2                          |                     |      |      | 0               | 329.0        | 139.3        | 3.5        | 55.3        |
| May 18                | 4,667          |                      |                     | 481          |       | 0              | 4                      | -1                         |                     |      |      | 0               | 365.9        | 133.5        | 3.5        | 55.7        |
| May 19                | 2,782          |                      |                     | 281          |       | 0              | 9                      | 2                          |                     |      |      | 0               | 364.8        | 134.7        | 3.5        | 56.3        |
| May 20                | 3,671          |                      |                     | 262          |       | 0              | 6                      | 0                          |                     |      |      | 0               | 332.7        | 105.7        | 3.5        | 56.7        |
| May 21                | 2,752          |                      |                     | 255          |       | 0              | 7                      | 2                          |                     |      |      | 0               | 339.6        | 98.5         | 3.0        | 56.8        |
| May 22                | 1,699          |                      |                     | 217          |       | 0              | 11                     | 2                          |                     |      |      | 0               | 341.8        | 113.3        | 3.5        | 56.8        |
| May 23                | 1,273          |                      |                     | 132          |       | 0              | 13                     | 1                          |                     |      |      | 0               | 352.5        | 149.5        | 3.5        | 56.5        |
| May 24                | 1,871          |                      |                     | 172          |       | 0              | 2                      | 0                          |                     |      |      | 0               | 360.6        | 121.2        | 4.0        | 56.2        |
| May 25                | 1,133          |                      |                     | 134          |       | 0              | 13                     | 2                          |                     |      |      | 0               | 339.6        | 111.2        | 3.0        | 55.8        |
| May 26                | 831            |                      |                     | 105          |       | 0              | 12                     | 2                          |                     |      |      | 0               | 330.5        | 112.0        | 3.0        | 55.5        |
| May 27                | 1,027          |                      |                     | 115          |       | 1              | 16                     | 0                          |                     |      |      | 0               | 304.5        | 114.4        | 3.0        | 55.4        |
| May 28                | 980            |                      |                     | 133          |       | 1              | 13                     | 2                          |                     |      |      | 0               | 300.6        | 119.6        | 3.0        | 55.7        |
| May 29                | 1,081          |                      |                     | 69           |       | 0              | 16                     | 6                          |                     |      |      | 0               | 272.3        | 108.8        | 3.5        | 55.9        |
| May 30                | 1,394          |                      |                     | 100          |       | 1              | 9                      | 1                          |                     |      |      | 0               | 297.8        | 119.2        | 3.5        | 56.0        |
| May 31                | 1,229          |                      |                     | 96           |       | 12             | 13                     | 1                          |                     |      |      | 1               | 262.6        | 105.1        | 3.5        | 56.3        |
| <b>TOTAL</b>          | <b>103,906</b> |                      |                     | <b>6,570</b> |       | <b>15</b>      | <b>258</b>             | <b>41</b>                  |                     |      |      | <b>2</b>        |              |              |            |             |
| <b>AVG.</b>           | <b>3,352</b>   |                      |                     | <b>212</b>   |       | <b>0</b>       | <b>8</b>               | <b>1</b>                   |                     |      |      | <b>0</b>        | <b>334.2</b> | <b>130.2</b> | <b>3.1</b> | <b>54.2</b> |
| <b>RUN YEAR</b>       |                |                      |                     |              |       |                |                        |                            |                     |      |      |                 |              |              |            |             |
| <b>TOTALS TO DATE</b> |                | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |       | <b>SOCKEYE</b> | <b>TOTAL STEELHEAD</b> | <b>unclipped STEELHEAD</b> |                     |      |      | <b>STURGEON</b> |              |              |            |             |
| <b>SPRING</b>         |                | 112,305              | 6,833               |              |       | 15             | 889                    | 388                        |                     |      |      | 2               |              |              |            |             |

TABLE 30

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK JACK | COHO  |                | TOTAL unclipped |            |           |      |            | DISCH KCFS | SPILL KCFS   | TURBIDITY    |            |             |
|--------------|---------------|---------------|------|--------------|-------|----------------|-----------------|------------|-----------|------|------------|------------|--------------|--------------|------------|-------------|
|              | SPRING        | SUMMER        | FALL |              | ADULT | JACK           | SOCKEYE         | STEELHEAD  | STEELHEAD | PINK | CHUM       |            |              | LAMPREY      | STURGEON   | SECCHI      |
| Jun 1        | 1,479         |               |      | 117          |       | 11             | 12              | 2          |           |      | 0          | 0          | 260.3        | 104.1        | 3.5        | 56.7        |
| Jun 2        | 1,654         |               |      | 101          |       | 40             | 22              | 4          |           |      | 0          | 0          | 257.8        | 103.1        | 3.5        | 57.3        |
| Jun 3        | 1,633         |               |      | 122          |       | 92             | 23              | 2          |           |      | 0          | 1          | 271.0        | 108.4        | 3.5        | 57.5        |
| Jun 4        |               | 1,896         |      | 132          |       | 139            | 26              | 6          |           |      | 0          | 0          | 285.0        | 111.9        | 3.5        | 57.8        |
| Jun 5        |               | 2,166         |      | 133          |       | 224            | 17              | 2          |           |      | 0          | 0          | 281.1        | 121.6        | 3.5        | 57.6        |
| Jun 6        |               | 1,014         |      | 89           |       | 220            | 31              | 1          |           |      | 0          | 0          | 324.0        | 150.4        | 4.0        | 57.5        |
| Jun 7        |               | 1,384         |      | 136          |       | 322            | 34              | 6          |           |      | 0          | 0          | 333.1        | 133.3        | 3.0        | 57.6        |
| Jun 8        |               | 1,358         |      | 131          |       | 356            | 13              | 1          |           |      | 0          | 1          | 332.7        | 132.7        | 3.0        | 57.2        |
| Jun 9        |               | 977           |      | 134          |       | 461            | 32              | 6          |           |      | 0          | 0          | 329.3        | 145.0        | 3.5        | 56.7        |
| Jun 10       |               | 1,381         |      | 71           |       | 637            | 35              | 9          |           |      | 0          | 0          | 335.4        | 123.6        | 2.5        | 56.5        |
| Jun 11       |               | 1,044         |      | 125          |       | 1,121          | 43              | 11         |           |      | 0          | 0          | 323.6        | 128.9        | 3.0        | 56.8        |
| Jun 12       |               | 1,203         |      | 162          |       | 1,674          | 27              | 8          |           |      | 0          | 0          | 328.3        | 141.4        | 4.0        | 57.3        |
| Jun 13       |               | 1,398         |      | 132          |       | 2,113          | 48              | 7          |           |      | 0          | 0          | 328.4        | 137.0        | 3.5        | 57.6        |
| Jun 14       |               | 1,615         |      | 93           |       | 3,344          | 41              | 16         |           |      | 0          | 0          | 319.6        | 124.4        | 4.0        | 57.9        |
| Jun 15       |               | 1,928         |      | 184          |       | 5,255          | 53              | 14         |           |      | 2          | 0          | 337.1        | 126.0        | 4.0        | 58.2        |
| Jun 16       |               | 1,931         |      | 233          |       | 5,160          | 97              | 24         |           |      | 0          | 0          | 281.8        | 114.7        | 4.0        | 58.8        |
| Jun 17       |               | 2,234         |      | 201          |       | 8,070          | 94              | 42         |           |      | 2          | 0          | 313.0        | 127.9        | 4.0        |             |
| Jun 18       |               | 2,628         |      | 314          |       | 10,136         | 128             | 26         |           |      | 2          | 0          | 305.8        | 128.1        | 4.0        |             |
| Jun 19       |               | 1,917         |      | 224          |       | 9,417          | 80              | 18         |           |      | 0          | 0          | 348.2        | 136.2        | 4.0        |             |
| Jun 20       |               | 1,452         |      | 205          |       | 10,351         | 131             | 24         |           |      | 7          | 0          | 337.6        | 130.2        | 4.0        |             |
| Jun 21       |               | 1,800         |      | 239          |       | 16,143         | 113             | 29         |           |      | 4          | 0          | 339.2        | 129.7        | 4.0        |             |
| Jun 22       |               | 1,758         |      | 265          |       | 19,957         | 165             | 42         |           |      | 8          | 0          | 331.1        | 127.6        | 4.0        |             |
| Jun 23       |               | 1,870         |      | 198          |       | 19,721         | 158             | 66         |           |      | 5          | 0          | 344.9        | 127.9        | 3.5        |             |
| Jun 24       |               | 1,616         |      | 104          |       | 19,420         | 117             | 40         |           |      | 9          | 1          | 339.3        | 140.9        | 3.0        | 60.2        |
| Jun 25       |               | 1,747         |      | 262          |       | 20,113         | 172             | 70         |           |      | 17         | 0          | 402.0        | 196.2        | 4.0        | 60.5        |
| Jun 26       |               | 1,070         |      | 209          |       | 16,956         | 140             | 50         |           |      | 15         | 1          | 376.6        | 149.3        | 3.5        | 60.5        |
| Jun 27       |               | 788           |      | 76           |       | 19,394         | 178             | 32         |           |      | 17         | 0          | 414.5        | 179.3        | 3.0        | 60.8        |
| Jun 28       |               | 1,047         |      | 239          |       | 30,220         | 231             | 62         |           |      | 18         | 0          | 376.5        | 184.4        | 3.0        | 61.0        |
| Jun 29       |               | 1,747         |      | 245          |       | 32,896         | 273             | 80         |           |      | 21         | 0          | 372.2        | 185.0        | 3.5        | 60.9        |
| Jun 30       |               | 1,249         |      | 282          |       | 16,826         | 275             | 114        |           |      | 13         | 0          | 379.3        | 185.0        | 3.0        | 60.9        |
| <b>TOTAL</b> | <b>4,766</b>  | <b>42,218</b> |      | <b>5,158</b> |       | <b>270,789</b> | <b>2,809</b>    | <b>814</b> |           |      | <b>140</b> | <b>4</b>   |              |              |            |             |
| <b>AVG.</b>  | <b>1,589</b>  | <b>1564</b>   |      | <b>172</b>   |       | <b>9,026</b>   | <b>94</b>       | <b>27</b>  |           |      | <b>5</b>   | <b>0</b>   | <b>330.3</b> | <b>137.8</b> | <b>3.6</b> | <b>58.4</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 117,071        | 7,173         |
| SUMMER         | 42,218         | 4,818         |
| <b>TOTAL</b>   | <b>159,289</b> | <b>11,991</b> |

| SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD |
|---------|-----------------|---------------------|
| 270,804 | 3,698           | 1,202               |

| LAMPREY | STURGEON |
|---------|----------|
| 140     | 6        |

TABLE 31

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

JULY 2012

| DATE                  | CHINOOK ADULT |                | CHINOOK        | COHO         | COHO         | TOTAL |                | unclipped        |                  |      |      | DISCH          | SPILL           | TURBIDITY    |              |            |             |
|-----------------------|---------------|----------------|----------------|--------------|--------------|-------|----------------|------------------|------------------|------|------|----------------|-----------------|--------------|--------------|------------|-------------|
|                       | SPRING        | SUMMER         | FALL           | JACK         | ADULT        | JACK  | SOCKEYE        | STEELHEAD        | STEELHEAD        | PINK | CHUM | LAMPREY        | STURGEON        | KCFS         | KCFS         | SECCHI     | DEG F       |
| Jul 1                 |               | 1,416          |                | 170          | 0            |       | 17,844         | 232              | 78               |      |      | 23             | 1               | 389.6        | 177.9        | 4.0        | 60.7        |
| Jul 2                 |               | 1,314          |                | 153          | 0            |       | 14,912         | 287              | 98               |      |      | 19             | 0               | 353.3        | 139.4        | 3.5        | 60.8        |
| Jul 3                 |               | 1,165          |                | 257          | 0            |       | 12,829         | 307              | 115              |      |      | 12             | 0               | 336.1        | 126.8        | 3.5        | 60.6        |
| Jul 4                 |               | 1,053          |                | 153          | 0            |       | 11,588         | 334              | 156              |      |      | 2              | 1               | 325.0        | 122.8        | 4.0        | 60.6        |
| Jul 5                 |               | 920            |                | 160          | 0            |       | 12,631         | 438              | 177              |      |      | 16             | 0               | 348.3        | 123.2        | 4.0        | 60.8        |
| Jul 6                 |               | 982            |                | 191          | 0            |       | 10,891         | 403              | 191              |      |      | 36             | 0               | 342.6        | 124.1        | 4.0        | 61.3        |
| Jul 7                 |               | 1,355          |                | 265          | 0            |       | 11,376         | 626              | 280              |      |      | 52             | 0               | 302.2        | 113.0        | 4.0        | 62.0        |
| Jul 8                 |               | 1,279          |                | 208          | 0            |       | 12,120         | 662              | 313              |      |      | 40             | 1               | 298.6        | 112.6        | 4.0        | 62.7        |
| Jul 9                 |               | 1,330          |                | 274          | 0            |       | 9,610          | 887              | 424              |      |      | 113            | 2               | 321.8        | 114.2        | 4.0        | 63.3        |
| Jul 10                |               | 898            |                | 169          | 0            |       | 5,107          | 662              | 329              |      |      | 138            | 1               | 317.1        | 114.9        | 4.5        | 63.5        |
| Jul 11                |               | 499            |                | 101          | 0            |       | 3,253          | 571              | 265              |      |      | 74             | 0               | 322.5        | 125.1        | 4.0        | 63.8        |
| Jul 12                |               | 1,046          |                | 175          | 0            |       | 4,471          | 922              | 519              |      |      | 79             | 0               | 312.4        | 127.3        | 5.0        | 64.3        |
| Jul 13                |               | 906            |                | 172          | 0            |       | 3,104          | 766              | 407              |      |      | 57             | 0               | 320.5        | 124.6        | 4.0        | 64.4        |
| Jul 14                |               | 1,234          |                | 201          | 0            |       | 3,173          | 1,372            | 727              |      |      | 55             | 0               | 316.0        | 127.0        | 3.5        | 64.6        |
| Jul 15                |               | 970            |                | 202          | 0            |       | 1,856          | 1,487            | 768              |      |      | 112            | 1               | 296.9        | 124.4        | 3.5        |             |
| Jul 16                |               | 895            |                | 164          | 0            |       | 1,192          | 1,756            | 920              |      |      | 51             | 2               | 345.1        | 137.0        | 4.0        |             |
| Jul 17                |               | 661            |                | 178          | 0            |       | 741            | 1,321            | 563              |      |      | 82             | 4               | 319.2        | 128.1        | 3.5        |             |
| Jul 18                |               | 875            |                | 166          | 0            |       | 617            | 1,832            | 971              |      |      | 58             | 1               | 282.9        | 113.6        | 4.0        |             |
| Jul 19                |               | 866            |                | 215          | 0            |       | 422            | 2,102            | 1,069            |      |      | 97             | 1               | 279.6        | 111.2        | 3.5        |             |
| Jul 20                |               | 749            |                | 149          | 0            |       | 228            | 2,310            | 1,098            |      |      | 90             | 3               | 288.5        | 115.9        | 3.5        |             |
| Jul 21                |               | 610            |                | 169          | 0            |       | 166            | 2,625            | 1,264            |      |      | 43             | 3               | 320.1        | 137.7        | 4.0        |             |
| Jul 22                |               | 559            |                | 119          | 0            |       | 125            | 2,379            | 1,092            |      |      | 61             | 3               | 312.1        | 136.7        | 4.0        | 66.2        |
| Jul 23                |               | 409            |                | 116          | 0            |       | 105            | 2,451            | 1,129            |      |      | 86             | 1               | 308.3        | 128.3        | 4.0        | 66.1        |
| Jul 24                |               | 495            |                | 130          | 0            |       | 152            | 2,621            | 1,020            |      |      | 110            | 1               | 291.1        | 116.2        | 4.0        | 66.4        |
| Jul 25                |               | 422            |                | 143          | 1            |       | 111            | 2,572            | 1,331            |      |      | 115            | 1               | 273.2        | 109.0        | 4.0        | 66.7        |
| Jul 26                |               | 488            |                | 137          | 2            |       | 101            | 2,642            | 1,246            |      |      | 106            | 4               | 284.3        | 106.2        | 3.5        | 66.7        |
| Jul 27                |               | 516            |                | 148          | 0            |       | 88             | 2,908            | 1,426            |      |      | 122            | 2               | 265.1        | 105.0        | 4.0        | 66.6        |
| Jul 28                |               | 492            |                | 140          | 0            |       | 70             | 2,930            | 1,386            |      |      | 133            | 1               | 236.9        | 103.0        | 3.3        | 66.6        |
| Jul 29                |               | 538            |                | 139          | 0            |       | 66             | 2,848            | 1,317            |      |      | 91             | 1               | 241.1        | 104.3        | 3.3        | 66.7        |
| Jul 30                |               | 531            |                | 140          | 4            |       | 66             | 3,087            | 1,392            |      |      | 121            | 2               | 237.2        | 101.8        | 4.0        | 66.7        |
| Jul 31                |               | 405            |                | 120          | 1            |       | 30             | 3,174            | 1,445            |      |      | 168            | 2               | 256.1        | 110.3        | 4.0        | 66.7        |
| <b>TOTAL</b>          |               | <b>25,878</b>  |                | <b>5,224</b> | <b>8</b>     |       | <b>139,045</b> | <b>49,514</b>    | <b>23,516</b>    |      |      | <b>2,362</b>   | <b>39</b>       |              |              |            |             |
| <b>AVG</b>            |               | <b>835</b>     |                | <b>169</b>   | <b>0</b>     |       | <b>4,485</b>   | <b>1,597</b>     | <b>759</b>       |      |      | <b>76</b>      | <b>1</b>        | <b>304.6</b> | <b>121.3</b> | <b>3.9</b> | <b>64.1</b> |
| <b>RUN YEAR</b>       |               | <b>CHINOOK</b> | <b>CHINOOK</b> |              | <b>COHO</b>  |       |                | <b>TOTAL</b>     | <b>unclipped</b> |      |      |                |                 |              |              |            |             |
| <b>TOTALS TO DATE</b> |               | <b>ADULT</b>   | <b>JACK</b>    |              | <b>ADULT</b> |       | <b>SOCKEYE</b> | <b>STEELHEAD</b> | <b>STEELHEAD</b> |      |      | <b>LAMPREY</b> | <b>STURGEON</b> |              |              |            |             |
| <b>SPRING</b>         |               | 117,071        | 7,173          |              | 8            |       | 409,849        | 53,212           | 24,718           |      |      | 2,502          | 45              |              |              |            |             |
| <b>SUMMER</b>         |               | 68,096         | 10,042         |              |              |       |                |                  |                  |      |      |                |                 |              |              |            |             |
| <b>TOTAL</b>          |               | 185,167        | 17,215         |              |              |       |                |                  |                  |      |      |                |                 |              |              |            |             |

TABLE 32

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |        |        | CHINOOK | COHO  | COHO | TOTAL unclipped |           |           |      |      | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | TURBIDITY<br>DEG F |         |          |
|--------------|---------------|--------|--------|---------|-------|------|-----------------|-----------|-----------|------|------|---------------|---------------|---------------------|--------------------|---------|----------|
|              | SPRING        | SUMMER | FALL   | JACK    | ADULT | JACK | SOCKEYE         | STEELHEAD | STEELHEAD | PINK | CHUM |               |               |                     |                    | LAMPREY | STURGEON |
| Aug 1        |               | 279    |        | 89      | 0     | 0    | 31              | 2,414     | 968       | 0    |      | 110           | 0             | 230.1               | 92.1               | 3.5     | 67.0     |
| Aug 2        |               | 405    |        | 114     | 0     | 0    | 24              | 3,001     | 1,220     | 0    |      | 138           | 1             | 226.4               | 90.2               | 4.0     | 67.3     |
| Aug 3        |               | 442    |        | 147     | 0     | 0    | 20              | 2,347     | 1,060     | 0    |      | 87            | 0             | 222.1               | 89.1               | 3.0     | 67.7     |
| Aug 4        |               |        | 490    | 144     | 0     | 0    | 16              | 3,056     | 1,332     | 0    |      | 71            | 2             | 211.5               | 85.1               | 3.0     | 68.1     |
| Aug 5        |               |        | 420    | 155     | 0     | 0    | 12              | 2,544     | 1,042     | 0    |      | 162           | 0             | 206.4               | 82.3               | 3.0     | 68.4     |
| Aug 6        |               |        | 465    | 142     | 0     | 0    | 21              | 3,075     | 1,270     | 0    |      | 168           | 0             | 213.1               | 85.1               | 3.5     | 68.9     |
| Aug 7        |               |        | 489    | 156     | 2     | 0    | 20              | 2,825     | 998       | 0    |      | 72            | 1             | 203.1               | 80.8               | 3.5     | 69.2     |
| Aug 8        |               |        | 435    | 129     | 1     | 0    | 5               | 3,524     | 1,451     | 0    |      | 148           | 3             | 196.8               | 78.5               | 3.5     | 69.4     |
| Aug 9        |               |        | 503    | 152     | 0     | 0    | 6               | 3,235     | 1,285     | 1    |      | 177           | 2             | 195.8               | 78.1               | 3.5     | 69.2     |
| Aug 10       |               |        | 408    | 105     | 1     | 0    | 9               | 2,040     | 741       | 0    |      | 152           | 0             | 183.9               | 73.3               | 4.0     | 69.6     |
| Aug 11       |               |        | 534    | 148     | 8     | 5    | 5               | 2,006     | 701       | 0    |      | 138           | 2             | 195.7               | 78.4               | 4.0     | 69.6     |
| Aug 12       |               |        | 548    | 157     | 11    | 4    | 20              | 1,699     | 605       | 0    |      | 150           | 1             | 210.4               | 83.7               | 4.0     | 70.1     |
| Aug 13       |               |        | 440    | 105     | 18    | 0    | 7               | 1,332     | 514       | 0    |      | 152           | 3             | 201.4               | 80.4               | 4.0     | 70.4     |
| Aug 14       |               |        | 582    | 111     | 12    | 7    | 5               | 1,443     | 546       | 0    |      | 118           | 1             | 171.5               | 68.4               | 4.5     | 70.5     |
| Aug 15       |               |        | 600    | 130     | 16    | 8    | 0               | 1,436     | 590       | 0    |      | 101           | 2             | 175.8               | 70.4               | 4.5     | 70.8     |
| Aug 16       |               |        | 418    | 105     | 12    | 5    | 0               | 1,121     | 430       | 0    |      | 105           | 0             | 168.6               | 67.2               | 5.0     | 71.0     |
| Aug 17       |               |        | 487    | 133     | 8     | 3    | 9               | 1,083     | 443       | 0    |      | 53            | 2             | 183.0               | 73.0               | 4.0     | 71.2     |
| Aug 18       |               |        | 596    | 157     | 8     | 0    | 5               | 974       | 382       | 1    |      | 53            | 0             | 178.0               | 71.2               | 4.0     | 71.0     |
| Aug 19       |               |        | 569    | 147     | 17    | 4    | 4               | 728       | 275       | 0    |      | 91            | 0             | 160.7               | 64.4               | 4.5     | 70.7     |
| Aug 20       |               |        | 719    | 180     | 22    | 1    | 5               | 748       | 266       | -1   |      | 120           | 1             | 183.4               | 73.6               | 4.5     | 70.3     |
| Aug 21       |               |        | 901    | 216     | 16    | 9    | 2               | 726       | 281       | 0    |      | 55            | 0             | 163.6               | 65.4               | 4.0     | 70.2     |
| Aug 22       |               |        | 564    | 265     | 15    | 8    | 6               | 725       | 270       | 0    |      | 91            | 0             | 187.3               | 74.8               | 5.0     | 69.8     |
| Aug 23       |               |        | 704    | 249     | 30    | 11   | 0               | 787       | 285       | 0    |      | 57            | 1             | 162.5               | 65.1               | 5.0     | 69.5     |
| Aug 24       |               |        | 1,491  | 369     | 50    | 14   | 1               | 803       | 288       | 0    |      | 65            | 0             | 183.0               | 73.2               | 4.0     | 69.0     |
| Aug 25       |               |        | 2,362  | 534     | 156   | 16   | -1              | 1,168     | 415       | 0    |      | 76            | 0             | 169.6               | 67.7               | 4.5     | 69.3     |
| Aug 26       |               |        | 2,388  | 567     | 174   | 28   | 0               | 1,278     | 434       | 0    |      | 34            | 0             | 139.1               | 55.6               | 4.5     | 69.2     |
| Aug 27       |               |        | 2,350  | 582     | 170   | 30   | 0               | 1,221     | 443       | 0    |      | 33            | 0             | 165.5               | 66.1               | 4.5     | 68.9     |
| Aug 28       |               |        | 2,196  | 645     | 212   | 80   | 4               | 1,382     | 476       | 0    |      | 35            | 1             | 134.3               | 53.7               | 5.0     | 68.8     |
| Aug 29       |               |        | 3,475  | 746     | 276   | 47   | 9               | 1,459     | 483       | 0    |      | 42            | 0             | 157.9               | 63.2               | 5.0     | 68.4     |
| Aug 30       |               |        | 3,827  | 1018    | 275   | 65   | 2               | 1,975     | 618       | 0    |      | 55            | 0             | 148.8               | 59.4               | 5.0     | 68.3     |
| Aug 31       |               |        | 5,238  | 1227    | 311   | 96   | 1               | 2,412     | 623       | 0    |      | 34            | 0             | 160.1               | 63.9               | 5.0     | 68.3     |
| <b>TOTAL</b> |               | 1,126  | 34,199 | 9,124   | 1,821 | 441  | 248             | 54,567    | 20,735    | 1    |      | 2,943         | 23            |                     |                    |         |          |
| AVG.         |               | 375    | 1,221  | 294     | 59    | 14   | 8               | 1760      | 669       | 0    |      | 95            | 1             | 183.5               | 73.3               | 4.2     | 69.4     |

| RUN YEAR       | CHINOOK        |               | COHO   |       | TOTAL unclipped |           |           | LAMPREY STURGEON |       |
|----------------|----------------|---------------|--------|-------|-----------------|-----------|-----------|------------------|-------|
|                | ADULT          | JACK          | ADULTS | JACKS | SOCKEYE         | STEELHEAD | STEELHEAD | PINK             |       |
| TOTALS TO DATE |                |               |        |       |                 |           |           |                  |       |
| SPRING         | 117,071        | 7,173         | 1,829  | 441   | 410,097         | 107,779   | 45,453    | 1                | 5,445 |
| SUMMER         | 69,222         | 10,392        |        |       |                 |           |           |                  | 68    |
| FALL           | 34,199         | 8,774         |        |       |                 |           |           |                  |       |
| <b>TOTAL</b>   | <b>220,492</b> | <b>26,339</b> |        |       |                 |           |           |                  |       |

TABLE 33

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK        | COHO          | COHO          | TOTAL        |          |               |                        | CHUM     | LAMPREY | STURGEON   | DISCH     | SPILL        | TURBIDITY  |            |             |
|--------------|---------------|--------|----------------|---------------|---------------|--------------|----------|---------------|------------------------|----------|---------|------------|-----------|--------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL           | JACK          | ADULT         | JACK         | SOCKEYE  | STEELHEAD     | unclipped<br>STEELHEAD |          |         |            |           |              | PINK       | KCFS       | KCFS        |
| Sep 1        |               |        | 5,157          | 1,482         | 404           | 83           | 0        | 2,302         | 650                    | 0        |         | 24         | 1         | 139.2        | 0.0        | 4.0        | 68.0        |
| Sep 2        |               |        | 8,112          | 1,676         | 1,006         | 124          | 0        | 2,665         | 684                    | 0        |         | 31         | 1         | 102.9        | 0.0        | 5.0        | 67.8        |
| Sep 3        |               |        | 6,398          | 2,221         | 1,356         | 166          | 0        | 2,998         | 834                    | 0        |         | 24         | 5         | 94.1         | 0.0        | 4.5        | 67.4        |
| Sep 4        |               |        | 6,687          | 2,332         | 1,359         | 212          | 0        | 2,905         | 827                    | 0        |         | 18         | 0         | 114.3        | 0.0        | 5.0        | 67.5        |
| Sep 5        |               |        | 5,256          | 2,153         | 1,444         | 127          | 2        | 2,271         | 406                    | 0        |         | 21         | 0         | 135.9        | 0.0        | 4.5        | 67.8        |
| Sep 6        |               |        | 5,873          | 2,228         | 1,349         | 151          | 0        | 2,511         | 645                    | 0        |         | 27         | 0         | 151.1        | 0.0        | 5.0        | 67.9        |
| Sep 7        |               |        | 5,283          | 2,078         | 1,463         | 92           | 0        | 2,406         | 476                    | 0        |         | 15         | 1         | 111.3        | 0.0        | 5.0        | 68.0        |
| Sep 8        |               |        | 6,581          | 2,423         | 993           | 61           | 0        | 2,400         | 622                    | 0        |         | 36         | 1         | 113.8        | 0.0        | 5.0        | 68.3        |
| Sep 9        |               |        | 8,611          | 2,677         | 1,421         | 70           | 0        | 2,788         | 401                    | 0        |         | 53         | 0         | 92.9         | 0.0        | 5.0        | 68.2        |
| Sep 10       |               |        | 8,515          | 3,279         | 1,318         | 115          | 0        | 2,968         | 722                    | 0        |         | 41         | 1         | 105.2        | 0.0        | 5.0        | 67.5        |
| Sep 11       |               |        | 8,661          | 3,042         | 910           | 66           | 0        | 2,356         | 649                    | 0        |         | 50         | 0         | 114.8        | 0.0        | 5.0        | 66.9        |
| Sep 12       |               |        | 7,170          | 2,817         | 505           | 63           | 0        | 1,850         | 498                    | 0        |         | 32         | 0         | 126.6        | 0.0        | 7.0        | 67.2        |
| Sep 13       |               |        | 4,698          | 2,062         | 514           | 26           | 0        | 1,819         | 476                    | 0        |         | 35         | 1         | 96.8         | 0.0        | 5.0        | 67.3        |
| Sep 14       |               |        | 6,115          | 2,317         | 549           | 43           | 0        | 2,452         | 555                    | 0        |         | 44         | 0         | 103.9        | 0.0        | 4.5        | 67.2        |
| Sep 15       |               |        | 11,345         | 3,364         | 1,283         | 55           | 0        | 3,498         | 909                    | 1        |         | 30         | 1         | 106.6        | 0.0        | 5.0        | 67.3        |
| Sep 16       |               |        | 11,141         | 5,152         | 1,771         | 74           | 0        | 3,391         | 698                    | 0        |         | 49         | 0         | 102.6        | 0.0        | 5.0        |             |
| Sep 17       |               |        | 9,932          | 5,559         | 2,266         | 81           | 0        | 2,931         | 790                    | 0        |         | 41         | 0         | 104.7        | 0.0        | 5.0        |             |
| Sep 18       |               |        | 6,617          | 4,909         | 1,800         | 139          | 0        | 2,377         | 391                    | 0        |         | 23         | 0         | 116.5        | 0.0        | 5.0        |             |
| Sep 19       |               |        | 4,975          | 3,405         | 1,138         | 49           | 0        | 2,298         | 572                    | 0        |         | 19         | 0         | 125.9        | 0.0        | 7.0        |             |
| Sep 20       |               |        | 4,118          | 3,730         | 769           | 79           | 0        | 2,266         | 585                    | 0        |         | 22         | 0         | 103.8        | 0.0        | 5.0        |             |
| Sep 21       |               |        | 4,330          | 3,034         | 396           | 59           | 0        | 2,225         | 588                    | 0        |         | 24         | 0         | 112.9        | 0.0        | 5.5        |             |
| Sep 22       |               |        | 3,651          | 3,094         | 516           | 39           | 0        | 3,376         | 974                    | 0        |         | 20         | 0         | 94.2         | 0.0        | 5.5        |             |
| Sep 23       |               |        | 4,546          | 3,123         | 365           | 32           | 0        | 3,564         | 1,007                  | 0        |         | 11         | 0         | 101.4        | 0.0        | 5.0        | 66.0        |
| Sep 24       |               |        | 3,153          | 2,313         | 424           | 29           | 0        | 2,864         | 829                    | 0        |         | 7          | 0         | 89.2         | 0.0        | 5.0        | 66.1        |
| Sep 25       |               |        | 3,490          | 2,509         | 288           | 22           | 0        | 2,018         | 590                    | 0        |         | 15         | 0         | 102.4        | 0.0        | 5.0        | 66.3        |
| Sep 26       |               |        | 2,225          | 1,997         | 246           | 40           | 0        | 1,330         | 275                    | 0        |         | 1          | 0         | 101.0        | 0.0        | 5.0        | 65.9        |
| Sep 27       |               |        | 2,189          | 1,832         | 171           | 24           | 0        | 870           | 263                    | 0        |         | 9          | 0         | 87.3         | 0.0        | 5.0        | 65.9        |
| Sep 28       |               |        | 3,014          | 2,529         | 169           | 31           | 0        | 978           | 159                    | 0        |         | 18         | 0         | 110.7        | 0.0        | 5.0        | 66.0        |
| Sep 29       |               |        | 2,903          | 2,819         | 200           | 20           | 0        | 1,837         | 522                    | 0        |         | 11         | 1         | 101.3        | 0.0        | 5.0        | 65.9        |
| Sep 30       |               |        | 2,212          | 1,956         | 134           | 8            | 0        | 1,481         | 413                    | 0        |         | 4          | 0         | 87.8         | 0.0        | 5.0        | 65.7        |
| <b>TOTAL</b> |               |        | <b>172,958</b> | <b>84,112</b> | <b>26,527</b> | <b>2,180</b> | <b>2</b> | <b>71,995</b> | <b>18,010</b>          | <b>1</b> |         | <b>755</b> | <b>13</b> |              |            |            |             |
| <b>AVG.</b>  |               |        | <b>5,765</b>   | <b>2,804</b>  | <b>884</b>    | <b>73</b>    | <b>0</b> | <b>2,400</b>  | <b>600</b>             | <b>0</b> |         | <b>25</b>  | <b>0</b>  | <b>108.4</b> | <b>0.0</b> | <b>5.1</b> | <b>67.0</b> |

| RUN YEAR       | CHINOOK<br>ADULT | CHINOOK<br>JACK |
|----------------|------------------|-----------------|
| TOTALS TO DATE |                  |                 |
| SPRING         | 117,071          | 7,173           |
| SUMMER         | 69,222           | 10,392          |
| FALL           | 207,157          | 92,886          |
| <b>TOTAL</b>   | <b>393,450</b>   | <b>110,451</b>  |

| COHO<br>ADULT | COHO<br>JACK | SOCKEYE | TOTAL<br>STEELHEAD | unclipped<br>STEELHEAD | PINK |
|---------------|--------------|---------|--------------------|------------------------|------|
| 28,356        | 2,621        | 410,099 | 179,774            | 63,463                 | 2    |

| LAMPREY | STURGEON |
|---------|----------|
| 6,200   | 81       |



TABLE 34

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO   | COHO  | TOTAL unclipped |         |           |           | CHUM | LAMPREY | STURGEON | DISCH | SPILL | TURBIDITY |     |        |
|--------------|---------------|--------|---------|--------|-------|-----------------|---------|-----------|-----------|------|---------|----------|-------|-------|-----------|-----|--------|
|              | SPRING        | SUMMER | FALL    | JACK   | ADULT | JACK            | SOCKEYE | STEELHEAD | STEELHEAD |      |         |          | PINK  | KCFS  | KCFS      |     | SECCHI |
| Oct 1        |               |        | 1,365   | 1531   | 116   | 24              |         | 1,171     | 347       |      |         | 8        | 1     | 77.6  | 0.0       | 6.0 | 65.7   |
| Oct 2        |               |        | 1,405   | 883    | 116   | 7               |         | 1,215     | 345       |      |         | -2       | 0     | 79.3  | 0.0       | 6.0 | 65.5   |
| Oct 3        |               |        | 1,362   | 1464   | 122   | 12              |         | 967       | 294       |      |         | 9        | 0     | 107.9 | 0.0       | 6.0 | 65.0   |
| Oct 4        |               |        | 1,237   | 985    | 93    | 12              |         | 914       | 284       |      |         | 0        | 0     | 95.5  | 0.0       | 6.0 | 64.4   |
| Oct 5        |               |        | 1,560   | 1203   | 94    | 7               |         | 1,019     | 293       |      |         | 2        | 0     | 76.6  | 0.0       | 6.0 | 64.3   |
| Oct 6        |               |        | 1,180   | 851    | 107   | 10              |         | 950       | 283       |      |         | 2        | 0     | 73.6  | 0.0       | 6.0 | 64.0   |
| Oct 7        |               |        | 872     | 729    | 86    | 4               |         | 872       | 265       |      |         | 5        | 0     | 69.7  | 0.0       | 5.0 | 63.6   |
| Oct 8        |               |        | 811     | 754    | 90    | 7               |         | 768       | 227       |      |         | 1        | 0     | 75.1  | 0.0       | 5.0 | 63.4   |
| Oct 9        |               |        | 980     | 990    | 84    | 14              |         | 838       | 192       |      |         | 1        | 0     | 98.0  | 0.0       | 7.0 | 63.1   |
| Oct 10       |               |        | 945     | 696    | 58    | 6               |         | 733       | 217       |      |         | 4        | 0     | 95.4  | 0.0       | 5.0 | 63.3   |
| Oct 11       |               |        | 945     | 777    | 74    | 10              |         | 659       | 220       |      |         | 5        | 0     | 83.5  | 0.0       | 5.0 | 63.1   |
| Oct 12       |               |        | 747     | 551    | 76    | 4               |         | 679       | 211       |      |         | 1        | 0     | 73.8  | 0.0       | 5.0 | 62.7   |
| Oct 13       |               |        | 653     | 453    | 87    | 1               |         | 622       | 203       |      |         | 1        | 0     | 66.9  | 0.0       | 6.0 | 62.5   |
| Oct 14       |               |        | 396     | 366    | 47    | 5               |         | 502       | 168       |      |         | 0        | 0     | 62.3  | 0.0       | 6.0 | 62.1   |
| Oct 15       |               |        | 317     | 175    | 78    | 2               |         | 458       | 185       |      |         | 1        | 0     | 77.3  | 0.0       | 5.0 | 62.1   |
| Oct 16       |               |        | 458     | 276    | 206   | 6               |         | 649       | 276       |      |         | 2        | 0     | 69.6  | 0.0       | 5.0 | 61.9   |
| Oct 17       |               |        | 450     | 288    | 489   | 36              |         | 860       | 370       |      |         | 0        | 0     | 80.1  | 0.0       | 5.0 | 61.5   |
| Oct 18       |               |        | 401     | 318    | 268   | 25              |         | 630       | 278       |      |         | 0        | 2     | 78.7  | 0.0       | 5.0 | 60.8   |
| Oct 19       |               |        | 254     | 199    | 79    | 5               |         | 355       | 116       |      |         | 0        | 0     | 75.1  | 0.0       | 5.0 | 60.6   |
| Oct 20       |               |        | 251     | 166    | 37    | 8               |         | 340       | 152       |      |         | 1        | 0     | 74.6  | 0.0       | 5.5 | 60.4   |
| Oct 21       |               |        | 184     | 122    | 42    | 4               |         | 444       | 190       |      |         | 0        | 0     | 84.1  | 0.0       | 5.5 |        |
| Oct 22       |               |        | 192     | 169    | 33    | 6               |         | 350       | 123       |      |         | 0        | 0     | 105.1 | 0.0       | 5.0 |        |
| Oct 23       |               |        | 283     | 144    | 31    | 1               |         | 317       | 122       |      |         | -1       | 0     | 106.2 | 0.0       | 6.5 |        |
| Oct 24       |               |        | 258     | 234    | 27    | 5               |         | 312       | 121       |      |         | 0        | 0     | 106.7 | 0.0       | 5.0 |        |
| Oct 25       |               |        | 238     | 145    | 15    | 1               |         | 269       | 96        |      |         | 0        | 0     | 116.5 | 0.0       | 5.0 |        |
| Oct 26       |               |        | 214     | 183    | 9     | 0               |         | 180       | 51        |      |         | 0        | 0     | 127.7 | 0.0       | 4.5 |        |
| Oct 27       |               |        | 262     | 155    | 30    | 2               |         | 222       | 102       |      |         | 0        | 0     | 106.1 | 0.0       | 5.0 |        |
| Oct 28       |               |        | 132     | 96     | 19    | 4               |         | 191       | 60        |      |         | 0        | 0     | 100.9 | 0.0       | 6.0 | 57.4   |
| Oct 29       |               |        | 100     | 69     | 25    | 2               |         | 157       | 55        |      |         | 0        | 0     | 112.4 | 0.0       | 6.0 | 57.4   |
| Oct 30       |               |        | 202     | 98     | 33    | 8               |         | 215       | 74        |      |         | 1        | 0     | 115.5 | 0.0       | 5.0 | 57.5   |
| Oct 31       |               |        | 101     | 78     | 10    | 2               |         | 207       | 98        |      |         | 0        | 0     | 112.0 | 0.0       | 5.0 | 57.2   |
| <b>TOTAL</b> |               |        | 18,755  | 15,148 | 2,681 | 240             |         | 18,065    | 6,018     |      |         | 41       | 3     |       |           |     |        |
| <b>AVG.</b>  |               |        | 605     | 489    | 86    | 8               |         | 583       | 194       |      |         | 1        | 0     | 89.8  | 0.0       | 5.5 | 62.1   |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK   | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | LAMPREY | STURGEON |
|----------------|----------------|----------------|------------|-----------|---------|-----------------|---------------------|------|---------|----------|
| TOTALS TO DATE |                |                |            |           |         |                 |                     |      |         |          |
| SPRING         | 117,071        | 7,173          | 31,037     | 2,861     | 410,099 | 197,839         | 69,481              | 2    | 6,241   | 84       |
| SUMMER         | 69,222         | 10,392         |            |           |         |                 |                     |      |         |          |
| FALL           | 225,912        | 108,034        |            |           |         |                 |                     |      |         |          |
| <b>TOTAL</b>   | <b>412,205</b> | <b>125,599</b> |            |           |         |                 |                     |      |         |          |

Note: Visual counts ended October 31.

TABLE 35

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT  
NOVEMBER 2012

FISH COUNTS

RIVER CONDITIONS

| DATE         | CHINOOK ADULT |        | CHINOOK      | COHO       | COHO       | TOTAL     |         |              |              |      | RIVER CONDITIONS |          |          |               |               |                     |             |
|--------------|---------------|--------|--------------|------------|------------|-----------|---------|--------------|--------------|------|------------------|----------|----------|---------------|---------------|---------------------|-------------|
|              | SPRING        | SUMMER | FALL         | JACK       | ADULT      | JACK      | SOCKEYE | STEELHEAD    | STEELHEAD    | PINK | CHUM             | LAMPREY  | STURGEON | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F       |
| Nov 1        |               |        | 127          | 116        | 12         | 4         |         | 222          | 106          |      | 1                | 0        |          | 115.1         | 0.0           | 5.0                 | 56.9        |
| Nov 2        |               |        | 84           | 84         | 10         | 2         |         | 237          | 121          |      | 0                | 0        |          | 116.3         | 0.0           | 5.0                 | 56.6        |
| Nov 3        |               |        | 82           | 80         | 15         | 1         |         | 211          | 85           |      | 0                | 0        |          | 111.9         | 0.0           | 5.0                 | 56.6        |
| Nov 4        |               |        | 69           | 98         | 9          | 0         |         | 254          | 110          |      | 0                | 0        |          | 112.4         | 0.0           | 5.0                 | 56.3        |
| Nov 5        |               |        | 64           | 59         | 8          | 2         |         | 130          | 54           |      | 1                | 0        |          | 110.8         | 0.0           | 6.0                 | 56.2        |
| Nov 6        |               |        | 96           | 61         | 3          | 0         |         | 151          | 57           |      | 1                | 0        |          | 117.1         | 0.0           | 5.0                 | 56.0        |
| Nov 7        |               |        | 95           | 69         | 5          | 1         |         | 157          | 66           |      | 0                | 0        |          | 110.0         | 0.0           | 5.0                 | 55.6        |
| Nov 8        |               |        | 73           | 52         | 5          | 1         |         | 99           | 35           |      | 1                | 0        |          | 125.5         | 0.0           | 6.0                 | 55.1        |
| Nov 9        |               |        | 71           | 39         | 3          | 0         |         | 85           | 33           |      | 1                | 0        |          | 117.1         | 0.0           | 6.0                 | 54.8        |
| Nov 10       |               |        | 28           | 31         | 1          | 0         |         | 81           | 40           |      | 0                | 0        |          | 120.2         | 0.0           | 6.0                 | 54.6        |
| Nov 11       |               |        | 35           | 22         | 1          | 0         |         | 55           | 23           |      | 0                | 0        |          | 130.2         | 0.0           | 5.0                 | 54.3        |
| Nov 12       |               |        | 41           | 23         | 1          | 0         |         | 60           | 23           |      | 0                | 0        |          | 131.6         | 0.0           | 5.0                 | 54.2        |
| Nov 13       |               |        | 33           | 22         | 3          | 0         |         | 65           | 20           |      | 0                | 0        |          | 123.5         | 0.0           | 5.0                 | 54.4        |
| Nov 14       |               |        | 24           | 18         | 1          | 0         |         | 43           | 9            |      | 0                | 0        |          | 124.4         | 0.0           | 5.0                 | 54.6        |
| Nov 15       |               |        | 29           | 19         | 3          | 0         |         | 72           | 30           |      | 1                | 0        |          | 130.6         | 0.0           | 5.0                 | 54.4        |
| Nov 16       |               |        | 22           | 25         | 0          | 1         |         | 51           | 25           |      | 0                | 0        |          | 134.9         | 0.0           | 6.0                 | 58.3        |
| Nov 17       |               |        | 37           | 22         | 2          | 0         |         | 45           | 15           |      | 0                | 0        |          | 123.5         | 0.0           | 6.0                 | 53.4        |
| Nov 18       |               |        | 29           | 16         | 2          | 0         |         | 37           | 11           |      | 0                | 0        |          | 137.4         | 0.0           | 5.0                 | 53.0        |
| Nov 19       |               |        | 14           | 9          | 1          | 0         |         | 39           | 11           |      | 0                | 1        |          | 125.1         | 0.0           | 5.0                 | 53.0        |
| Nov 20       |               |        | 12           | 11         | 6          | 0         |         | 33           | 20           |      | 0                | 0        |          | 87.2          | 0.0           | 5.0                 | 53.0        |
| Nov 21       |               |        | 13           | 18         | 4          | 0         |         | 31           | 14           |      | 0                | 0        |          | 117.2         | 0.0           | 5.0                 | 52.8        |
| Nov 22       |               |        | 14           | 12         | 8          | 0         |         | 52           | 30           |      | 0                | -1       |          | 112.5         | 0.0           | 5.0                 | 52.1        |
| Nov 23       |               |        | 7            | 11         | 1          | 1         |         | 61           | 31           |      | 0                | 0        |          | 127.7         | 0.0           | 6.0                 | 51.5        |
| Nov 24       |               |        | 3            | 7          | 0          | 0         |         | 53           | 29           |      | 0                | 0        |          | 110.9         | 0.0           | 5.0                 | 51.1        |
| Nov 25       |               |        | 5            | 6          | 1          | 1         |         | 89           | 34           |      | 0                | 0        |          | 113.9         | 0.0           | 5.0                 | 50.6        |
| Nov 26       |               |        | 12           | 6          | 0          | 0         |         | 71           | 34           |      | 0                | 0        |          | 133.7         | 0.0           | 5.0                 | 50.2        |
| Nov 27       |               |        | 4            | 3          | 0          | 0         |         | 61           | 22           |      | 0                | 0        |          | 151.3         | 0.0           | 5.0                 | 50.0        |
| Nov 28       |               |        | 6            | 4          | 0          | 0         |         | 44           | 17           |      | 0                | 0        |          | 135.5         | 0.0           | 5.0                 | 49.9        |
| Nov 29       |               |        | 6            | 0          | 0          | 0         |         | 27           | 8            |      | 1                | 0        |          | 135.1         | 0.0           | 5.0                 | 49.7        |
| Nov 30       |               |        | 6            | 4          | 0          | 0         |         | 15           | 3            |      | 0                | 0        |          | 138.5         | 0.0           | 4.0                 | 49.5        |
| <b>TOTAL</b> |               |        | <b>1,141</b> | <b>947</b> | <b>105</b> | <b>14</b> |         | <b>2,631</b> | <b>1,116</b> |      | <b>7</b>         | <b>0</b> |          |               |               |                     |             |
| <b>AVG.</b>  |               |        | <b>38</b>    | <b>32</b>  | <b>4</b>   | <b>0</b>  |         | <b>88</b>    | <b>37</b>    |      | <b>0</b>         | <b>0</b> |          | <b>122.7</b>  | <b>0.0</b>    | <b>5.2</b>          | <b>53.6</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK   |
|----------------|----------------|----------------|
| TOTALS TO DATE |                |                |
| SPRING         | 117,071        | 7,173          |
| SUMMER         | 69,222         | 10,392         |
| FALL           | 225,912        | 108,034        |
| <b>TOTAL</b>   | <b>412,205</b> | <b>125,599</b> |

| COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | CHUM | LAMPREY | STURGEON |
|------------|-----------|---------|-----------------|---------------------|------|------|---------|----------|
| 31,037     | 2,861     | 410,099 | 197,839         | 69,481              | 2    | 7    | 6,241   | 84       |

Note: Video counts occurred from November 1 through December 7. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Fall chinook run ended October 31st. November and December totals were not added to fall totals except Pink, chum, and sturgeon counts are totals for entire calendar year

TABLE 36

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

THE DALLES PROJECT  
DECEMBER 2012

| DATE         | FISH COUNTS   |        |           |              |            |           |         |                 |                     |      |      | RIVER CONDITIONS |              |            |            |             |
|--------------|---------------|--------|-----------|--------------|------------|-----------|---------|-----------------|---------------------|------|------|------------------|--------------|------------|------------|-------------|
|              | CHINOOK ADULT |        |           | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | CHUM | LAMPREY          | STURGEON     | DISCH KCFs | SPILL KCFs | TURBIDITY   |
|              | SPRING        | SUMMER | FALL      |              |            |           |         |                 |                     |      |      |                  |              |            | SECCHI     | DEG F       |
| Dec 1        |               |        | 2         | 3            | 0          |           |         | 10              | 4                   |      |      |                  | 140.0        | 0.0        | 5.0        | 49.3        |
| Dec 2        |               |        | 1         | -3           | 0          |           |         | 21              | 7                   |      |      |                  | 142.5        | 0.0        | 5.0        | 49.3        |
| Dec 3        |               |        | 1         | 2            | 1          |           |         | 4               | 2                   |      |      |                  | 144.9        | 0.0        | 5.0        | 49.3        |
| Dec 4        |               |        | 0         | -1           | 0          |           |         | 9               | 2                   |      |      |                  | 160.3        | 0.0        | 5.0        | 49.2        |
| Dec 5        |               |        | 1         | -1           | 1          |           |         | 5               | 1                   |      |      |                  | 153.5        | 0.0        | 5.0        | 48.7        |
| Dec 6        |               |        | 1         | 0            | 0          |           |         | 3               | 1                   |      |      |                  | 170.5        | 0.0        | 5.0        | 48.4        |
| Dec 7        |               |        | -1        | 1            | 0          |           |         | 7               | -1                  |      |      |                  | 180.3        | 0.0        | 5.0        | 47.8        |
| Dec 8        |               |        | 0         | 2            | 0          |           |         | 5               | 3                   |      |      |                  | 186.3        | 0.0        | 5.0        | 47.6        |
| Dec 9        |               |        | 1         | 0            | 0          |           |         | 5               | 0                   |      |      |                  | 186.7        | 0.0        | 6.0        | 47.5        |
| Dec 10       |               |        | 2         | 2            | 0          |           |         | 15              | 3                   |      |      |                  | 166.6        | 0.0        | 5.0        | 47.6        |
| Dec 11       |               |        | 1         | 2            | 0          |           |         | 28              | 15                  |      |      |                  | 179.8        | 0.0        | 5.0        | 47.6        |
| Dec 12       |               |        | 0         | 0            | 0          |           |         | 9               | 6                   |      |      |                  | 198.5        | 0.0        | 5.5        | 47.5        |
| Dec 13       |               |        | 0         | -1           | 0          |           |         | 23              | 7                   |      |      |                  | 200.3        | 0.0        | 5.0        | 47.2        |
| Dec 14       |               |        | 1         | 0            | 0          |           |         | 6               | 4                   |      |      |                  | 203.5        | 0.0        | 5.0        | 47.0        |
| Dec 15       |               |        | 0         | 0            | 0          |           |         | 18              | 9                   |      |      |                  | 183.1        | 0.0        | 5.0        | 46.6        |
| Dec 16       |               |        | 0         | 0            | 0          |           |         | 10              | 6                   |      |      |                  | 159.7        | 0.0        | 5.0        |             |
| Dec 17       |               |        | 1         | 0            | 0          |           |         | 5               | 3                   |      |      |                  | 168.5        | 0.0        | 5.0        |             |
| Dec 18       |               |        | 1         | 0            | 0          |           |         | 13              | 5                   |      |      |                  | 200.8        | 0.0        | 5.0        |             |
| Dec 19       |               |        | 1         | 0            | 0          |           |         | 4               | 2                   |      |      |                  | 164.3        | 0.0        | 5.0        |             |
| Dec 20       |               |        | 0         | 1            | 0          |           |         | 1               | 1                   |      |      |                  | 150.1        | 0.0        | 5.0        |             |
| Dec 21       |               |        | 0         | 0            | 0          |           |         | 0               | 1                   |      |      |                  | 162.9        | 0.0        | 5.0        |             |
| Dec 22       |               |        | 1         | 0            | 0          |           |         | 6               | 0                   |      |      |                  | 173.7        | 0.0        | 5.0        |             |
| Dec 23       |               |        | 0         | 0            | 0          |           |         | 3               | 2                   |      |      |                  | 146.3        | 0.0        | 5.0        | 44.8        |
| Dec 24       |               |        | 0         | 0            | 0          |           |         | 4               | 1                   |      |      |                  | 140.4        | 0.0        | 5.0        | 44.4        |
| Dec 25       |               |        | 1         | 0            | 0          |           |         | 2               | 0                   |      |      |                  | 132.0        | 0.0        | 5.0        | 44.1        |
| Dec 26       |               |        | 0         | 0            | 0          |           |         | 1               | 0                   |      |      |                  | 151.0        | 0.0        | 5.0        | 43.8        |
| Dec 27       |               |        | 0         | 0            | 0          |           |         | 1               | 2                   |      |      |                  | 155.0        | 0.0        | 5.0        | 43.8        |
| Dec 28       |               |        | 0         | -1           | 0          |           |         | 3               | 2                   |      |      |                  | 163.7        | 0.0        | 5.0        | 43.5        |
| Dec 29       |               |        | -1        | 0            | 0          |           |         | 0               | 0                   |      |      |                  | 171.1        | 0.0        | 5.0        | 43.0        |
| Dec 30       |               |        | 0         | 0            | 0          |           |         | -1              | -1                  |      |      |                  | 185.1        | 0.0        | 5.0        | 42.7        |
| Dec 31       |               |        | 0         | 0            | 0          |           |         | 0               | 0                   |      |      |                  | 187.4        | 0.0        | 5.0        | 42.4        |
| <b>TOTAL</b> |               |        | <b>14</b> | <b>6</b>     | <b>2</b>   |           |         | <b>220</b>      | <b>87</b>           |      |      |                  |              |            |            |             |
| <b>AVG.</b>  |               |        | <b>1</b>  | <b>0</b>     | <b>0</b>   |           |         | <b>8</b>        | <b>2</b>            |      |      |                  | <b>168.0</b> | <b>0.0</b> | <b>5.0</b> | <b>46.4</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK   | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | CHUM | LAMPREY | STURGEON |
|----------------|----------------|----------------|------------|-----------|---------|-----------------|---------------------|------|------|---------|----------|
| TOTALS TO DATE |                |                |            |           |         |                 |                     |      |      |         |          |
| SPRING         | 117,071        | 7,173          | 31,037     | 2,861     | 410,099 | 197,839         | 69,481              | 2    | 7    | 6,241   | 84       |
| SUMMER         | 69,222         | 10,392         |            |           |         |                 |                     |      |      |         |          |
| FALL           | 225,912        | 108,034        |            |           |         |                 |                     |      |      |         |          |
| <b>TOTAL</b>   | <b>412,205</b> | <b>125,599</b> |            |           |         |                 |                     |      |      |         |          |

Note: Video counts occurred from November 1 through December 7. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Fall chinook run ended October 31st. November and December totals were not added to fall totals except Pink, chum, and sturgeon counts are totals for entire calendar year

TABLE 37

**YEARLY TOTALS OF SALMONIDS COUNTED OVER THE DALLES DAM  
1957 - 2012**

| YEAR                   | CHINOOK*          | STEELHEAD         | SOCKEYE          | COHO*            | CHUM       | PINK         | TOTALS            |
|------------------------|-------------------|-------------------|------------------|------------------|------------|--------------|-------------------|
| 1957                   | 312,678           | 129,361           | 90,201           | 6,793            | 75         | 4            | 539,112           |
| 1958                   | 301,960           | 121,420           | 111,039          | 2,395            | 31         | 5            | 536,850           |
| 1959                   | 207,461           | 156,090           | 86,259           | 2,709            | 25         | 9            | 452,553           |
| 1960                   | 196,962           | 111,189           | 59,441           | 3,000            | 35         | 5            | 370,632           |
| 1961                   | 201,335           | 134,572           | 16,689           | 2,139            |            | 4            | 354,739           |
| 1962                   | 187,132           | 163,301           | 27,127           | 3,696            |            | 5            | 381,261           |
| 1963                   | 180,969           | 118,957           | 56,931           | 3,716            | 23         | 3            | 360,599           |
| 1964                   | 183,842           | 110,033           | 79,042           | 5,978            |            | 5            | 378,900           |
| 1965                   | 195,049           | 141,052           | 44,279           | 17,468           | 1          | 3            | 397,852           |
| 1966                   | 240,671           | 146,172           | 147,886          | 32,279           |            | 1            | 567,009           |
| 1967                   | 280,112           | 121,614           | 120,589          | 32,015           | 1          | 4            | 554,335           |
| 1968                   | 262,975           | 147,481           | 116,897          | 42,687           |            | 1            | 570,041           |
| 1969                   | 314,258           | 112,529           | 37,226           | 17,054           |            | 1            | 481,068           |
| 1970                   | 261,457           | 99,187            | 77,678           | 23,219           |            | 4            | 461,545           |
| 1971                   | 250,528           | 151,348           | 76,103           | 29,061           |            | 3            | 507,043           |
| 1972                   | 268,628           | 135,303           | 44,671           | 16,562           |            |              | 465,164           |
| 1973                   | 280,945           | 100,082           | 52,303           | 11,152           |            | 1            | 444,483           |
| 1974                   | 217,181           | 70,875            | 28,827           | 14,655           |            |              | 331,538           |
| 1975                   | 217,283           | 57,675            | 43,198           | 13,976           |            |              | 332,132           |
| 1976                   | 216,163           | 82,568            | 27,747           | 19,392           |            |              | 345,870           |
| 1977                   | 224,950           | 133,882           | 86,252           | 10,021           |            |              | 455,105           |
| 1978                   | 199,228           | 60,485            | 11,845           | 18,877           |            |              | 290,435           |
| 1979                   | 150,647           | 83,364            | 32,791           | 8,726            |            | 4            | 275,532           |
| 1980                   | 113,951           | 93,963            | 42,088           | 6,326            |            |              | 256,328           |
| 1981                   | 135,176           | 113,268           | 35,447           | 6,941            |            | 1            | 290,833           |
| 1982                   | 172,682           | 117,434           | 33,331           | 7,383            |            |              | 330,830           |
| 1983                   | 156,190           | 171,055           | 84,204           | 3,459            | 1          |              | 414,909           |
| 1984                   | 203,920           | 219,123           | 101,177          | 3,142            |            | 1            | 527,363           |
| 1985                   | 370,982           | 276,025           | 117,254          | 4,625            |            | 5            | 768,891           |
| 1986                   | 443,013           | 281,953           | 48,477           | 4,842            | 3          | 4            | 778,292           |
| 1987                   | 421,190           | 217,768           | 87,599           | 3,310            | 1          | 2            | 729,870           |
| 1988                   | 378,080           | 198,499           | 55,802           | 9,226            |            |              | 641,607           |
| 1989                   | 282,168           | 235,639           | 39,672           | 12,611           |            |              | 570,090           |
| 1990                   | 207,556           | 129,271           | 40,230           | 4,645            |            |              | 381,702           |
| 1991                   | 153,023           | 199,853           | 63,405           | 9,601            |            | 103          | 425,985           |
| 1992                   | 168,507           | 232,179           | 66,384           | 3,825            |            | 3            | 470,898           |
| 1993                   | 184,953           | 124,829           | 62,252           | 4,360            |            |              | 376,394           |
| 1994                   | 161,758           | 112,254           | 9,356            | 4,376            |            |              | 287,744           |
| 1995                   | 141,793           | 145,844           | 7,166            | 3,269            |            |              | 298,072           |
| 1996                   | 167,911           | 162,456           | 25,055           | 4,583            |            |              | 360,005           |
| 1997                   | 223,801           | 164,756           | 32,430           | 4,729            |            |              | 425,716           |
| 1998                   | 154,132           | 116,682           | 8,826            | 8,970            |            |              | 288,610           |
| 1999                   | 199,491           | 156,874           | 13,715           | 15,041           |            | 19           | 385,140           |
| 2000                   | 316,836           | 205,241           | 73,383           | 29,536           |            | 1            | 624,997           |
| 2001                   | 629,334           | 503,327           | 102,562          | 64,557           |            |              | 1,299,780         |
| 2002                   | 583,155           | 387,920           | 40,554           | 12,786           |            |              | 1,024,415         |
| 2003                   | 618,472           | 282,574           | 34,180           | 46,101           | 29         | 128          | 981,484           |
| 2004                   | 562,737           | 241,123           | 107,466          | 41,645           | 5          | 0            | 952,976           |
| 2005                   | 389,905           | 244,213           | 65,273           | 36,129           | 0          | 23           | 735,543           |
| 2006                   | 341,371           | 249,223           | 30,026           | 34,339           | 3          | 3            | 654,965           |
| 2007                   | 253,613           | 246,960           | 19,124           | 32,961           | 11         | 1            | 552,670           |
| 2008                   | 397,766           | 277,640           | 177,984          | 42,682           | 0          | 12           | 896,084           |
| 2009                   | 525,837           | 515,111           | 155,591          | 77,492           | 7          | 28           | 1,274,066         |
| 2010                   | 618,699           | 333,033           | 325,133          | 31,374           | 0          | 1            | 1,308,240         |
| 2011                   | 591,869           | 299,007           | 138,293          | 76,753           | 3          | 1,158        | 1,107,083         |
| 2012                   | 539,930           | 201,640           | 410,099          | 34,019           | 7          | 2            | 1,185,697         |
| <b>Totals</b>          | <b>16,162,215</b> | <b>10,145,277</b> | <b>4,128,559</b> | <b>1,023,208</b> | <b>261</b> | <b>1,557</b> | <b>31,461,077</b> |
| <b>10-Year Average</b> | <b>484,020</b>    | <b>289,052</b>    | <b>146,317</b>   | <b>45,350</b>    |            |              | <b>964,881</b>    |

\*Jacks included

TABLE 38

MONTHLY COUNT OF CHINOOK SALMON  
THE DALLES DAM 1957 - 2012

| YEAR            | JAN | FEB   | MAR | APR     | MAY       | JUN       | JUL       | AUG       | SEP       | OCT       | NOV     | DEC    | TOTAL*     | SPRING      | SUMMER      | FALL         | JACKS     |
|-----------------|-----|-------|-----|---------|-----------|-----------|-----------|-----------|-----------|-----------|---------|--------|------------|-------------|-------------|--------------|-----------|
|                 |     |       |     |         |           |           |           |           |           |           |         |        |            | 1 JAN-3 JUN | 4 JUN-3 AUG | 4 AUG-31 DEC |           |
| 1957            |     |       | 22  | 42,161  | 59,410    | 86,096    | 35,643    | 28,828    | 56,753    | 3,564     | 201     |        | 312,678    | 109,723     | 116,661     | 86,294       | 37,374    |
| 1958            |     |       | 114 | 8,268   | 47,862    | 59,955    | 24,381    | 17,211    | 141,262   | 2,788     | 119     |        | 301,960    | 61,747      | 80,139      | 160,074      | 19,747    |
| 1959            |     |       | 8   | 16,771  | 32,634    | 27,799    | 42,817    | 20,142    | 65,229    | 2,022     | 39      |        | 207,461    | 50,874      | 71,362      | 85,225       | 39,857    |
| 1960            |     |       |     | 17,073  | 40,091    | 52,577    | 22,549    | 15,225    | 46,453    | 2,720     | 274     |        | 196,962    | 58,406      | 75,315      | 63,241       | 30,847    |
| 1961            |     |       |     | 43,822  | 35,059    | 24,478    | 24,596    | 16,866    | 53,371    | 3,143     |         |        | 201,335    | 79,183      | 50,824      | 71,328       | 35,409    |
| 1962            |     |       |     | 33,069  | 35,629    | 34,488    | 21,515    | 13,461    | 46,135    | 2,835     |         |        | 187,132    | 69,139      | 57,007      | 60,986       | 17,835    |
| 1963            |     |       |     | 19,119  | 33,207    | 25,063    | 20,414    | 21,865    | 57,248    | 4,053     |         |        | 180,969    | 52,937      | 47,333      | 80,699       | 54,749    |
| 1964            |     |       | 340 | 35,551  | 24,447    | 16,801    | 37,697    | 17,452    | 49,811    | 1,743     |         |        | 183,842    | 60,691      | 56,360      | 66,791       | 30,900    |
| 1965            |     |       | 190 | 17,870  | 24,930    | 17,900    | 31,072    | 25,119    | 74,904    | 3,064     |         |        | 195,049    | 43,617      | 50,527      | 100,905      | 67,552    |
| 1966            |     | 1,068 |     | 72,267  | 22,837    | 25,530    | 33,712    | 14,978    | 65,380    | 4,899     |         |        | 240,671    | 96,628      | 61,062      | 82,981       | 36,482    |
| 1967            |     |       |     | 48,744  | 22,817    | 24,718    | 45,346    | 23,927    | 107,427   | 7,133     |         |        | 280,112    | 71,976      | 72,582      | 135,554      | 98,817    |
| 1968            |     |       | 100 | 52,144  | 45,057    | 32,827    | 33,272    | 22,361    | 72,209    | 4,800     | 205     |        | 262,975    | 98,742      | 67,391      | 96,842       | 64,644    |
| 1969            |     |       | 65  | 19,025  | 80,162    | 33,432    | 27,750    | 29,330    | 118,890   | 5,604     |         |        | 314,258    | 100,482     | 61,978      | 151,798      | 96,244    |
| 1970            |     |       |     | 53,370  | 29,670    | 22,903    | 23,318    | 34,906    | 93,633    | 3,657     |         |        | 261,457    | 83,549      | 48,115      | 129,793      | 85,471    |
| 1971            |     |       |     | 28,227  | 44,181    | 22,011    | 29,655    | 16,190    | 103,370   | 6,894     |         |        | 250,528    | 73,655      | 51,847      | 125,026      | 75,329    |
| 1972            |     |       |     | 68,955  | 33,508    | 17,354    | 29,756    | 21,828    | 91,666    | 5,561     |         |        | 268,628    | 103,107     | 48,660      | 116,861      | 81,668    |
| 1973            |     |       |     | 94,334  | 15,040    | 19,548    | 19,181    | 23,341    | 101,771   | 7,730     |         |        | 280,945    | 111,088     | 38,774      | 131,083      | 72,088    |
| 1974            |     |       |     | 13,415  | 41,902    | 7,141     | 22,709    | 13,964    | 103,804   | 14,246    |         |        | 217,181    | 56,397      | 30,273      | 130,511      | 79,840    |
| 1975            |     |       |     | 18,526  | 32,869    | 12,155    | 26,447    | 28,973    | 90,193    | 8,120     |         |        | 217,283    | 52,483      | 39,062      | 125,738      | 74,418    |
| 1976            |     |       |     | 20,266  | 35,434    | 17,828    | 20,129    | 17,278    | 90,933    | 14,295    |         |        | 216,163    | 56,570      | 38,733      | 120,860      | 74,275    |
| 1977            |     |       |     | 72,726  | 16,672    | 22,084    | 22,059    | 12,266    | 69,927    | 9,216     |         |        | 224,950    | 90,373      | 44,378      | 90,199       | 95,067    |
| 1978            |     |       |     | 52,425  | 30,472    | 19,477    | 15,978    | 11,251    | 57,786    | 11,839    |         |        | 199,228    | 84,924      | 34,396      | 79,908       | 32,503    |
| 1979            |     |       |     | 13,993  | 12,569    | 14,310    | 17,687    | 20,458    | 61,757    | 9,516     | 357     |        | 150,647    | 27,297      | 32,298      | 91,052       | 42,886    |
| 1980            |     |       |     | 12,434  | 15,441    | 7,948     | 12,832    | 12,881    | 43,675    | 8,740     |         |        | 113,951    | 28,237      | 21,133      | 64,581       | 20,016    |
| 1981            |     |       |     | 24,227  | 16,335    | 8,491     | 10,779    | 15,802    | 53,840    | 5,702     |         |        | 135,176    | 41,160      | 19,676      | 74,340       | 33,919    |
| 1982            |     |       |     | 10,569  | 33,296    | 10,058    | 9,554     | 17,466    | 79,487    | 12,252    |         |        | 172,682    | 44,750      | 19,342      | 108,590      | 60,165    |
| 1983            |     |       |     | 13,270  | 22,893    | 8,766     | 8,430     | 12,501    | 73,942    | 16,388    |         |        | 156,190    | 36,856      | 17,051      | 102,283      | 41,335    |
| 1984            |     |       |     | 9,326   | 23,784    | 9,992     | 12,332    | 23,495    | 105,786   | 19,205    |         |        | 203,920    | 33,848      | 22,472      | 147,600      | 70,798    |
| 1985            |     |       |     | 36,035  | 39,173    | 15,785    | 10,332    | 37,806    | 203,470   | 27,058    | 1,323   |        | 370,982    | 76,514      | 25,385      | 269,083      | 145,007   |
| 1986            |     |       | 175 | 48,892  | 36,928    | 14,175    | 10,452    | 22,684    | 264,091   | 45,616    |         |        | 443,013    | 87,004      | 24,826      | 331,183      | 176,461   |
| 1987            |     |       |     | 48,812  | 27,586    | 17,923    | 12,145    | 50,680    | 236,216   | 27,828    |         |        | 421,190    | 77,453      | 30,804      | 312,933      | 65,115    |
| 1988            |     |       |     | 51,680  | 20,756    | 16,644    | 13,494    | 66,509    | 193,490   | 15,507    |         |        | 378,080    | 73,663      | 29,892      | 274,525      | 69,631    |
| 1989            |     |       |     | 24,474  | 27,477    | 15,539    | 13,899    | 58,674    | 130,931   | 10,438    | 736     |        | 282,168    | 53,014      | 30,555      | 198,599      | 28,671    |
| 1990            |     |       | 115 | 36,062  | 20,749    | 13,390    | 9,099     | 22,152    | 96,538    | 9,451     |         |        | 207,556    | 57,424      | 22,615      | 127,517      | 32,794    |
| 1991            |     |       |     | 14,513  | 17,313    | 10,949    | 7,638     | 8,384     | 84,861    | 9,365     |         |        | 153,023    | 32,359      | 18,467      | 102,197      | 36,820    |
| 1992            |     |       |     | 38,141  | 19,414    | 9,595     | 5,797     | 14,589    | 71,281    | 9,690     |         |        | 168,507    | 58,451      | 14,976      | 95,080       | 27,160    |
| 1993            |     |       |     | 42,391  | 25,824    | 14,165    | 6,481     | 19,297    | 71,395    | 5,400     |         |        | 184,953    | 69,356      | 20,063      | 95,534       | 12,298    |
| 1994            |     |       |     | 6,573   | 4,938     | 7,376     | 8,360     | 22,910    | 98,997    | 12,604    |         |        | 161,758    | 11,798      | 15,997      | 133,963      | 25,470    |
| 1995            |     |       |     | 3,008   | 4,244     | 6,176     | 7,111     | 23,094    | 82,723    | 15,437    |         |        | 141,793    | 7,553       | 13,558      | 120,682      | 32,813    |
| 1996            |     |       |     | 5,631   | 20,896    | 8,018     | 6,718     | 26,505    | 90,762    | 9,381     |         |        | 167,911    | 27,127      | 14,488      | 126,296      | 5,851     |
| 1997            |     |       |     | 25,639  | 42,467    | 14,718    | 8,011     | 23,666    | 100,652   | 8,648     |         |        | 223,801    | 69,740      | 21,134      | 132,704      | 16,249    |
| 1998            |     |       |     | 14,927  | 10,488    | 10,289    | 6,702     | 20,129    | 78,191    | 13,406    |         |        | 154,132    | 25,743      | 16,906      | 111,483      | 20,513    |
| 1999            |     |       |     | 5,396   | 17,579    | 10,972    | 13,864    | 30,830    | 107,411   | 13,439    |         |        | 199,491    | 23,743      | 24,937      | 150,811      | 28,412    |
| 2000            |     |       |     | 68,618  | 47,131    | 20,878    | 15,442    | 57,600    | 97,042    | 10,125    |         |        | 316,836    | 117,749     | 35,580      | 163,507      | 63,769    |
| 2001            |     |       |     | 228,568 | 79,627    | 50,030    | 35,889    | 38,452    | 172,871   | 23,897    |         |        | 629,334    | 313,865     | 80,249      | 233,081      | 72,644    |
| 2002            |     |       |     | 63,869  | 116,008   | 76,400    | 45,761    | 63,943    | 197,956   | 19,218    |         |        | 583,155    | 185,046     | 118,812     | 279,297      | 42,982    |
| 2003            |     |       | 11  | 84,312  | 54,173    | 70,347    | 43,926    | 42,146    | 280,091   | 33,070    | 3,085   |        | 618,472    | 149,967     | 111,931     | 356,574      | 62,007    |
| 2004            |     |       |     | 272     | 74,705    | 59,127    | 59,859    | 30,999    | 41,935    | 261,434   | 32,361  | 2,017  | 562,737    | 138,229     | 87,925      | 336,583      | 48,732    |
| 2005            |     |       | 1   | 44      | 18,797    | 41,560    | 48,505    | 27,685    | 25,764    | 203,518   | 23,064  | 958    | 389,905    | 64,219      | 73,136      | 252,550      | 24,991    |
| 2006            |     |       |     | 9       | 1,006     | 61,711    | 58,394    | 26,404    | 24,419    | 141,212   | 26,060  | 2,140  | 341,371    | 64,012      | 84,839      | 192,520      | 27,212    |
| 2007            |     |       | 1   | 51      | 19,338    | 46,147    | 34,405    | 19,510    | 21,415    | 93,517    | 17,883  | 1,326  | 253,613    | 68,253      | 52,062      | 133,298      | 65,306    |
| 2008            |     |       |     |         | 21,531    | 86,590    | 58,430    | 21,041    | 46,608    | 147,583   | 15,983  |        | 397,766    | 111,239     | 77,279      | 209,248      | 66,298    |
| 2009            |     |       |     |         | 8,464     | 132,674   | 83,688    | 30,189    | 74,468    | 176,655   | 19,699  |        | 525,837    | 147,554     | 107,794     | 270,489      | 175,120   |
| 2010            |     |       |     |         | 83,785    | 108,482   | 72,234    | 29,689    | 45,375    | 246,464   | 32,670  |        | 618,699    | 201,385     | 93,820      | 323,494      | 75,458    |
| 2011            |     |       |     |         | 8,526     | 150,084   | 76,725    | 47,267    | 37,941    | 230,089   | 41,237  |        | 591,869    | 164,310     | 120,968     | 306,591      | 151,007   |
| 2012            |     |       | 18  | 8,662   | 110,476   | 52,142    | 31,102    | 44,449    | 257,070   | 33,903    | 2,088   | 20     | 539,930    | 124,262     | 79,614      | 336,054      | 126,554   |
| Total           |     |       |     | 9,818   | 2,024,302 | 2,337,830 | 1,629,481 | 1,226,617 | 1,561,789 | 6,593,153 | 764,167 | 14,868 | 16,162,215 | 4,369,748   | 2,706,702   | 8,770,725    | 3,218,206 |
| 10-Year Average |     |       |     | 32,913  | 85,102    | 61,473    | 30,781    | 40,452    | 203,763   | 27,593    |         |        | 484,020    | 123,343     | 88,937      | 271,740      | 82,269    |

\*Jacks included

TABLE 39

MONTHLY COUNT OF SOCKEYE SALMON  
THE DALLES DAM  
1957 - 2012

| YEAR            | JAN | FEB | MAR | APR | MAY     | JUN       | JUL       | AUG    | SEP   | OCT | NOV | DEC | TOTAL     |
|-----------------|-----|-----|-----|-----|---------|-----------|-----------|--------|-------|-----|-----|-----|-----------|
| 1957            |     |     |     |     | 125     | 33,476    | 54,294    | 2,081  | 221   | 4   |     |     | 90,201    |
| 1958            |     |     |     |     | 29      | 28,854    | 80,324    | 1,583  | 248   | 1   |     |     | 111,039   |
| 1959            |     |     |     |     | 413     | 7,176     | 76,347    | 2,245  | 77    | 1   |     |     | 86,259    |
| 1960            |     |     |     |     | 2       | 36,907    | 22,228    | 297    | 7     |     |     |     | 59,441    |
| 1961            |     |     |     |     | 66      | 5,863     | 10,629    | 116    | 15    |     |     |     | 16,689    |
| 1962            |     |     |     |     | 55      | 8,333     | 18,545    | 180    | 14    |     |     |     | 27,127    |
| 1963            |     |     |     |     | 199     | 17,914    | 38,633    | 185    | 0     |     |     |     | 56,931    |
| 1964            |     |     |     |     | 23      | 9,984     | 68,205    | 758    | 72    |     |     |     | 79,042    |
| 1965            |     |     |     |     | 184     | 11,023    | 31,622    | 1,438  | 12    |     |     |     | 44,279    |
| 1966            |     |     |     |     | 65      | 36,539    | 109,167   | 2,106  | 9     |     |     |     | 147,886   |
| 1967            |     |     |     |     | 114     | 15,713    | 103,862   | 892    | 8     |     |     |     | 120,589   |
| 1968            |     |     |     |     | 5       | 77,878    | 38,542    | 462    | 10    |     |     |     | 116,897   |
| 1969            |     |     |     |     | 22      | 15,165    | 21,933    | 102    | 3     | 1   |     |     | 37,226    |
| 1970            |     |     |     |     | 1       | 18,309    | 56,903    | 2,387  | 75    | 3   |     |     | 77,678    |
| 1971            |     |     |     |     | 0       | 8,887     | 66,841    | 369    | 6     |     |     |     | 76,103    |
| 1972            |     |     |     |     | 0       | 9,276     | 34,924    | 466    | 5     |     |     |     | 44,671    |
| 1973            |     |     |     |     | 8       | 19,510    | 32,674    | 105    | 6     |     |     |     | 52,303    |
| 1974            |     |     |     |     | 4       | 3,935     | 24,790    | 98     | 0     |     |     |     | 28,827    |
| 1975            |     |     |     |     | 0       | 7,679     | 35,291    | 225    | 2     | 1   |     |     | 43,198    |
| 1976            |     |     |     |     | 1       | 10,988    | 16,637    | 121    | 0     |     |     |     | 27,747    |
| 1977            |     |     |     |     | 5       | 60,049    | 26,146    | 52     | 0     |     |     |     | 86,252    |
| 1978            |     |     |     |     | 24      | 7,158     | 4,559     | 104    | 0     |     |     |     | 11,845    |
| 1979            |     |     |     |     | 0       | 14,750    | 17,734    | 307    | 0     |     |     |     | 32,791    |
| 1980            |     |     |     |     | 0       | 11,096    | 30,046    | 927    | 19    |     |     |     | 42,088    |
| 1981            |     |     |     |     | 0       | 17,692    | 17,686    | 68     | 1     |     |     |     | 35,447    |
| 1982            |     |     |     |     | 0       | 11,430    | 21,742    | 144    | 15    |     |     |     | 33,331    |
| 1983            |     |     |     |     | 1       | 34,684    | 49,302    | 197    | 19    | 1   |     |     | 84,204    |
| 1984            |     |     |     |     | 0       | 62,500    | 37,926    | 745    | 6     |     |     |     | 101,177   |
| 1985            |     |     | 1   | 17  | 75,603  | 41,107    | 521       | 4      | 4     |     | 1   |     | 117,254   |
| 1986            |     |     |     |     | 12      | 17,224    | 30,686    | 550    | 4     | 1   |     |     | 48,477    |
| 1987            |     |     |     |     | 1       | 48,798    | 38,443    | 348    | 8     | 1   |     |     | 87,599    |
| 1988            |     |     |     |     | 5       | 30,443    | 25,096    | 208    | 50    |     |     |     | 55,802    |
| 1989            |     |     |     |     | 1       | 22,196    | 17,321    | 152    | 2     |     |     |     | 39,672    |
| 1990            |     |     |     |     | 0       | 17,603    | 22,406    | 218    | 3     |     |     |     | 40,230    |
| 1991            |     |     |     |     | 1       | 14,106    | 48,824    | 443    | 27    | 4   |     |     | 63,405    |
| 1992            |     |     |     |     | 16      | 38,319    | 27,812    | 232    | 4     | 1   |     |     | 66,384    |
| 1993            |     |     |     |     | 2       | 36,517    | 25,584    | 146    | 3     |     |     |     | 62,252    |
| 1994            |     |     |     |     | 0       | 6,752     | 2,594     | 8      | 2     |     |     |     | 9,356     |
| 1995            |     |     |     |     | 1       | 4,195     | 2,890     | 61     | 15    | 4   |     |     | 7,166     |
| 1996            |     |     |     |     | 0       | 17,013    | 7,983     | 44     | 15    |     |     |     | 25,055    |
| 1997            |     |     |     |     | 4       | 11,707    | 20,292    | 395    | 29    | 3   |     |     | 32,430    |
| 1998            |     |     |     |     | 0       | 4,777     | 3,978     | 65     | 6     |     |     |     | 8,826     |
| 1999            |     |     |     |     | 0       | 5,210     | 8,445     | 57     | 3     |     |     |     | 13,715    |
| 2000            |     |     |     |     | 69      | 61,980    | 11,242    | 88     | 4     |     |     |     | 73,383    |
| 2001            |     |     |     |     | 12      | 85,939    | 16,527    | 82     | 2     |     |     |     | 102,562   |
| 2002            |     |     |     |     | 1       | 22,714    | 17,746    | 93     | 0     |     |     |     | 40,554    |
| 2003            |     |     |     |     | 8       | 21,233    | 12,862    | 70     | 3     |     |     |     | 34,180    |
| 2004            |     |     |     |     | 61      | 84,332    | 22,978    | 94     | 1     |     |     |     | 107,466   |
| 2005            |     |     |     |     | 4       | 38,474    | 26,688    | 98     | 7     | 2   |     |     | 65,273    |
| 2006            |     |     |     |     | 1       | 20,817    | 9,099     | 105    | 4     |     |     |     | 30,026    |
| 2007            |     |     |     |     | 10      | 13,475    | 5,540     | 99     | 0     |     |     |     | 19,124    |
| 2008            |     |     |     |     | 6       | 152,255   | 25,678    | 45     | 0     |     |     |     | 177,984   |
| 2009            |     |     |     |     | 27      | 114,162   | 41,260    | 126    | 16    |     |     |     | 155,591   |
| 2010            |     |     |     | 1   | 45      | 235,935   | 88,980    | 168    | 3     | 1   |     |     | 325,133   |
| 2011            |     |     |     |     | 1       | 50,335    | 87,699    | 255    | 3     |     |     |     | 138,293   |
| 2012            |     |     |     |     | 15      | 270,789   | 139,045   | 248    | 2     |     |     |     | 410,099   |
| Total           |     |     |     | 2   | 1,666   | 2,125,671 | 1,976,337 | 23,779 | 1,070 | 29  | 1   |     | 4,128,559 |
| 10-Year Average |     |     |     | 18  | 100,181 | 45,983    | 131       | 4      |       |     |     |     | 146,317   |

TABLE 40  
MONTHLY COUNT OF COHO SALMON  
THE DALLES DAM: 1957-2012

| YEAR                   | JAN | FEB | MAR | APR | MAY | JUN | JUL          | AUG           | SEP            | OCT            | NOV          | DEC       | TOTAL*           | JACKS          |
|------------------------|-----|-----|-----|-----|-----|-----|--------------|---------------|----------------|----------------|--------------|-----------|------------------|----------------|
| 1957                   |     |     |     |     |     |     | 220          | 605           | 5,615          | 342            | 11           |           | 6,793            |                |
| 1958                   |     |     |     |     |     |     |              | 96            | 2,132          | 161            | 6            |           | 2,395            |                |
| 1959                   |     |     |     |     |     |     |              | 46            | 2,428          | 234            | 1            |           | 2,709            |                |
| 1960                   |     |     |     |     |     |     |              | 475           | 2,288          | 227            | 10           |           | 3,000            |                |
| 1961                   |     |     |     |     |     |     | 4            | 5             | 1,898          | 232            |              |           | 2,139            |                |
| 1962                   |     |     |     |     |     |     | 5            | 258           | 3,194          | 239            |              |           | 3,696            |                |
| 1963                   |     |     |     |     |     |     | 2            | 361           | 2,931          | 422            |              |           | 3,716            |                |
| 1964                   |     |     |     |     |     |     |              | 506           | 4,723          | 749            |              |           | 5,978            |                |
| 1965                   |     |     |     |     |     |     | 7            | 200           | 13,064         | 4,197          |              |           | 17,468           |                |
| 1966                   |     |     |     |     |     |     | 225          | 3,850         | 25,476         | 2,728          |              |           | 32,279           |                |
| 1967                   |     |     |     |     |     |     | 192          | 494           | 27,860         | 3,469          |              |           | 32,015           | 20,456         |
| 1968                   |     |     |     |     |     |     | 372          | 3,319         | 36,568         | 2,346          | 82           |           | 42,687           | 13,035         |
| 1969                   |     |     |     |     |     |     | 412          | 970           | 13,179         | 2,493          |              |           | 17,054           | 11,218         |
| 1970                   |     |     |     |     |     |     | 96           | 2,064         | 19,983         | 1,076          |              |           | 23,219           | 11,327         |
| 1971                   |     |     |     |     |     |     | 1            | 1,589         | 26,066         | 1,405          |              |           | 29,061           | 11,174         |
| 1972                   |     |     |     |     |     |     | 3            | 1,090         | 14,564         | 905            |              |           | 16,562           | 10,272         |
| 1973                   |     |     |     |     |     |     |              | 793           | 9,443          | 916            |              |           | 11,152           | 5,256          |
| 1974                   |     |     |     |     |     |     |              | 522           | 10,715         | 3,418          |              |           | 14,655           | 9,054          |
| 1975                   |     |     |     |     |     |     |              | 465           | 10,356         | 3,155          |              |           | 13,976           | 8,534          |
| 1976                   |     |     |     |     |     |     |              | 608           | 14,609         | 4,175          |              |           | 19,392           | 13,083         |
| 1977                   |     |     |     |     |     |     | 1            | 91            | 8,131          | 1,798          |              |           | 10,021           | 6,096          |
| 1978                   |     |     |     |     |     |     |              | 355           | 13,069         | 5,453          |              |           | 18,877           | 13,533         |
| 1979                   |     |     |     |     |     |     |              | 211           | 7,109          | 1,367          | 39           |           | 8,726            | 4,836          |
| 1980                   |     |     |     |     |     |     |              | 287           | 5,064          | 975            |              |           | 6,326            | 2,970          |
| 1981                   |     |     |     |     |     |     |              | 295           | 6,061          | 585            |              |           | 6,941            | 4,405          |
| 1982                   |     |     |     |     |     |     |              | 336           | 5,792          | 1,255          |              |           | 7,383            | 3,047          |
| 1983                   |     |     |     |     |     |     |              | 65            | 2,343          | 1,051          |              |           | 3,459            | 2,256          |
| 1984                   |     |     |     |     |     |     |              | 24            | 2,521          | 597            |              |           | 3,142            | 1,282          |
| 1985                   |     |     |     |     |     |     | 4            | 208           | 3,537          | 828            | 48           |           | 4,625            | 1,555          |
| 1986                   |     |     |     |     |     |     | 2            | 1             | 3,772          | 1,067          |              |           | 4,842            | 1,458          |
| 1987                   |     |     |     |     |     |     | 12           | 91            | 2,409          | 798            |              |           | 3,310            | 1,953          |
| 1988                   |     |     |     |     |     |     |              | 232           | 7,082          | 1,912          |              |           | 9,226            | 2,701          |
| 1989                   |     |     |     |     |     |     |              | 283           | 9,027          | 3,173          | 128          |           | 12,611           | 4,781          |
| 1990                   |     |     |     |     |     |     |              | 60            | 3,229          | 1,356          |              |           | 4,645            | 2,340          |
| 1991                   |     |     |     |     |     |     |              | 30            | 7,714          | 1,857          |              |           | 9,601            | 1,053          |
| 1992                   |     |     |     |     |     |     |              | 11            | 3,119          | 695            |              |           | 3,825            | 1,239          |
| 1993                   |     |     |     |     |     |     |              | 18            | 3,256          | 1,086          |              |           | 4,360            | 3,416          |
| 1994                   |     |     |     |     |     |     | 1            | 121           | 2,922          | 1,332          |              |           | 4,376            | 590            |
| 1995                   |     |     |     |     |     |     | 6            | 204           | 2,013          | 1,046          |              |           | 3,269            | 483            |
| 1996                   |     |     |     |     |     |     | 3            | 73            | 3,795          | 712            |              |           | 4,583            | 967            |
| 1997                   |     |     |     |     |     |     |              | 35            | 3,649          | 1,045          |              |           | 4,729            | 662            |
| 1998                   |     |     |     |     |     |     |              | 7             | 3,520          | 5,443          |              |           | 8,970            | 774            |
| 1999                   |     |     |     |     |     |     |              | 37            | 11,456         | 3,548          |              |           | 15,041           | 1,226          |
| 2000                   |     |     |     |     |     |     |              | 2,248         | 20,526         | 6,762          |              |           | 29,536           | 4,570          |
| 2001                   |     |     |     |     |     |     |              | 1,351         | 36,099         | 27,107         |              |           | 64,557           | 2,179          |
| 2002                   |     |     |     |     |     |     |              | 275           | 8,286          | 4,225          |              |           | 12,786           | 3,021          |
| 2003                   |     |     |     |     |     |     |              | 1,084         | 29,129         | 15,161         | 713          | 14        | 46,101           | 2,853          |
| 2004                   |     |     |     |     |     |     |              | 565           | 29,591         | 10,408         | 1,072        | 10        | 41,645           | 1,919          |
| 2005                   |     |     |     |     |     |     | 1            | 438           | 20,376         | 13,814         | 1,500        | 0         | 36,129           | 2,187          |
| 2006                   |     |     |     |     |     |     | 1            | 1,541         | 18,080         | 12,574         | 2,142        | 1         | 34,339           | 2,468          |
| 2007                   |     |     |     |     |     |     |              | 596           | 17,545         | 14,608         | 198          | 14        | 32,961           | 2,095          |
| 2008                   |     |     |     |     |     |     |              | 1,369         | 26,714         | 14,599         |              |           | 42,682           | 4,700          |
| 2009                   |     |     |     |     |     |     | 4            | 8,214         | 29,912         | 39,362         |              |           | 77,492           | 8,552          |
| 2010                   |     |     |     |     |     |     | 0            | 1,082         | 20,090         | 10,202         |              |           | 31,374           | 75,458         |
| 2011                   |     |     |     |     |     |     | 2            | 3,172         | 52,196         | 21,383         |              |           | 76,753           | 4,633          |
| 2012                   |     |     |     |     |     |     | 8            | 2,262         | 28,707         | 2,921          | 119          | 2         | 34,019           | 2,861          |
| <b>Total</b>           |     |     |     |     |     |     | <b>1,584</b> | <b>45,588</b> | <b>704,933</b> | <b>264,994</b> | <b>6,069</b> | <b>41</b> | <b>1,023,208</b> | <b>294,528</b> |
| <b>10-Year Average</b> |     |     |     |     |     |     | <b>2,032</b> | <b>27,234</b> | <b>15,503</b>  |                |              |           | <b>45,350</b>    | <b>10,773</b>  |

\*Includes Jacks

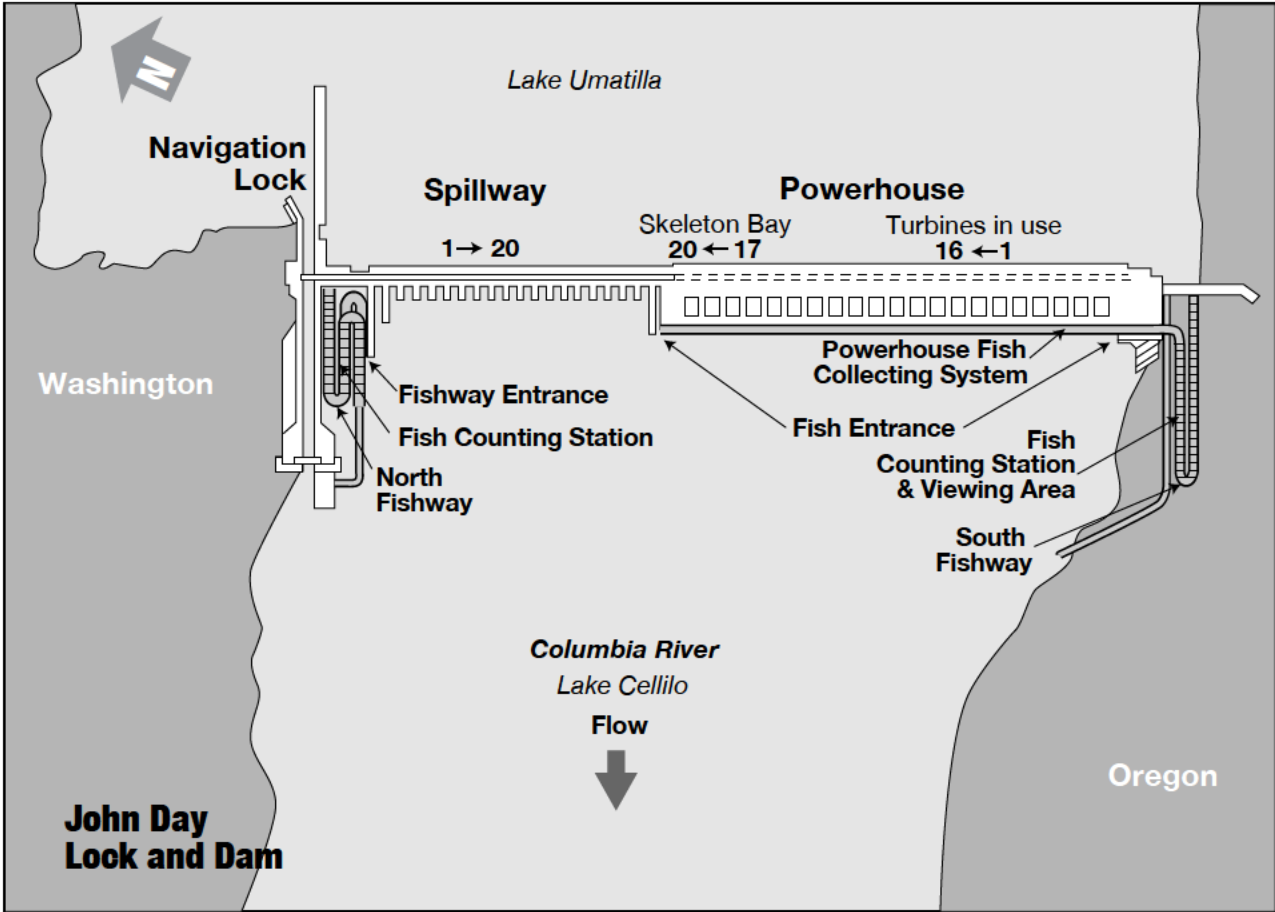
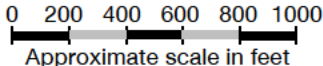
TABLE 41

**MONTHLY COUNT OF STEELHEAD  
THE DALLES DAM 1957 - 2012**

| YEAR                   | JAN | FEB | MAR           | APR           | MAY           | JUN            | JUL              | AUG              | SEP              | OCT            | NOV           | DEC | TOTAL             |
|------------------------|-----|-----|---------------|---------------|---------------|----------------|------------------|------------------|------------------|----------------|---------------|-----|-------------------|
| 1957                   |     |     | 1,603         | 951           | 977           | 4,782          | 45,445           | 33,319           | 35,396           | 6,545          | 343           |     | 129,361           |
| 1958                   |     |     | 122           | 274           | 1,898         | 4,906          | 20,384           | 11,442           | 75,036           | 6,846          | 512           |     | 121,420           |
| 1959                   |     |     | 1             | 541           | 502           | 2,227          | 46,271           | 60,841           | 41,026           | 4,502          | 179           |     | 156,090           |
| 1960                   |     |     |               | 289           | 557           | 2,591          | 28,218           | 32,667           | 42,447           | 4,021          | 399           |     | 111,189           |
| 1961                   |     |     |               | 305           | 307           | 1,396          | 21,906           | 17,850           | 87,344           | 5,464          |               |     | 134,572           |
| 1962                   |     |     |               | 528           | 252           | 1,068          | 36,609           | 31,507           | 87,463           | 5,874          |               |     | 163,301           |
| 1963                   |     |     |               | 153           | 451           | 1,361          | 30,485           | 25,360           | 48,066           | 13,081         |               |     | 118,957           |
| 1964                   |     |     | 50            | 369           | 127           | 493            | 36,773           | 31,742           | 38,197           | 2,282          |               |     | 110,033           |
| 1965                   |     |     | 36            | 502           | 484           | 896            | 60,522           | 21,132           | 53,389           | 4,091          |               |     | 141,052           |
| 1966                   |     | 25  | 788           | 933           | 600           | 3,816          | 52,975           | 26,382           | 53,721           | 6,932          |               |     | 146,172           |
| 1967                   |     |     |               | 258           | 183           | 435            | 27,914           | 22,746           | 56,082           | 13,996         |               |     | 121,614           |
| 1968                   |     |     | 23            | 691           | 344           | 973            | 20,974           | 58,866           | 57,666           | 7,456          | 488           |     | 147,481           |
| 1969                   |     |     | 54            | 953           | 414           | 1,442          | 33,952           | 22,963           | 44,146           | 8,605          |               |     | 112,529           |
| 1970                   |     |     |               | 337           | 172           | 733            | 15,905           | 32,752           | 44,823           | 4,465          |               |     | 99,187            |
| 1971                   |     |     |               | 408           | 233           | 821            | 40,712           | 31,812           | 69,602           | 7,760          |               |     | 151,348           |
| 1972                   |     |     |               | 463           | 159           | 604            | 35,569           | 30,631           | 63,748           | 4,129          |               |     | 135,303           |
| 1973                   |     |     |               | 723           | 326           | 1,981          | 29,067           | 25,437           | 38,017           | 4,531          |               |     | 100,082           |
| 1974                   |     |     |               | 529           | 1,362         | 1,859          | 24,779           | 21,835           | 15,059           | 5,452          |               |     | 70,875            |
| 1975                   |     |     |               | 1,018         | 1,334         | 1,973          | 18,046           | 20,531           | 11,519           | 3,254          |               |     | 57,675            |
| 1976                   |     |     |               | 768           | 1,604         | 3,357          | 22,021           | 30,386           | 21,586           | 2,846          |               |     | 82,568            |
| 1977                   |     |     |               | 1,666         | 1,332         | 5,038          | 42,859           | 13,022           | 61,678           | 8,287          |               |     | 133,882           |
| 1978                   |     |     |               | 834           | 1,378         | 3,459          | 13,493           | 11,457           | 26,189           | 3,675          |               |     | 60,485            |
| 1979                   |     |     |               | 478           | 244           | 1,942          | 23,054           | 21,974           | 20,961           | 14,079         | 632           |     | 83,364            |
| 1980                   |     |     |               | 2,885         | 790           | 2,134          | 15,114           | 30,755           | 34,447           | 7,838          |               |     | 93,963            |
| 1981                   |     |     |               | 1,389         | 1,632         | 3,768          | 34,242           | 36,537           | 26,837           | 8,863          |               |     | 113,268           |
| 1982                   |     |     |               | 729           | 1,289         | 2,710          | 22,607           | 31,410           | 49,050           | 9,639          |               |     | 117,434           |
| 1983                   |     |     |               | 438           | 324           | 1,492          | 37,029           | 47,521           | 75,210           | 9,041          |               |     | 171,055           |
| 1984                   |     |     |               | 846           | 894           | 3,715          | 52,825           | 36,859           | 107,377          | 16,607         |               |     | 219,123           |
| 1985                   |     |     |               | 2,405         | 1,511         | 5,679          | 41,534           | 102,866          | 107,574          | 13,337         | 1,119         |     | 276,025           |
| 1986                   |     |     | 1,395         | 610           | 712           | 4,492          | 78,494           | 60,458           | 111,066          | 24,726         |               |     | 281,953           |
| 1987                   |     |     |               | 1,069         | 366           | 3,280          | 55,395           | 58,850           | 76,461           | 22,347         |               |     | 217,768           |
| 1988                   |     |     |               | 2,520         | 969           | 3,984          | 34,612           | 54,986           | 85,061           | 16,367         |               |     | 198,499           |
| 1989                   |     |     |               | 1,810         | 849           | 3,950          | 35,167           | 45,694           | 119,322          | 25,880         | 2,967         |     | 235,639           |
| 1990                   |     |     | 1,169         | 1,515         | 920           | 3,078          | 17,942           | 17,772           | 58,805           | 28,070         |               |     | 129,271           |
| 1991                   |     |     |               | 1,826         | 630           | 1,755          | 25,686           | 37,560           | 104,833          | 27,563         |               |     | 199,853           |
| 1992                   |     |     |               | 1,104         | 743           | 3,494          | 18,753           | 37,269           | 157,216          | 13,600         |               |     | 232,179           |
| 1993                   |     |     |               | 2,367         | 731           | 3,847          | 17,962           | 20,194           | 61,600           | 18,128         |               |     | 124,829           |
| 1994                   |     |     |               | 1,327         | 391           | 2,263          | 11,434           | 11,703           | 55,247           | 29,889         |               |     | 112,254           |
| 1995                   |     |     |               | 435           | 407           | 2,329          | 11,953           | 46,428           | 59,604           | 24,688         |               |     | 145,844           |
| 1996                   |     |     |               | 669           | 481           | 1,981          | 20,317           | 61,136           | 65,400           | 12,472         |               |     | 162,456           |
| 1997                   |     |     |               | 658           | 483           | 2,187          | 18,916           | 34,055           | 84,006           | 24,451         |               |     | 164,756           |
| 1998                   |     |     |               | 609           | 433           | 2,433          | 9,911            | 12,180           | 62,331           | 28,785         |               |     | 116,682           |
| 1999                   |     |     |               | 279           | 343           | 1,625          | 25,277           | 56,665           | 60,762           | 11,923         |               |     | 156,874           |
| 2000                   |     |     |               | 491           | 319           | 6,467          | 37,760           | 48,697           | 96,040           | 15,467         |               |     | 205,241           |
| 2001                   |     |     |               | 788           | 582           | 13,063         | 100,501          | 95,859           | 226,711          | 65,823         |               |     | 503,327           |
| 2002                   |     |     |               | 2,308         | 439           | 7,027          | 67,132           | 84,140           | 170,382          | 56,492         |               |     | 387,920           |
| 2003                   |     | 485 | 2,389         | 801           | 271           | 4,882          | 36,960           | 35,275           | 158,525          | 36,458         | 6,004         | 524 | 282,574           |
| 2004                   |     | 140 | 1,072         | 1,066         | 680           | 7,116          | 23,581           | 30,398           | 152,302          | 23,099         | 1,647         | 22  | 241,123           |
| 2005                   |     | 107 | 688           | 558           | 616           | 4,483          | 33,476           | 33,332           | 126,710          | 41,174         | 3,020         | 49  | 244,213           |
| 2006                   |     | 16  | 811           | 972           | 252           | 2,241          | 15,892           | 43,884           | 138,845          | 33,537         | 12,641        | 132 | 249,223           |
| 2007                   |     | 195 | 1,948         | 1,033         | 255           | 2,155          | 25,008           | 66,310           | 121,058          | 26,079         | 2,776         | 143 | 246,960           |
| 2008                   |     |     |               | 1,084         | 383           | 4,847          | 69,771           | 47,273           | 131,616          | 22,666         |               |     | 277,640           |
| 2009                   |     |     |               | 986           | 392           | 4,181          | 51,667           | 165,723          | 233,187          | 58,975         |               |     | 515,111           |
| 2010                   |     |     |               | 1,901         | 580           | 10,348         | 104,984          | 55,209           | 128,816          | 31,195         |               |     | 333,033           |
| 2011                   |     |     |               | 1,098         | 352           | 1,611          | 56,247           | 127,161          | 91,517           | 21,021         |               |     | 299,007           |
| 2012                   |     |     | 950           | 631           | 258           | 2,809          | 49,514           | 54,567           | 71,995           | 18,065         | 2,631         | 220 | 201,640           |
| <b>Total</b>           |     |     | <b>13,099</b> | <b>53,178</b> | <b>35,517</b> | <b>179,579</b> | <b>1,985,596</b> | <b>2,365,380</b> | <b>4,503,074</b> | <b>972,438</b> | <b>35,358</b> |     | <b>10,145,277</b> |
| <b>10-Year Average</b> |     |     | <b>1,013</b>  | <b>404</b>    | <b>4,467</b>  | <b>46,710</b>  | <b>65,913</b>    | <b>135,457</b>   | <b>31,227</b>    |                |               |     | <b>289,052</b>    |



# Plate 4 John Day Lock and Dam



# JOHN DAY DAM

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## FISH COUNTING SCHEDULE

Apr 1 – Oct 31      Visual counting daily 0400-2000 hours Pacific Standard Time.

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## FISHWAY OPERATING SCHEDULE

The following information includes fishway operation for calendar year 2011. Total length of time for annual fishway outages can be determined by referring to the 2010 annual report.

### *North Adult Fishway*

Jan 1 – Mar 10      Dewatered for winter maintenance  
Mar 11 – 30      In service with mostly orifice flow (AWS pump testing)  
Mar 31 – Nov 3      In service with attraction water  
Aug 2      Attraction water off half day for required ROV grating inspection  
Nov 5 – Dec 31      Dewatered for winter maintenance

### *South Adult Fishway*

Jan 1 – 29      In service with 2 AWS turbines (#3 rehab)  
Jan 31 – Feb 13      Dewatered for winter maintenance  
Feb 14 – Apr 05      In service with 2 AWS turbines (#3 rehab)  
Apr 06 – 11      Orifice flow (return #3 AWS turbine back to service)  
Apr 12 – Dec 31      In service with attraction water  
Aug 1      Attraction water off half day for required ROV grating inspection

### *Smolt Monitoring Facility*

Jan 1- March 30      Dewatered  
Mar 31 – Aug 12      In full operation with juvenile sampling  
Aug 13 – 25      Water temperature 70° F. Condition sampling of 100 fish on Monday and Thursday.  
System in bypass at switch gate on other days.  
Aug 26 – Sep 15      In full operation with juvenile sampling  
Sep 16 – Nov 28      System in bypass for full flow PIT tag detection.  
Nov 29 – Dec 31      System dewatered for winter maintenance.

### *Juvenile Bypass System*

Jan 1- Feb 7      1/3 gatewell orifice open, rotated twice weekly  
Feb 8 – Mar 16      Dewatered for winter maintenance  
Mar 17 – Mar 30      1/3 gatewell orifice open, rotated twice weekly  
Apr 1-Dec 15      Full operation  
Dec 15 – 31      1/3 gatewell orifice open, rotated twice weekly

### *Spillway*

Jan 1 – Apr 9      Closed  
Apr 10 – Aug 31      Spill (TSW evaluation)  
Sept 1 – Nov 30      Bay 2 only, 1.5 KCFS daylight hours only (attraction water for north fishway)  
Dec 1 – Dec 31      Closed

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## FISH RELATED DEWATERINGS

### *FISHWAY DEWATERING PROCEDURES*

Bulkheads are installed and drain valves open to dewater various areas of fishways. Fisheries personnel enter these areas to salvage fish that become stranded and /or trapped in shallow pools behind weirs. Minimal handling of fish is applied. Fish that are reluctant to vacate an area are captured and transported to the forebay or tailwater, depending on circumstances such as fish species, age class and stress levels. A follow up inspection is made to account for possible missed fish. Efforts are made to provide continual water supply during the entire operation to reduce fish stranding. Fishway areas not included on this list are inspected by ROV.

### **Fish Ladder Dewatering Results**

Key:a=adult, j=juvenile catfish=ca, mountain whitefish=mw, common carp=cc, sucker species=su, bass=ba, blue gill=bg

| Date  | Event        | Steelhead | Lamprey | Other       | Morts   | Cause   |
|-------|--------------|-----------|---------|-------------|---------|---------|
| 1/31/ | SFL          | 12 j, 3a  | 10a     |             | 0       |         |
| 11/5  | NFL upper    |           |         |             | 20 shad | dewater |
|       |              |           |         |             | 144     |         |
| 11/19 | NFL entrance |           |         |             | shad    | dewater |
|       | NFL AWS      |           |         |             |         |         |
| 11/19 | conduit      |           |         | 1ca,1bg,2sp | 0       |         |

### **Smolt Monitoring Facility Dewatering Results**

Key:a=adult, j=juvenile catfish=ca, mountain whitefish=mw, common carp=cc, sucker species=su, bass=ba, sculpin=sp

| Date  | Event       | Chinook | Steelhead | Lamprey | Sturgeon | Other    | Morts |
|-------|-------------|---------|-----------|---------|----------|----------|-------|
| 2/7   | JBS Channel |         | 1a        |         |          |          | 0     |
| 11/29 | PDS         | 6a, 1j  | 20a       | 45a     | 12       | 1ba,24ca | 0     |

### *TURBINE DEWATERING PROCEDURES*

Turbine dewatering for routine maintenance usually involves low numbers of fish, due to operational guidelines. If a turbine unit fails, operational guidelines cannot always be followed, which usually results in higher numbers of fish entrapment. Removal of fish from these areas has a greater fish stress risk due to handling. Procedures are continually analyzed to determine the best method for preventing fish stress or loss. Fish are removed from scroll case and draft tubes by fish bags. If numbers of fish are higher than two bags, transport tanks are placed in the draft tube gallery for transport by crane. Fish are released to tailwater either with bag and rope or tank and crane

## Turbine Dewatering Results

Key: scroll case=sc, draft tube=dt, catfish=ca, steelhead=sh,shad=sd, common carp=cc, sucker species=su, bass=ba, crappie=cp

| Date  | Event   | Steelhead | Sockeye | Sturgeon | Other   | Comments   | Morts   | Cause |
|-------|---------|-----------|---------|----------|---------|------------|---------|-------|
| 1/18  | MU3 sc  |           |         |          |         |            | 1sh,8sd | unkn  |
| 1/27  | MU11 dt |           |         | 1        | 15ca    |            | 0       |       |
| 2/26  | MU3 sc  |           |         |          |         | No Fish    | 0       |       |
| 2/27  | MU3 dt  | 14a       |         |          |         |            | 0       |       |
| 6/26  | MU13 sc |           |         |          |         | No Fish    | 0       |       |
| 7/10  | MU5 sc  |           | 1a      |          |         |            | 0       |       |
| 7/10  | MU5 dt  |           |         |          | 14ca    | 5lg,9small | 0       |       |
| 7/31  | MU5 sc  |           |         |          |         | No Fish    | 0       |       |
| 8/1   | MU5 dt  |           |         |          | 37ca    |            | 0       |       |
| 8/10  | MU12 sc |           |         |          | 1ca,1cp |            | 0       |       |
| 8/10  | MU12 dt |           |         |          |         | No Fish    | 0       |       |
| 12/22 | MU2 sc  |           |         |          | 1ca,1bg |            | 3 a. sd | unkn  |
| 12/22 | MU2 dt  | 1a        |         | 30j      | 20ca    |            | 0       |       |

## Discussion

2012 was a good year for the JD fish passage as all JD Fishways performed well and without a major failure.

There has been a significant improvement in the Turbine Trashrack Drawdown, which declined in 2012 to 0 from 3.5 % OOC in 2011. This was due to an increased monitoring by JD Fisheries and intensive/ proactive raking of MUs trashracks by JD Structural crew.

JD North Fishway's Entrance Differential was OOC 4.2 % of time in 2012, but this was due to problems created by an intermediate/incomplete stage of the two years' construction schedule for its entrance improvements contract. Specifically, the mid channel velocities were lower than anticipated in September 2012 (related to low tailrace levels that time of year,) and the only practical remedy, was to run the ladder with an increased entrance differential (> 2.0 ',) which showed an improved fish passage. It is expected that the completion of the JD N Entrance improvements in early 2013, will eliminate the above mentioned ladder velocities' issues.

JD South Fishway's Entrance Differentials OOCs (SE1, NE1 & 2) were related to the necessary outage of the AWS in April 2012, when AWS turbine 3 was returning back to service after a three years long overhaul.

Unit Priority OOCs were a result of the necessary, biannual Line 1 maintenance outage, resulting in MU 1-4 OOS in October 2012.

TABLE 42

MONTHLY TOTALS OF SALMONIDS, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER JOHN DAY DAM

2012

| SPECIES      | JAN | FEB | MAR | APR          | MAY            | JUN            | JUL            | AUG           | SEP            | OCT           | NOV | DEC | TOTAL*           |
|--------------|-----|-----|-----|--------------|----------------|----------------|----------------|---------------|----------------|---------------|-----|-----|------------------|
| CHINOOK*     |     |     |     | 5,071        | 100,761        | 47,139         | 30,572         | 27,013        | 205,132        | 28,448        |     |     | 444,136          |
| STEELHEAD    |     |     |     | 1,657        | 277            | 1,995          | 27,799         | 34,466        | 67,996         | 27,893        |     |     | 162,083          |
| SOCKEYE      |     |     |     |              | 2              | 241,353        | 152,501        | 285           | 22             | 3             |     |     | 394,166          |
| COHO*        |     |     |     |              |                |                | 9              | 1,393         | 28,826         | 3,631         |     |     | 33,859           |
| CHUM         |     |     |     |              |                |                |                |               |                |               |     |     | 0                |
| PINK         |     |     |     |              |                |                | 3              | 1             | 11             |               |     |     | 15               |
| <b>TOTAL</b> |     |     |     | <b>6,728</b> | <b>101,040</b> | <b>290,487</b> | <b>210,884</b> | <b>63,158</b> | <b>301,987</b> | <b>59,975</b> |     |     | <b>1,034,259</b> |
| LAMPREY      |     |     |     | 1            | 1              | 36             | 1,710          | 2,087         | 712            | 40            |     |     | 4,587            |
| STURGEON     |     |     |     |              |                |                | 1              | 3             | 1              |               |     |     | 5                |
| BULL TROUT   |     |     |     |              |                | 1              | 0              | 1             |                |               |     |     | 2                |

\*Jacks Included

TABLE 43  
DISCHARGE AND WATER QUALITY DATA

JOHN DAY PROJECT 2012

| JANUARY |               |               |                     |       |
|---------|---------------|---------------|---------------------|-------|
| DATE    | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Jan 1   | 143.4         | 0.0           | 6.0                 | 41.0  |
| Jan 2   | 112.8         | 0.0           | 6.0                 | 40.9  |
| Jan 3   | 137.7         | 0.0           | 6.0                 | 40.8  |
| Jan 4   | 153.0         | 0.0           | 6.0                 | 40.9  |
| Jan 5   | 127.5         | 0.0           | 6.0                 | 41.1  |
| Jan 6   | 137.6         | 0.0           | 6.0                 | 41.1  |
| Jan 7   | 102.6         | 0.0           | 6.0                 | 41.1  |
| Jan 8   | 105.8         | 0.0           | 6.0                 | 41.1  |
| Jan 9   | 139.3         | 0.0           | 6.0                 | 41.2  |
| Jan 10  | 134.2         | 0.0           | 6.0                 | 41.2  |
| Jan 11  | 148.3         | 0.0           | 6.0                 | 41.0  |
| Jan 12  | 123.3         | 0.0           | 6.0                 | 40.6  |
| Jan 13  | 139.9         | 0.0           | 6.0                 | *     |
| Jan 14  | 107.2         | 0.0           | 6.0                 | *     |
| Jan 15  | 120.0         | 0.0           | 6.0                 | *     |
| Jan 16  | 135.7         | 0.0           | 5.5                 | *     |
| Jan 17  | 129.9         | 0.0           | 6.0                 | *     |
| Jan 18  | 158.7         | 0.0           | 5.5                 | *     |
| Jan 19  | 160.0         | 0.0           | 5.5                 | *     |
| Jan 20  | 151.4         | 0.0           | 5.5                 | 38.1  |
| Jan 21  | 139.6         | 0.0           | 6.0                 | 37.9  |
| Jan 22  | 115.6         | 0.0           | 6.0                 | 37.6  |
| Jan 23  | 145.2         | 0.0           | 6.0                 | 37.3  |
| Jan 24  | 142.0         | 0.0           | 6.0                 | 37.1  |
| Jan 25  | 126.3         | 0.0           | 6.0                 | 37.2  |
| Jan 26  | 127.3         | 0.0           | 6.0                 | 37.2  |
| Jan 27  | 146.7         | 0.0           | 6.0                 | 37.0  |
| Jan 28  | 145.6         | 0.0           | 6.0                 | 36.8  |
| Jan 29  | 127.2         | 0.0           | 6.0                 | 36.7  |
| Jan 30  | 119.7         | 0.0           | 6.0                 | 36.6  |
| Jan 31  | 119.3         | 0.0           | 6.0                 | 36.5  |

AVG. 133.0 0.0 5.9 39.1

| FEBRUARY |               |               |                     |       |
|----------|---------------|---------------|---------------------|-------|
| DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Feb 1    | 121.7         | 0.0           | 6.0                 | 36.7  |
| Feb 2    | 126.1         | 0.0           | 6.0                 | 36.9  |
| Feb 3    | 120.1         | 0.0           | 6.0                 | 37.0  |
| Feb 4    | 121.9         | 0.0           | 6.0                 | 37.0  |
| Feb 5    | 115.7         | 0.0           | 6.0                 | 37.1  |
| Feb 6    | 123.7         | 0.0           | 6.0                 | 37.3  |
| Feb 7    | 127.3         | 0.0           | 6.0                 | 37.5  |
| Feb 8    | 129.8         | 0.0           | 6.0                 | 37.5  |
| Feb 9    | 116.4         | 0.0           | 6.0                 | 37.5  |
| Feb 10   | 124.8         | 0.0           | 6.0                 | 37.4  |
| Feb 11   | 125.6         | 0.0           | 6.0                 | 37.6  |
| Feb 12   | 130.8         | 0.0           | 6.0                 | 37.9  |
| Feb 13   | 121.6         | 0.0           | 6.0                 | 38.1  |
| Feb 14   | 130.2         | 0.0           | 6.0                 | 38.1  |
| Feb 15   | 146.2         | 0.0           | 6.0                 | 38.1  |
| Feb 16   | 152.2         | 0.0           | 6.0                 | 38.2  |
| Feb 17   | 119.6         | 0.0           | 6.0                 | 38.4  |
| Feb 18   | 112.5         | 0.0           | 6.0                 | 38.4  |
| Feb 19   | 114.4         | 0.0           | 6.0                 | 38.5  |
| Feb 20   | 131.6         | 0.0           | 6.0                 | 38.4  |
| Feb 21   | 121.9         | 0.0           | 6.0                 | 38.6  |
| Feb 22   | 122.0         | 0.0           | 4.5                 | 39.1  |
| Feb 23   | 162.4         | 0.0           | 4.5                 | 39.2  |
| Feb 24   | 158.6         | 0.0           | 5.0                 | 39.4  |
| Feb 25   | 116.1         | 0.0           | 5.0                 | 39.6  |
| Feb 26   | 131.7         | 0.0           | 5.0                 | 39.5  |
| Feb 27   | 158.6         | 0.0           | 5.0                 | 39.8  |
| Feb 28   | 162.7         | 0.0           | 6.0                 | 40.0  |
| Feb 29   | 122.7         | 0.0           | 6.0                 | 40.2  |

AVG. 130.0 0.0 5.8 38.2

| MARCH  |               |               |                     |       |
|--------|---------------|---------------|---------------------|-------|
| DATE   | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Mar 1  | 129.9         | 0.0           | 6.0                 | 40.1  |
| Mar 2  | 143.6         | 0.0           | 6.0                 | 40.2  |
| Mar 3  | 135.0         | 0.0           | 5.0                 | 40.3  |
| Mar 4  | 139.2         | 0.0           | 6.0                 | 40.5  |
| Mar 5  | 134.2         | 0.0           | 6.0                 | 40.6  |
| Mar 6  | 141.4         | 0.0           | 5.0                 | 40.6  |
| Mar 7  | 158.8         | 0.0           | 6.0                 | 40.6  |
| Mar 8  | 159.3         | 0.0           | 6.0                 | 40.7  |
| Mar 9  | 151.8         | 0.0           | 6.0                 | 40.9  |
| Mar 10 | 143.4         | 0.0           | 5.0                 | 40.9  |
| Mar 11 | 132.3         | 0.0           | 6.0                 | 41.0  |
| Mar 12 | 162.2         | 0.0           | 6.0                 | 40.9  |
| Mar 13 | 180.3         | 0.0           | 6.0                 | 41.2  |
| Mar 14 | 183.2         | 0.0           | 5.0                 | 41.5  |
| Mar 15 | 172.8         | 0.0           | 6.0                 | 41.8  |
| Mar 16 | 192.5         | 0.0           | 6.0                 | 41.9  |
| Mar 17 | 188.4         | 0.0           | 5.0                 | 41.8  |
| Mar 18 | 193.4         | 0.0           | 5.0                 | 42.0  |
| Mar 19 | 208.1         | 0.0           | 5.0                 | 42.1  |
| Mar 20 | 171.6         | 0.0           | 2.0                 | 42.2  |
| Mar 21 | 224.4         | 0.0           | 2.0                 | 42.3  |
| Mar 22 | 213.4         | 0.0           | 3.0                 | 42.4  |
| Mar 23 | 222.7         | 0.0           | 4.0                 | 42.4  |
| Mar 24 | 234.2         | 0.0           | 4.0                 | 42.7  |
| Mar 25 | 237.0         | 0.0           | 4.5                 | 42.6  |
| Mar 26 | 220.1         | 25.5          | 4.0                 | 42.6  |
| Mar 27 | 241.6         | 53.5          | 4.0                 | 42.9  |
| Mar 28 | 273.8         | 88.2          | 3.5                 | 42.8  |
| Mar 29 | 287.3         | 112.8         | 3.5                 | 43.1  |
| Mar 30 | 300.8         | 117.6         | 3.5                 | 43.4  |
| Mar 31 | 287.7         | 105.0         | 4.0                 | 43.6  |

AVG. 192.4 16.2 4.8 41.7

\*Data unavailable

TABLE 44

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | unclipped    |              | PINK | LAMPREY  | STURGEON | DISCH KCFS   | SPILL KCFS   | TURBIDITY  |             |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|--------------|--------------|------|----------|----------|--------------|--------------|------------|-------------|
|              | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD    | STEELHEAD    |      |          |          |              |              | SECCHI     | DEG F       |
| Apr 1        | 0             |        |      | 0            |            |           |         | 112          | 76           |      | 0        |          | 325.3        | 143.9        | 4.0        | 44.2        |
| Apr 2        | 0             |        |      | 0            |            |           |         | 84           | 43           |      | 0        |          | 317.0        | 168.6        | 4.0        | 44.4        |
| Apr 3        | 0             |        |      | 0            |            |           |         | 45           | 28           |      | 0        |          | 327.0        | 169.3        | 4.0        | 44.0        |
| Apr 4        | 0             |        |      | 0            |            |           |         | 56           | 38           |      | 0        |          | 302.8        | 164.3        | 4.5        | 44.2        |
| Apr 5        | 1             |        |      | 0            |            |           |         | 33           | 18           |      | 0        |          | 281.0        | 137.2        | 3.0        | 44.0        |
| Apr 6        | 1             |        |      | 0            |            |           |         | 58           | 35           |      | 0        |          | 300.0        | 134.0        | 3.0        | 44.2        |
| Apr 7        | 2             |        |      | 0            |            |           |         | 69           | 47           |      | 0        |          | 311.2        | 116.5        | 3.0        | 44.6        |
| Apr 8        | 0             |        |      | 0            |            |           |         | 73           | 55           |      | 0        |          | 298.8        | 126.8        | 2.0        | 45.0        |
| Apr 9        | 1             |        |      | 0            |            |           |         | 33           | 18           |      | 0        |          | 276.1        | 97.4         | 2.0        | 45.0        |
| Apr 10       | 0             |        |      | 0            |            |           |         | 82           | 51           |      | 0        |          | 272.6        | 81.9         | 2.0        | 45.9        |
| Apr 11       | 0             |        |      | 0            |            |           |         | 54           | 43           |      | 0        |          | 304.4        | 91.3         | 2.0        | 46.1        |
| Apr 12       | 3             |        |      | 0            |            |           |         | 111          | 70           |      | 0        |          | 296.4        | 93.0         | 2.0        | 45.6        |
| Apr 13       | 2             |        |      | 0            |            |           |         | 82           | 60           |      | 0        |          | 290.1        | 88.6         | 2.5        | 46.7        |
| Apr 14       | 8             |        |      | 1            |            |           |         | 60           | 43           |      | 0        |          | 300.2        | 110.4        | 2.5        | 46.6        |
| Apr 15       | 6             |        |      | 1            |            |           |         | 87           | 69           |      | 0        |          | 300.7        | 101.7        | 2.5        | 46.5        |
| Apr 16       | 7             |        |      | 0            |            |           |         | 35           | 25           |      | 0        |          | 280.3        | 83.8         | 2.5        | 47.2        |
| Apr 17       | 18            |        |      | 2            |            |           |         | 40           | 29           |      | 0        |          | 289.1        | 86.3         | 3.0        | 46.9        |
| Apr 18       | 24            |        |      | 0            |            |           |         | 56           | 38           |      | 0        |          | 303.1        | 93.4         | 3.0        | 47.2        |
| Apr 19       | 42            |        |      | 12           |            |           |         | 54           | 40           |      | 0        |          | 304.2        | 108.3        | 3.0        | 47.4        |
| Apr 20       | 21            |        |      | 0            |            |           |         | 78           | 48           |      | 0        |          | 321.7        | 110.7        | 4.5        | 47.9        |
| Apr 21       | 54            |        |      | 2            |            |           |         | 75           | 60           |      | 0        |          | 311.4        | 93.1         | 3.0        | 49.1        |
| Apr 22       | 95            |        |      | 0            |            |           |         | 67           | 52           |      | 0        |          | 324.1        | 97.6         | 4.0        | 49.4        |
| Apr 23       | 76            |        |      | 1            |            |           |         | 45           | 33           |      | 0        |          | 341.2        | 142.8        | 3.0        | 50.3        |
| Apr 24       | 161           |        |      | 7            |            |           |         | 46           | 34           |      | 0        |          | 345.1        | 151.9        | 3.0        | 49.8        |
| Apr 25       | 226           |        |      | 18           |            |           |         | 25           | 20           |      | 0        |          | 408.5        | 146.2        | 3.0        | 51.4        |
| Apr 26       | 673           |        |      | 32           |            |           |         | 23           | 15           |      | 1        |          | 405.0        | 157.9        | 1.5        | 51.6        |
| Apr 27       | 824           |        |      | 81           |            |           |         | 29           | 22           |      | 0        |          | 420.1        | 154.4        | 2.0        | 51.6        |
| Apr 28       | 766           |        |      | 50           |            |           |         | 18           | 11           |      | 0        |          | 420.9        | 159.2        | 1.5        | 51.3        |
| Apr 29       | 1,027         |        |      | 41           |            |           |         | 10           | 8            |      | 0        |          | 389.2        | 147.7        | 2.0        | 51.2        |
| Apr 30       | 771           |        |      | 14           |            |           |         | 17           | 10           |      | 0        |          | 384.7        | 145.5        | 2.0        | 51.2        |
| <b>TOTAL</b> | <b>4,809</b>  |        |      | <b>262</b>   |            |           |         | <b>1,657</b> | <b>1,139</b> |      | <b>1</b> |          |              |              |            |             |
| <b>AVG.</b>  | <b>160</b>    |        |      | <b>9</b>     |            |           |         | <b>55</b>    | <b>38</b>    |      | <b>0</b> |          | <b>325.1</b> | <b>123.5</b> | <b>2.8</b> | <b>47.4</b> |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.  
Official Spring Chinook run started April 1.

TABLE 45  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

MAY 2012

| DATE                           | CHINOOK ADULT        |                     |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE        | STEELHEAD        | unclipped STEELHEAD        | PINK | LAMPREY        | STURGEON | DISCH KCFS   | SPILL KCFS   | TURBIDITY SECCHI | TEMP DEG F  |
|--------------------------------|----------------------|---------------------|------|--------------|------------|-----------|----------------|------------------|----------------------------|------|----------------|----------|--------------|--------------|------------------|-------------|
|                                | SPRING               | SUMMER              | FALL | JACK         | ADULT      | JACK      |                |                  |                            |      |                |          |              |              |                  |             |
| May 1                          | 1,222                |                     |      | 17           |            |           | 0              | 16               | 10                         |      | 0              |          | 401.2        | 175.4        | 3.0              | 51.8        |
| May 2                          | 977                  |                     |      | 30           |            |           | 0              | 8                | 2                          |      | 0              |          | 410.9        | 176.8        | 2.0              | 52.1        |
| May 3                          | 875                  |                     |      | 19           |            |           | 0              | 5                | 4                          |      | 0              |          | 407.1        | 173.8        | 2.0              | 52.0        |
| May 4                          | 738                  |                     |      | 30           |            |           | 0              | 7                | 2                          |      | 0              |          | 405.1        | 166.0        | 2.5              | 51.4        |
| May 5                          | 646                  |                     |      | 27           |            |           | 0              | 3                | 3                          |      | 1              |          | 388.0        | 161.3        | 2.5              | 51.2        |
| May 6                          | 723                  |                     |      | 37           |            |           | 0              | 6                | 3                          |      | 0              |          | 378.6        | 152.4        | 2.5              | 50.7        |
| May 7                          | 873                  |                     |      | 37           |            |           | 0              | 5                | 4                          |      | 0              |          | 359.2        | 144.3        | 2.5              | 50.5        |
| May 8                          | 1,566                |                     |      | 77           |            |           | 0              | 12               | 8                          |      | 0              |          | 338.3        | 131.8        | 3.0              | 50.7        |
| May 9                          | 4,937                |                     |      | 171          |            |           | 0              | 8                | 4                          |      | 0              |          | 338.5        | 140.5        | 3.0              | 50.8        |
| May 10                         | 3,788                |                     |      | 205          |            |           | 0              | 5                | 2                          |      | 0              |          | 344.7        | 137.4        | 4.0              | 51.1        |
| May 11                         | 9,224                |                     |      | 299          |            |           | 0              | 15               | 6                          |      | 0              |          | 362.2        | 132.6        | 3.0              | 51.9        |
| May 12                         | 10,431               |                     |      | 324          |            |           | 0              | 2                | 0                          |      | -1             |          | 346.7        | 109.9        | 3.0              | 52.0        |
| May 13                         | 8,746                |                     |      | 338          |            |           | 0              | 6                | 0                          |      | 0              |          | 313.9        | 99.2         | 3.0              | 52.6        |
| May 14                         | 5,566                |                     |      | 294          |            |           | 0              | 3                | -3                         |      | -1             |          | 302.1        | 118.7        | 3.0              | 53.6        |
| May 15                         | 5,276                |                     |      | 268          |            |           | 0              | 5                | 4                          |      | 0              |          | 327.2        | 128.1        | 3.0              | 53.8        |
| May 16                         | 6,062                |                     |      | 388          |            |           | 0              | 13               | 5                          |      | -1             |          | 323.9        | 102.4        | 3.5              | 54.3        |
| May 17                         | 6,387                |                     |      | 483          |            |           | 0              | 14               | 6                          |      | 0              |          | 345.6        | 126.9        | 3.0              | 54.8        |
| May 18                         | 4,986                |                     |      | 499          |            |           | 0              | 11               | 5                          |      | 0              |          | 385.7        | 148.7        | 3.5              | 55.6        |
| May 19                         | 3,509                |                     |      | 419          |            |           | 0              | 8                | 6                          |      | 1              |          | 376.8        | 140.4        | 3.0              | 56.1        |
| May 20                         | 2,736                |                     |      | 298          |            |           | 0              | 11               | 6                          |      | 0              |          | 355.0        | 118.9        | 3.0              | 57.1        |
| May 21                         | 2,842                |                     |      | 251          |            |           | 0              | 6                | 0                          |      | 1              |          | 357.1        | 121.0        | 3.0              | 56.6        |
| May 22                         | 1,809                |                     |      | 252          |            |           | 0              | 6                | 1                          |      | 1              |          | 359.1        | 136.9        | 3.0              | 56.7        |
| May 23                         | 1,758                |                     |      | 171          |            |           | 0              | 8                | 2                          |      | 1              |          | 369.7        | 140.9        | 3.0              | 56.4        |
| May 24                         | 1,304                |                     |      | 143          |            |           | 0              | 8                | 3                          |      | 0              |          | 378.7        | 132.6        | 3.0              | 55.9        |
| May 25                         | 1,360                |                     |      | 151          |            |           | 0              | 15               | 4                          |      | 0              |          | 358.3        | 111.1        | 3.0              | 55.4        |
| May 26                         | 1,275                |                     |      | 147          |            |           | 0              | 8                | 6                          |      | 0              |          | 342.0        | 132.0        | 3.0              | 54.9        |
| May 27                         | 858                  |                     |      | 87           |            |           | 0              | 7                | 1                          |      | 0              |          | 319.5        | 122.2        | 3.0              | 55.2        |
| May 28                         | 1,143                |                     |      | 98           |            |           | 0              | 13               | 10                         |      | 0              |          | 316.9        | 94.6         | 3.0              | 54.8        |
| May 29                         | 1,054                |                     |      | 135          |            |           | 0              | 11               | 6                          |      | 0              |          | 289.9        | 92.6         | 3.5              | 55.7        |
| May 30                         | 999                  |                     |      | 84           |            |           | 0              | 13               | 3                          |      | -1             |          | 310.6        | 124.2        | 3.5              | 55.8        |
| May 31                         | 1,223                |                     |      | 89           |            |           | 2              | 19               | 5                          |      | 0              |          | 279.4        | 106.7        | 3.0              | 56.0        |
| <b>TOTAL</b>                   | <b>94,893</b>        |                     |      | <b>5,868</b> |            |           | <b>2</b>       | <b>277</b>       | <b>118</b>                 |      | <b>1</b>       |          |              |              |                  |             |
| <b>AVG.</b>                    | <b>3061</b>          |                     |      | <b>189</b>   |            |           | <b>0</b>       | <b>9</b>         | <b>4</b>                   |      | <b>0</b>       |          | <b>351.4</b> | <b>132.3</b> | <b>3.0</b>       | <b>53.8</b> |
| <b>RUN YEAR TOTALS TO DATE</b> | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |      |              |            |           | <b>SOCKEYE</b> | <b>STEELHEAD</b> | <b>unclipped STEELHEAD</b> |      | <b>LAMPREY</b> |          |              |              |                  |             |
| <b>SPRING</b>                  | <b>99,702</b>        | <b>6,130</b>        |      |              |            |           | <b>2</b>       | <b>1,934</b>     | <b>1,257</b>               |      | <b>2</b>       |          |              |              |                  |             |



TABLE 46

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK COHO | COHO       | unclipped      |              |            |      | DISCH   | SPILL     | TURBIDITY    |              |            |             |
|--------------|---------------|---------------|------|--------------|------------|----------------|--------------|------------|------|---------|-----------|--------------|--------------|------------|-------------|
|              | SPRING        | SUMMER        | FALL | JACK         | ADULT JACK | SOCKEYE        | STEELHEAD    | STEELHEAD  | PINK | LAMPREY | STURGEON  | KCFS         | KCFS         | SECCHI     | DEG F       |
| Jun 1        | 1,393         |               |      | 113          |            | 3              | 14           | 6          |      |         | 1         | 277.9        | 83.9         | 3.5        | 57.1        |
| Jun 2        | 1,457         |               |      | 105          |            | 21             | 7            | 1          |      |         | 0         | 275.7        | 87.4         | 3.0        | 57.2        |
| Jun 3        | 1,411         |               |      | 105          |            | 35             | 11           | 4          |      |         | 0         | 285.0        | 113.8        | 3.5        | 57.4        |
| Jun 4        | 1,388         |               |      | 138          |            | 66             | 11           | 2          |      |         | 0         | 304.6        | 116.3        | 3.0        | 57.7        |
| Jun 5        | 2,304         |               |      | 164          |            | 145            | 28           | 14         |      |         | 1         | 298.6        | 108.6        | 3.0        | 57.2        |
| Jun 6        |               | 1,863         |      | 105          |            | 178            | 14           | 6          |      |         | 0         | 339.6        | 147.0        | 2.0        | 57.0        |
| Jun 7        |               | 1,099         |      | 72           |            | 219            | 23           | 9          |      |         | 0         | 347.6        | 149.3        | 2.5        | 56.9        |
| Jun 8        |               | 1,064         |      | 99           |            | 274            | 20           | 3          |      |         | 2         | 352.8        | 148.9        | 2.5        | 56.7        |
| Jun 9        |               | 1,329         |      | 138          |            | 242            | 11           | 5          |      |         | 1         | 344.8        | 159.9        | 3.0        | 56.7        |
| Jun 10       |               | 639           |      | 69           |            | 293            | 16           | 7          |      |         | 0         | 354.0        | 143.7        | 3.0        | 56.1        |
| Jun 11       |               | 1,426         |      | 124          |            | 653            | 25           | 9          |      |         | 0         | 343.1        | 145.6        | 3.0        | 55.9        |
| Jun 12       |               | 940           |      | 128          |            | 1,021          | 37           | 15         |      |         | -1        | 340.8        | 142.5        | 3.5        | 56.7        |
| Jun 13       |               | 980           |      | 120          |            | 1,525          | 28           | 14         |      |         | 1         | 348.3        | 155.8        | 3.5        | 57.3        |
| Jun 14       |               | 1,071         |      | 96           |            | 2,135          | 36           | 9          |      |         | 0         | 340.9        | 133.5        | 3.0        | 57.0        |
| Jun 15       |               | 1,398         |      | 113          |            | 2,959          | 28           | 12         |      |         | 1         | 355.6        | 140.3        | 3.0        | 57.5        |
| Jun 16       |               | 1,770         |      | 167          |            | 4,702          | 24           | 13         |      |         | 0         | 293.9        | 114.0        | 3.5        | 57.9        |
| Jun 17       |               | 1,741         |      | 187          |            | 4,833          | 57           | 15         |      |         | 0         | 331.8        | 139.3        | 3.5        | 58.9        |
| Jun 18       |               | 1,910         |      | 190          |            | 6,807          | 50           | 28         |      |         | 1         | 325.2        | 139.7        | 3.5        | 58.9        |
| Jun 19       |               | 2,011         |      | 231          |            | 9,361          | 83           | 34         |      |         | 2         | 370.1        | 151.0        | 3.0        | 59.3        |
| Jun 20       |               | 1,587         |      | 226          |            | 9,437          | 68           | 33         |      |         | -1        | 357.0        | 139.8        | 3.5        | 59.3        |
| Jun 21       |               | 1,284         |      | 265          |            | 9,243          | 93           | 34         |      |         | 0         | 353.1        | 138.6        | 3.5        | 59.4        |
| Jun 22       |               | 2,020         |      | 281          |            | 15,344         | 116          | 57         |      |         | 2         | 352.1        | 140.4        | 3.5        | 59.6        |
| Jun 23       |               | 1,156         |      | 216          |            | 14,769         | 153          | 56         |      |         | 0         | 362.5        | 142.3        | 3.5        | 59.5        |
| Jun 24       |               | 1,383         |      | 244          |            | 19,902         | 96           | 36         |      |         | 1         | 356.7        | 162.4        | 3.5        | 59.4        |
| Jun 25       |               | 1,339         |      | 263          |            | 18,881         | 157          | 72         |      |         | 2         | 416.8        | 173.5        | 3.0        | 60.1        |
| Jun 26       |               | 1,628         |      | 220          |            | 19,113         | 87           | 27         |      |         | 0         | 398.0        | 168.4        | 3.5        | 59.9        |
| Jun 27       |               | 882           |      | 133          |            | 15,734         | 113          | 39         |      |         | 3         | 432.2        | 181.9        | 4.0        | 60.1        |
| Jun 28       |               | 986           |      | 135          |            | 19,457         | 88           | 37         |      |         | 2         | 392.1        | 160.4        | 3.0        | 60.4        |
| Jun 29       |               | 1,067         |      | 278          |            | 29,682         | 168          | 76         |      |         | 12        | 393.7        | 160.7        | 3.5        | 60.3        |
| Jun 30       |               | 1,497         |      | 391          |            | 34,319         | 333          | 162        |      |         | 6         | 395.5        | 146.2        | 3.0        | 60.9        |
| <b>TOTAL</b> | <b>7,953</b>  | <b>34,070</b> |      | <b>5,116</b> |            | <b>241,353</b> | <b>1,995</b> | <b>835</b> |      |         | <b>36</b> |              |              |            |             |
| <b>AVG.</b>  | <b>1591</b>   | <b>1,363</b>  |      | <b>171</b>   |            | <b>8,045</b>   | <b>67</b>    | <b>28</b>  |      |         | <b>1</b>  | <b>348.0</b> | <b>141.2</b> | <b>3.2</b> | <b>58.3</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  | SOCKEYE | STEELHEAD | unclipped STEELHEAD | LAMPREY |
|----------------|----------------|---------------|---------|-----------|---------------------|---------|
| TOTALS TO DATE |                |               |         |           |                     |         |
| SPRING         | 107,655        | 6,755         | 241,355 | 3,929     | 2,092               | 38      |
| SUMMER         | 34,070         | 4,491         |         |           |                     |         |
| <b>TOTAL</b>   | <b>141,725</b> | <b>11,246</b> |         |           |                     |         |

\* One bull trout counted on Jun 21

TABLE 47

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

JULY 2012

| DATE   | CHINOOK ADULT |        |      | CHINOOK | COHO  | unclipped |         |           |           |      |         | DISCH    | SPILL | TURBIDITY |        |       |
|--------|---------------|--------|------|---------|-------|-----------|---------|-----------|-----------|------|---------|----------|-------|-----------|--------|-------|
|        | SPRING        | SUMMER | FALL | JACK    | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | LAMPREY | STURGEON | KCFS  | KCFS      | SECCHI | DEG F |
| Jul 1  |               | 1,316  |      | 358     | 0     |           | 19,807  | 217       | 91        | 0    | 2       | 0        | 406.9 | 142.2     | 3.5    | 60.1  |
| Jul 2  |               | 1,107  |      | 259     | 0     |           | 15,654  | 221       | 118       | 0    | 14      | 0        | 371.3 | 145.8     | 3.0    | 60.6  |
| Jul 3  |               | 1,407  |      | 380     | 0     |           | 13,546  | 215       | 87        | 0    | 11      | 0        | 353.8 | 135.7     | 3.5    | 60.6  |
| Jul 4  |               | 790    |      | 136     | 0     |           | 10,665  | 180       | 42        | 0    | 13      | 0        | 344.4 | 110.9     | 4.0    | 60.1  |
| Jul 5  |               | 809    |      | 179     | 0     |           | 9,917   | 211       | 70        | 0    | 2       | 0        | 370.1 | 134.8     | 3.0    | 60.2  |
| Jul 6  |               | 826    |      | 145     | 0     |           | 9,698   | 173       | 62        | 0    | 16      | 0        | 363.0 | 128.6     | 4.0    | 60.5  |
| Jul 7  |               | 960    |      | 205     | 0     |           | 12,721  | 293       | 151       | 0    | 24      | 0        | 322.7 | 96.5      | 4.0    | 61.2  |
| Jul 8  |               | 1,104  |      | 273     | 0     |           | 11,293  | 357       | 153       | 0    | 26      | 0        | 313.0 | 99.3      | 4.0    | 62.6  |
| Jul 9  |               | 1,116  |      | 227     | 0     |           | 11,223  | 402       | 175       | 0    | 33      | 0        | 342.9 | 133.2     | 4.0    | 62.1  |
| Jul 10 |               | 1,130  |      | 218     | 0     |           | 8,732   | 437       | 224       | 0    | 36      | 0        | 338.0 | 125.5     | 4.0    | 62.6  |
| Jul 11 |               | 892    |      | 174     | 0     |           | 6,426   | 364       | 178       | 0    | 26      | 0        | 337.6 | 110.0     | 4.0    | 63.2  |
| Jul 12 |               | 1,162  |      | 181     | 0     |           | 4,230   | 473       | 238       | 0    | 43      | 0        | 327.7 | 120.1     | 4.0    | 63.9  |
| Jul 13 |               | 731    |      | 175     | 0     |           | 4,090   | 545       | 239       | 0    | 60      | 0        | 338.5 | 131.2     | 4.0    | 64.2  |
| Jul 14 |               | 1,148  |      | 255     | 0     |           | 3,869   | 799       | 422       | 0    | 62      | 0        | 332.9 | 128.2     | 4.0    | 64.2  |
| Jul 15 |               | 1,243  |      | 234     | 0     |           | 3,130   | 898       | 468       | 0    | 40      | 0        | 319.6 | 138.5     | 4.0    | 64.3  |
| Jul 16 |               | 874    |      | 161     | 0     |           | 2,370   | 854       | 434       | 0    | 52      | 0        | 362.0 | 118.4     | 4.0    | 64.3  |
| Jul 17 |               | 790    |      | 178     | 0     |           | 1,765   | 945       | 483       | 0    | 70      | 0        | 335.4 | 103.1     | 3.0    | 64.6  |
| Jul 18 |               | 713    |      | 131     | 0     |           | 819     | 820       | 379       | 0    | 42      | 0        | 295.3 | 103.3     | 3.0    | 64.9  |
| Jul 19 |               | 726    |      | 151     | 0     |           | 624     | 1,055     | 502       | 0    | 45      | 0        | 299.0 | 89.7      | 3.0    | 65.5  |
| Jul 20 |               | 737    |      | 190     | 0     |           | 397     | 1,172     | 653       | 1    | 102     | 0        | 307.6 | 102.7     | 3.0    | 65.4  |
| Jul 21 |               | 609    |      | 129     | 0     |           | 290     | 1,444     | 760       | 0    | 83      | 0        | 335.4 | 120.2     | 3.0    | 65.4  |
| Jul 22 |               | 870    |      | 176     | 6     |           | 239     | 1,394     | 694       | 1    | 73      | 0        | 329.3 | 138.0     | 4.0    | 65.7  |
| Jul 23 |               | 390    |      | 138     | 2     |           | 192     | 1,458     | 731       | 0    | 71      | 0        | 325.7 | 112.6     | 4.0    | 65.9  |
| Jul 24 |               | 558    |      | 116     | 1     |           | 169     | 1,716     | 800       | 1    | 54      | 0        | 307.9 | 92.6      | 4.0    | 65.8  |
| Jul 25 |               | 447    |      | 107     | 0     |           | 164     | 1,712     | 870       | 0    | 99      | 1        | 288.8 | 86.6      | 3.0    | 66.0  |
| Jul 26 |               | 361    |      | 80      | 0     |           | 116     | 1,304     | 590       | 0    | 112     | 0        | 298.9 | 89.7      | 3.5    | 66.8  |
| Jul 27 |               | 551    |      | 107     | 0     |           | 112     | 1,665     | 741       | 0    | 78      | 0        | 280.1 | 97.0      | 3.5    | 66.5  |
| Jul 28 |               | 413    |      | 73      | 0     |           | 83      | 1,502     | 710       | 0    | 132     | 0        | 251.0 | 93.0      | 3.5    | 66.3  |
| Jul 29 |               | 380    |      | 104     | 0     |           | 65      | 1,664     | 765       | 0    | 57      | 0        | 260.9 | 105.6     | 3.5    | 66.3  |
| Jul 30 |               | 455    |      | 97      | 0     |           | 39      | 1,664     | 737       | 0    | 136     | 0        | 253.0 | 109.3     | 3.5    | 66.4  |
| Jul 31 |               | 493    |      | 127     | 0     |           | 56      | 1,645     | 795       | 0    | 96      | 0        | 269.5 | 116.8     | 3.5    | 66.4  |

|              |               |              |          |                |               |               |          |              |          |              |              |            |             |
|--------------|---------------|--------------|----------|----------------|---------------|---------------|----------|--------------|----------|--------------|--------------|------------|-------------|
| <b>TOTAL</b> | <b>25,108</b> | <b>5,464</b> | <b>9</b> | <b>152,501</b> | <b>27,799</b> | <b>13,362</b> | <b>3</b> | <b>1,710</b> | <b>1</b> | <b>322.0</b> | <b>114.8</b> | <b>3.6</b> | <b>64.0</b> |
| <b>AVG</b>   | <b>810</b>    | <b>176</b>   | <b>0</b> | <b>4,919</b>   | <b>897</b>    | <b>431</b>    | <b>0</b> | <b>55</b>    | <b>0</b> |              |              |            |             |

|                       |                |                |              |                  |                  |                  |             |                |                 |
|-----------------------|----------------|----------------|--------------|------------------|------------------|------------------|-------------|----------------|-----------------|
| <b>RUN YEAR</b>       | <b>CHINOOK</b> | <b>CHINOOK</b> | <b>COHO</b>  | <b>unclipped</b> |                  |                  |             |                |                 |
| <b>TOTALS TO DATE</b> | <b>ADULT</b>   | <b>JACK</b>    | <b>ADULT</b> | <b>SOCKEYE</b>   | <b>STEELHEAD</b> | <b>STEELHEAD</b> | <b>PINK</b> | <b>LAMPREY</b> | <b>STURGEON</b> |
| SPRING                | 107,655        | 6,755          | 9            | 393,856          | 31,728           | 15,454           | 3           | 1,748          | 1               |
| SUMMER                | 59,178         | 9,955          |              |                  |                  |                  |             |                |                 |
| <b>TOTAL</b>          | <b>166,833</b> | <b>16,710</b>  |              |                  |                  |                  |             |                |                 |

TABLE 48  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

**JOHN DAY PROJECT - FISH COUNTS**

**AUGUST 2012**

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO  | COHO  | unclipped |         |           |           |      |         | DISCH    | SPILL | TURBIDITY |        |       |
|--------------|---------------|--------|---------|-------|-------|-----------|---------|-----------|-----------|------|---------|----------|-------|-----------|--------|-------|
|              | SPRING        | SUMMER | FALL    | JACK  | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | LAMPREY | STURGEON | KCFS  | KCFS      | SECCHI | DEG F |
| Aug 1        |               | 182    |         | 81    | 0     | 0         | 29      | 1,223     | 556       | 0    | 97      | 0        | 245.1 | 74.1      | 3.5    | 66.6  |
| Aug 2        |               | 360    |         | 108   | 0     | 0         | 25      | 1,968     | 879       | 0    | 136     | 0        | 239.9 | 72.0      | 4.0    | 67.0  |
| Aug 3        |               | 343    |         | 77    | 0     | 0         | 36      | 1,866     | 801       | 0    | 145     | 0        | 237.4 | 71.1      | 4.0    | 67.1  |
| Aug 4        |               | 410    |         | 107   | 0     | 0         | 36      | 1,874     | 858       | 0    | 102     | 1        | 227.9 | 68.1      | 3.5    | 68.4  |
| Aug 5        |               | 341    |         | 87    | 0     | 0         | 15      | 1,920     | 817       | 0    | 78      | 0        | 224.1 | 67.0      | 3.5    | 68.5  |
| Aug 6        |               |        | 318     | 108   | 0     | 0         | 18      | 1,727     | 753       | 0    | 106     | 1        | 225.4 | 67.8      | 3.5    | 68.8  |
| Aug 7        |               |        | 330     | 126   | 0     | 0         | 9       | 1,962     | 836       | 1    | 101     | 0        | 217.3 | 65.1      | 3.5    | 68.5  |
| Aug 8        |               |        | 304     | 90    | 0     | 0         | 14      | 2,192     | 912       | 0    | 73      | 0        | 212.4 | 63.5      | 3.5    | 69.1  |
| Aug 9        |               |        | 423     | 116   | 1     | 0         | 17      | 2,569     | 1,048     | 0    | 95      | 0        | 206.4 | 61.8      | 3.5    | 69.1  |
| Aug 10       |               |        | 355     | 92    | 0     | 0         | 11      | 1,886     | 791       | 0    | 89      | 0        | 199.3 | 59.8      | 3.5    | 69.3  |
| Aug 11       |               |        | 315     | 90    | 0     | 1         | 7       | 1,449     | 640       | 0    | 81      | 0        | 209.6 | 62.5      | 4.0    | 69.5  |
| Aug 12       |               |        | 249     | 91    | 0     | 1         | 2       | 1,349     | 576       | 0    | 79      | 0        | 219.5 | 65.4      | 4.5    | 69.7  |
| Aug 13       |               |        | 367     | 100   | 0     | 2         | 6       | 858       | 351       | 0    | 54      | 0        | 213.6 | 59.1      | 4.5    | 70.0  |
| Aug 14       |               |        | 271     | 83    | 0     | 0         | 2       | 1,196     | 482       | 0    | 92      | 0        | 189.5 | 56.6      | 4.5    | 70.4  |
| Aug 15       |               |        | 305     | 74    | 1     | 0         | 3       | 870       | 367       | 0    | 80      | 0        | 188.4 | 56.6      | 5.0    | 70.4  |
| Aug 16       |               |        | 417     | 73    | 0     | 0         | 3       | 820       | 351       | 0    | 70      | 0        | 179.0 | 53.8      | 5.0    | 70.8  |
| Aug 17       |               |        | 182     | 52    | 0     | 0         | 4       | 675       | 313       | 0    | 82      | 0        | 196.4 | 59.0      | 5.0    | 71.0  |
| Aug 18       |               |        | 401     | 86    | 17    | 17        | 10      | 706       | 283       | 0    | 76      | 1        | 191.5 | 57.5      | 5.0    | 71.1  |
| Aug 19       |               |        | 419     | 101   | 15    | 2         | 5       | 638       | 260       | 0    | 48      | 0        | 176.0 | 53.0      | 5.0    | 70.8  |
| Aug 20       |               |        | 442     | 110   | 17    | 6         | 4       | 431       | 156       | 0    | 50      | 0        | 197.6 | 59.3      | 5.0    | 70.5  |
| Aug 21       |               |        | 394     | 124   | 17    | 1         | 7       | 308       | 128       | 0    | 34      | 0        | 174.4 | 52.4      | 5.0    | 70.3  |
| Aug 22       |               |        | 139     | 90    | 17    | 6         | 1       | 251       | 98        | 0    | 44      | 0        | 200.5 | 60.0      | 4.0    | 70.2  |
| Aug 23       |               |        | 495     | 176   | 26    | 7         | 1       | 450       | 176       | 0    | 47      | 0        | 179.7 | 53.9      | 4.5    | 70.0  |
| Aug 24       |               |        | 383     | 178   | 14    | 7         | 0       | 389       | 148       | 0    | 31      | 0        | 197.0 | 59.1      | 4.5    | 69.8  |
| Aug 25       |               |        | 1,380   | 344   | 27    | 7         | 6       | 439       | 173       | 0    | 34      | 0        | 180.8 | 54.5      | 5.0    | 69.4  |
| Aug 26       |               |        | 1,234   | 299   | 39    | 6         | 7       | 461       | 186       | 0    | 28      | 0        | 150.6 | 45.0      | 5.0    | 69.6  |
| Aug 27       |               |        | 1,148   | 355   | 45    | 14        | 1       | 548       | 204       | 0    | 56      | 0        | 180.5 | 54.3      | 5.0    | 69.4  |
| Aug 28       |               |        | 1,644   | 462   | 83    | 30        | 2       | 634       | 273       | 0    | 10      | 0        | 142.1 | 42.6      | 4.5    | 68.9  |
| Aug 29       |               |        | 2,012   | 565   | 230   | 66        | 2       | 845       | 295       | 0    | 28      | 0        | 171.7 | 51.4      | 5.0    | 68.6  |
| Aug 30       |               |        | 1,865   | 563   | 183   | 43        | 1       | 719       | 261       | 0    | 13      | 0        | 157.9 | 47.3      | 5.0    | 68.4  |
| Aug 31       |               |        | 3,431   | 1,146 | 346   | 99        | 1       | 1,243     | 462       | 0    | 28      | 0        | 175.0 | 52.6      | 5.0    | 68.4  |
| <b>TOTAL</b> |               | 1,636  | 19,223  | 6,154 | 1,078 | 315       | 285     | 34,466    | 14,434    | 1    | 2,087   | 3        |       |           |        |       |

|             |  |     |     |     |    |    |   |       |     |   |    |   |       |      |     |      |
|-------------|--|-----|-----|-----|----|----|---|-------|-----|---|----|---|-------|------|-----|------|
| <b>AVG.</b> |  | 327 | 739 | 199 | 35 | 10 | 9 | 1,112 | 466 | 0 | 67 | 0 | 197.0 | 58.9 | 4.4 | 69.3 |
|-------------|--|-----|-----|-----|----|----|---|-------|-----|---|----|---|-------|------|-----|------|

| RUN YEAR     | CHINOOK        |         | COHO   |       | unclipped |         |           |           |        |         |          |       |   |
|--------------|----------------|---------|--------|-------|-----------|---------|-----------|-----------|--------|---------|----------|-------|---|
|              | TOTALS TO DATE | ADULT   | JACK   | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK   | LAMPREY | STURGEON |       |   |
| SPRING       |                | 107,655 | 6,755  |       |           | 1,087   | 315       | 394,141   | 66,194 | 29,888  | 4        | 3,835 | 4 |
| SUMMER       |                | 60,814  | 10,415 |       |           |         |           |           |        |         |          |       |   |
| FALL         |                | 19,223  | 5,694  |       |           |         |           |           |        |         |          |       |   |
| <b>TOTAL</b> |                | 187,692 | 22,864 |       |           |         |           |           |        |         |          |       |   |

\*One bull trout counted on Aug 10

TABLE 49

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        |                | CHINOOK COHO  |               | unclipped    |           |               |               |           | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F      |            |             |
|--------------|---------------|--------|----------------|---------------|---------------|--------------|-----------|---------------|---------------|-----------|---------------|---------------|---------------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL           | JACK          | ADULT         | JACK         | SOCKEYE   | STEELHEAD     | STEELHEAD     | PINK      |               |               |                     |            | LAMPREY    | STURGEON    |
| Sep 1        |               |        | 4,066          | 1,146         | 357           | 55           | 1         | 1,963         | 672           | 0         | 56            | 0             | 143.9               | 1.1        | 5.0        | 68.4        |
| Sep 2        |               |        | 4,345          | 1,127         | 1,244         | 312          | 0         | 2,236         | 804           | 1         | 27            | 0             | 101.2               | 1.0        | 5.0        | 68.1        |
| Sep 3        |               |        | 5,610          | 1,999         | 696           | 74           | 5         | 1,938         | 615           | 2         | 43            | 0             | 94.0                | 0.9        | 5.0        | 67.8        |
| Sep 4        |               |        | 5,067          | 1,674         | 1,207         | 238          | 1         | 2,201         | 734           | 2         | 39            | 0             | 113.5               | 0.9        | 5.0        | 67.6        |
| Sep 5        |               |        | 3,866          | 1,913         | 804           | 64           | 4         | 1,814         | 537           | 1         | 26            | 0             | 141.3               | 1.0        | 5.0        | 67.7        |
| Sep 6        |               |        | 4,305          | 1,955         | 1,177         | 210          | 2         | 2,216         | 762           | 1         | 14            | 0             | 152.3               | 0.9        | 5.0        | 68.2        |
| Sep 7        |               |        | 4,577          | 2,341         | 1,353         | 127          | 2         | 2,329         | 754           | 0         | 37            | 0             | 111.9               | 0.9        | 5.0        | 68.5        |
| Sep 8        |               |        | 3,143          | 1,301         | 928           | 80           | 1         | 1,817         | 600           | 0         | 44            | 0             | 115.3               | 1.0        | 5.0        | 69.0        |
| Sep 9        |               |        | 6,155          | 2,509         | 1,072         | 104          | 2         | 2,060         | 608           | 0         | 37            | 0             | 92.7                | 0.9        | 5.0        | 68.8        |
| Sep 10       |               |        | 6,603          | 3,032         | 1,521         | 174          | 5         | 2,796         | 842           | 1         | 31            | 0             | 104.6               | 1.0        | 5.0        | 68.1        |
| Sep 11       |               |        | 6,240          | 2,752         | 1,428         | 246          | 0         | 2,828         | 845           | 0         | 37            | 1             | 117.0               | 1.0        | 5.0        | 68.0        |
| Sep 12       |               |        | 5,520          | 2,158         | 1,616         | 307          | -2        | 1,884         | 543           | 0         | 23            | 0             | 125.2               | 1.0        | 5.5        | 67.9        |
| Sep 13       |               |        | 4,765          | 2,660         | 554           | 42           | 1         | 1,552         | 486           | 0         | 40            | 0             | 98.1                | 0.9        | 5.0        | 68.0        |
| Sep 14       |               |        | 3,338          | 1,716         | 467           | 47           | 0         | 1,367         | 377           | 0         | 16            | 0             | 103.3               | 1.0        | 5.5        | 67.8        |
| Sep 15       |               |        | 4,171          | 1,977         | 527           | 37           | 0         | 1,894         | 555           | 0         | 25            | 0             | 109.4               | 0.9        | 5.5        | 67.5        |
| Sep 16       |               |        | 8,177          | 3,338         | 886           | 95           | 0         | 3,419         | 960           | 0         | 23            | 0             | 101.9               | 1.0        | 5.5        | 67.2        |
| Sep 17       |               |        | 8,190          | 4,367         | 1,093         | 84           | -1        | 2,957         | 863           | 0         | 25            | 0             | 103.8               | 0.9        | 5.5        | 67.2        |
| Sep 18       |               |        | 6,960          | 4,078         | 1,042         | 60           | 0         | 2,047         | 586           | 0         | 28            | 0             | 118.4               | 0.9        | 5.5        | 67.0        |
| Sep 19       |               |        | 5,132          | 3,606         | 1,132         | 59           | 0         | 1,898         | 565           | 0         | 20            | 0             | 130.2               | 1.0        | 5.5        | 67.1        |
| Sep 20       |               |        | 4,504          | 3,392         | 1,170         | 76           | 1         | 2,202         | 652           | 1         | 15            | 0             | 103.5               | 0.9        | 5.5        | 67.1        |
| Sep 21       |               |        | 3,409          | 3,313         | 1,067         | 149          | 0         | 2,466         | 773           | 2         | 15            | 0             | 112.3               | 0.9        | 5.5        | 67.1        |
| Sep 22       |               |        | 3,159          | 2,917         | 939           | 91           | 0         | 3,154         | 984           | 0         | 24            | 0             | 95.4                | 0.9        | 5.0        | 66.8        |
| Sep 23       |               |        | 3,015          | 3,001         | 1,137         | 90           | 0         | 4,048         | 1,196         | 0         | 16            | 0             | 99.2                | 0.9        | 5.5        | 66.8        |
| Sep 24       |               |        | 3,458          | 2,385         | 342           | 36           | 0         | 3,417         | 996           | 0         | 9             | 0             | 93.5                | 2.8        | 5.5        | 66.8        |
| Sep 25       |               |        | 3,116          | 2,463         | 692           | 72           | 0         | 3,512         | 1,075         | 0         | 6             | 0             | 102.6               | 0.9        | 5.0        | 66.5        |
| Sep 26       |               |        | 2,692          | 1,859         | 357           | 26           | 0         | 2,551         | 775           | 0         | 6             | 0             | 102.4               | 1.5        | 5.0        | 66.5        |
| Sep 27       |               |        | 1,985          | 1,806         | 360           | 34           | 0         | 1,228         | 371           | 0         | 15            | 0             | 88.7                | 0.9        | 5.0        | 66.3        |
| Sep 28       |               |        | 1,796          | 1,523         | 124           | 2            | 0         | 875           | 264           | 0         | 7             | 0             | 110.0               | 0.9        | 5.0        | 66.1        |
| Sep 29       |               |        | 2,433          | 2,235         | 197           | 10           | 0         | 1,307         | 375           | 0         | 0             | 0             | 100.3               | 0.9        | 5.0        | 66.1        |
| Sep 30       |               |        | 2,510          | 2,282         | 307           | 29           | 0         | 2,020         | 647           | 0         | 8             | 0             | 89.1                | 0.9        | 5.0        | 66.0        |
| <b>TOTAL</b> |               |        | <b>132,307</b> | <b>72,825</b> | <b>25,796</b> | <b>3,030</b> | <b>22</b> | <b>67,996</b> | <b>20,816</b> | <b>11</b> | <b>712</b>    | <b>1</b>      |                     |            |            |             |
| <b>AVG.</b>  |               |        | <b>4,410</b>   | <b>2,428</b>  | <b>860</b>    | <b>101</b>   | <b>1</b>  | <b>2,267</b>  | <b>694</b>    | <b>0</b>  | <b>24</b>     | <b>0</b>      | <b>109.2</b>        | <b>1.0</b> | <b>5.2</b> | <b>67.4</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 107,655        | 6,755         |
| SUMMER         | 60,814         | 10,415        |
| FALL           | 151,530        | 78,519        |
| <b>TOTAL</b>   | <b>319,999</b> | <b>95,689</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | PINK | LAMPREY | STURGEON |
|------------|-----------|---------|-----------|---------------------|------|---------|----------|
| 26,883     | 3,345     | 394,163 | 134,190   | 50,704              | 15   | 4,547   | 5        |

TABLE 50

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

JOHN DAY PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK COHO  |               | COHO         |            | unclipped |               |               |      | DISCH SPILL TURBIDITY |          |             |            |            |             |
|--------------|---------------|--------|---------------|---------------|--------------|------------|-----------|---------------|---------------|------|-----------------------|----------|-------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT        | JACK       | SOCKEYE   | STEELHEAD     | STEELHEAD     | PINK | LAMPREY               | STURGEON | KCFS        | KCFS       | SECCHI     | DEG F       |
| Oct 1        |               |        | 1,679         | 1431          | 136          | 14         | 0         | 1,303         | 428           |      | 7                     |          | 76.6        | 0.8        | 5.0        | 66.0        |
| Oct 2        |               |        | 1,352         | 1556          | 203          | 31         | 0         | 1,627         | 492           |      | 6                     |          | 78.0        | 0.9        | 5.0        | 65.8        |
| Oct 3        |               |        | 675           | 795           | 109          | 19         | 0         | 1,049         | 334           |      | 16                    |          | 107.9       | 0.9        | 5.0        | 65.5        |
| Oct 4        |               |        | 1,171         | 1108          | 105          | 9          | 0         | 1,011         | 294           |      | 2                     |          | 95.4        | 0.9        | 5.0        | 65.4        |
| Oct 5        |               |        | 1,008         | 740           | 91           | 5          | 0         | 828           | 229           |      | 4                     |          | 76.5        | 1.0        | 5.5        | 65.1        |
| Oct 6        |               |        | 989           | 759           | 79           | 8          | 0         | 967           | 286           |      | 3                     |          | 71.4        | 0.8        | 5.0        | 64.8        |
| Oct 7        |               |        | 710           | 488           | 82           | 7          | 0         | 854           | 258           |      | -1                    |          | 67.4        | 0.9        | 5.0        | 64.5        |
| Oct 8        |               |        | 725           | 446           | 60           | 9          | 0         | 863           | 275           |      | 5                     |          | 75.5        | 0.8        | 5.0        | 64.2        |
| Oct 9        |               |        | 768           | 422           | 96           | 4          | 0         | 728           | 224           |      | 2                     |          | 98.4        | 0.8        | 5.0        | 63.9        |
| Oct 10       |               |        | 601           | 441           | 62           | 5          | 0         | 915           | 298           |      | 0                     |          | 93.8        | 0.8        | 5.0        | 63.6        |
| Oct 11       |               |        | 539           | 447           | 96           | 2          | 0         | 1,172         | 367           |      | 0                     |          | 85.0        | 0.8        | 5.0        | 63.2        |
| Oct 12       |               |        | 1,158         | 977           | 179          | 12         | 0         | 1,717         | 646           |      | -1                    |          | 71.1        | 0.8        | 5.0        | 62.9        |
| Oct 13       |               |        | 651           | 518           | 174          | 12         | 0         | 1,191         | 473           |      | -1                    |          | 65.1        | 0.8        | 5.0        | 62.6        |
| Oct 14       |               |        | 624           | 422           | 177          | 9          | 0         | 1,017         | 436           |      | -5                    |          | 61.5        | 0.8        | 5.0        | 62.4        |
| Oct 15       |               |        | 264           | 246           | 117          | 8          | 0         | 710           | 301           |      | 0                     |          | 75.9        | 0.8        | 5.0        | 62.2        |
| Oct 16       |               |        | 377           | 293           | 246          | 13         | 0         | 1,373         | 647           |      | 1                     |          | 69.1        | 0.8        | 5.0        | 61.8        |
| Oct 17       |               |        | 263           | 187           | 324          | 41         | 0         | 2,003         | 990           |      | 1                     |          | 76.9        | 0.8        | 5.0        | 61.5        |
| Oct 18       |               |        | 293           | 197           | 278          | 25         | 0         | 1,813         | 859           |      | -1                    |          | 76.5        | 0.6        | 5.0        | 61.3        |
| Oct 19       |               |        | 203           | 241           | 195          | 18         | 0         | 1,768         | 924           |      | 2                     |          | 73.5        | 0.7        | 5.0        | 61.2        |
| Oct 20       |               |        | 164           | 183           | 148          | 14         | 0         | 1,146         | 576           |      | 0                     |          | 72.0        | 0.7        | 5.0        | 60.7        |
| Oct 21       |               |        | 138           | 159           | 64           | 5          | 0         | 534           | 253           |      | 1                     |          | 80.9        | 0.8        | 5.0        | 60.4        |
| Oct 22       |               |        | 130           | 82            | 35           | 4          | 0         | 411           | 173           |      | -1                    |          | 104.2       | 0.6        | 5.0        | 60.0        |
| Oct 23       |               |        | 71            | 105           | 32           | 1          | 0         | 292           | 138           |      | 0                     |          | 106.3       | 0.2        | 5.0        | 59.4        |
| Oct 24       |               |        | 128           | 113           | 32           | 1          | 0         | 359           | 146           |      | 0                     |          | 104.5       | 0.6        | 5.0        | 58.9        |
| Oct 25       |               |        | 77            | 118           | 20           | 8          | 0         | 203           | 71            |      | 0                     |          | 118.0       | 0.8        | 5.0        | 58.5        |
| Oct 26       |               |        | 163           | 93            | 41           | 7          | 0         | 244           | 69            |      | 0                     |          | 123.3       | 0.8        | 5.0        | 58.1        |
| Oct 27       |               |        | 126           | 126           | 35           | 2          | 0         | 197           | 83            |      | 0                     |          | 107.1       | 0.8        | 5.0        | 57.8        |
| Oct 28       |               |        | 116           | 103           | 33           | 2          | 0         | 239           | 62            |      | 0                     |          | 106.0       | 0.9        | 5.0        | 57.6        |
| Oct 29       |               |        | 156           | 91            | 30           | 2          | 0         | 434           | 175           |      | 0                     |          | 108.4       | 0.8        | 5.0        | 57.4        |
| Oct 30       |               |        | 51            | 54            | 36           | 0          | 1         | 453           | 221           |      | 0                     |          | 111.8       | 0.7        | 5.0        | 57.1        |
| Oct 31       |               |        | 74            | 63            | 18           | 1          | 2         | 472           | 199           |      | 0                     |          | 114.3       | 0.7        | 5.0        | 56.9        |
| <b>TOTAL</b> |               |        | <b>15,444</b> | <b>13,004</b> | <b>3,333</b> | <b>298</b> | <b>3</b>  | <b>27,893</b> | <b>10,927</b> |      | <b>40</b>             |          |             |            |            |             |
| <b>AVG.</b>  |               |        | <b>498</b>    | <b>419</b>    | <b>108</b>   | <b>10</b>  | <b>0</b>  | <b>900</b>    | <b>352</b>    |      | <b>1</b>              |          | <b>88.8</b> | <b>0.8</b> | <b>5.0</b> | <b>61.6</b> |

| RUN YEAR     | CHINOOK        |                | COHO |        | unclipped |         |           |           |      |         |          |
|--------------|----------------|----------------|------|--------|-----------|---------|-----------|-----------|------|---------|----------|
|              | TOTALS TO DATE | ADULT          | JACK | ADULT  | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK | LAMPREY | STURGEON |
| SPRING       | 107,655        | 6,755          |      | 30,216 | 3,643     | 394,166 | 162,083   | 61,631    | 15   | 4,587   | 5        |
| SUMMER       | 60,814         | 10,415         |      |        |           |         |           |           |      |         |          |
| FALL         | 166,974        | 91,523         |      |        |           |         |           |           |      |         |          |
| <b>TOTAL</b> | <b>335,443</b> | <b>108,693</b> |      |        |           |         |           |           |      |         |          |

Note: Visual counts ended October 31.

TABLE 51

## DISCHARGE AND WATER QUALITY DATA

## JOHN DAY PROJECT 2012

| NOVEMBER |               |               |                     |       | DECEMBER |               |               |                     |       |
|----------|---------------|---------------|---------------------|-------|----------|---------------|---------------|---------------------|-------|
| DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F | DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Nov 1    | 116.4         | 0.8           | 5.0                 | 56.8  | Dec 1    | 141.5         | 0.0           | 5.0                 | 49.4  |
| Nov 2    | 117.7         | 0.8           | 5.0                 | 56.5  | Dec 2    | 141.9         | 0.0           | 5.0                 | 49.4  |
| Nov 3    | 112.4         | 0.0           | 5.0                 | 56.1  | Dec 3    | 144.2         | 0.0           | 5.0                 | 49.2  |
| Nov 4    | 108.1         | 0.0           | 5.0                 | 55.8  | Dec 4    | 163.3         | 0.0           | 5.0                 | 48.7  |
| Nov 5    | 111.8         | 0.0           | 5.0                 | 55.6  | Dec 5    | 154.1         | 0.0           | 4.5                 | 48.2  |
| Nov 6    | 117.7         | 0.0           | 5.0                 | 55.6  | Dec 6    | 172.2         | 0.0           | 5.0                 | 48.1  |
| Nov 7    | 110.7         | 0.0           | 5.0                 | 55.5  | Dec 7    | 177.1         | 0.0           | 5.0                 | 48.0  |
| Nov 8    | 124.5         | 0.0           | 5.0                 | 55.5  | Dec 8    | 190.9         | 0.0           | 4.0                 | 47.8  |
| Nov 9    | 119.1         | 0.0           | 5.0                 | 55.3  | Dec 9    | 186.0         | 0.0           | 4.0                 | 47.8  |
| Nov 10   | 119.7         | 0.0           | 5.0                 | 55.0  | Dec 10   | 166.1         | 0.0           | 4.0                 | 47.7  |
| Nov 11   | 131.3         | 0.0           | 5.0                 | 54.8  | Dec 11   | 179.5         | 0.0           | 4.0                 | 47.6  |
| Nov 12   | 131.3         | 0.0           | 5.0                 | 55.0  | Dec 12   | 200.8         | 0.0           | 5.0                 | 47.5  |
| Nov 13   | 125.8         | 0.0           | 5.0                 | 55.0  | Dec 13   | 203.0         | 0.0           | 5.0                 | 47.3  |
| Nov 14   | 121.5         | 0.0           | 5.0                 | 54.6  | Dec 14   | 206.1         | 0.0           | 5.0                 | 47.0  |
| Nov 15   | 133.5         | 0.0           | 5.0                 | 54.2  | Dec 15   | 188.2         | 0.0           | 5.0                 | 46.6  |
| Nov 16   | 134.6         | 0.0           | 5.0                 | 53.8  | Dec 16   | 160.5         | 0.0           | 4.0                 | 46.4  |
| Nov 17   | 126.4         | 0.0           | 5.0                 | 53.5  | Dec 17   | 170.3         | 0.0           | 4.0                 | 46.2  |
| Nov 18   | 137.0         | 0.0           | 5.0                 | 53.3  | Dec 18   | 204.5         | 0.0           | 4.0                 | 45.9  |
| Nov 19   | 124.6         | 0.0           | 5.0                 | 53.2  | Dec 19   | 162.0         | 0.0           | 5.0                 | 45.5  |
| Nov 20   | 90.5          | 0.0           | 5.0                 | 52.8  | Dec 20   | 145.8         | 0.0           | 5.0                 | 45.3  |
| Nov 21   | 116.2         | 0.0           | 5.0                 | 52.4  | Dec 21   | 167.5         | 0.0           | 5.0                 | 45.1  |
| Nov 22   | 110.3         | 0.0           | 5.0                 | 51.8  | Dec 22   | 171.9         | 0.0           | 5.0                 | 45.0  |
| Nov 23   | 124.9         | 0.0           | 5.0                 | 51.2  | Dec 23   | 146.4         | 0.0           | 5.0                 | 44.7  |
| Nov 24   | 112.7         | 0.0           | 5.5                 | 51.0  | Dec 24   | 139.7         | 0.0           | 5.0                 | 44.5  |
| Nov 25   | 115.8         | 0.0           | 5.5                 | 50.7  | Dec 25   | 128.6         | 0.0           | 5.0                 | 44.2  |
| Nov 26   | 132.2         | 0.0           | 5.0                 | 50.5  | Dec 26   | 153.0         | 0.0           | 6.0                 | 44.0  |
| Nov 27   | 154.0         | 0.0           | 5.0                 | 50.4  | Dec 27   | 154.4         | 0.0           | 5.0                 | 50.5  |
| Nov 28   | 133.5         | 0.0           | 4.5                 | 50.2  | Dec 28   | 164.9         | 0.0           | 5.5                 | 43.3  |
| Nov 29   | 137.8         | 0.0           | 5.0                 | 49.8  | Dec 29   | 170.5         | 0.0           | 5.5                 | 42.9  |
| Nov 30   | 139.9         | 0.0           | 5.0                 | 49.4  | Dec 30   | 187.0         | 0.0           | 5.5                 | 42.6  |
|          |               |               |                     |       | Dec 31   | 193.0         | 0.0           | 5.5                 | 42.5  |
| AVG.     | 123.1         | 0.1           | 5.0                 | 53.5  | AVG.     | 168.9         | 0.0           | 4.9                 | 46.4  |

TABLE 52

**YEARLY TOTALS OF SALMONIDS COUNTED OVER  
JOHN DAY DAM  
1968 - 2012**

| YEAR                       | CHINOOK*          | STEELHEAD        | SOCKEYE          | COHO*          | TOTAL             |
|----------------------------|-------------------|------------------|------------------|----------------|-------------------|
| 1968                       | 233,654           | 121,256          | 87,847           | 38,233         | 480,990           |
| 1969                       | 276,051           | 86,348           | 39,847           | 13,589         | 415,835           |
| 1970                       | 222,506           | 82,440           | 78,133           | 19,543         | 402,622           |
| 1971                       | 193,881           | 115,977          | 72,232           | 40,830         | 422,920           |
| 1972                       | 225,631           | 141,628          | 51,793           | 17,533         | 436,585           |
| 1973                       | 249,492           | 101,440          | 64,744           | 13,359         | 429,035           |
| 1974                       | 167,888           | 43,756           | 33,121           | 14,651         | 259,416           |
| 1975                       | 159,079           | 32,651           | 50,774           | 6,305          | 248,809           |
| 1976                       | 175,911           | 59,808           | 30,446           | 5,806          | 271,971           |
| 1977                       | 194,931           | 102,558          | 85,701           | 1,123          | 384,313           |
| 1978                       | 174,852           | 44,188           | 13,778           | 8,355          | 241,173           |
| 1979                       | 118,154           | 55,877           | 43,630           | 5,061          | 222,722           |
| 1980                       | 100,664           | 78,199           | 50,675           | 1,924          | 231,462           |
| 1981                       | 114,359           | 95,172           | 46,146           | 2,562          | 258,239           |
| 1982                       | 144,082           | 108,603          | 37,970           | 4,063          | 294,718           |
| 1983                       | 139,866           | 154,425          | 91,917           | 1,640          | 387,848           |
| 1984                       | 188,373           | 201,154          | 107,951          | 2,080          | 499,558           |
| 1985                       | 337,624           | 247,093          | 124,941          | 1,652          | 711,310           |
| 1986                       | 346,700           | 238,010          | 46,327           | 1,933          | 632,970           |
| 1987                       | 327,752           | 170,654          | 75,529           | 3,355          | 577,290           |
| 1988                       | 277,251           | 164,650          | 48,095           | 6,813          | 496,809           |
| 1989                       | 208,254           | 193,460          | 39,374           | 9,663          | 450,751           |
| 1990                       | 156,313           | 107,849          | 42,077           | 3,023          | 309,262           |
| 1991                       | 118,921           | 160,257          | 63,760           | 8,021          | 350,959           |
| 1992                       | 132,025           | 195,194          | 69,731           | 2,633          | 399,583           |
| 1993                       | 141,705           | 95,642           | 61,218           | 2,995          | 301,560           |
| 1994                       | 126,645           | 93,075           | 11,170           | 2,842          | 233,732           |
| 1995                       | 107,277           | 123,246          | 8,667            | 2,117          | 241,307           |
| 1996                       | 130,602           | 156,002          | 25,698           | 4,279          | 316,581           |
| 1997                       | 185,240           | 157,038          | 35,830           | 4,229          | 382,337           |
| 1998                       | 130,028           | 158,547          | 9,837            | 8,497          | 306,909           |
| 1999                       | 163,282           | 165,314          | 14,809           | 13,232         | 356,638           |
| 2000                       | 269,371           | 220,328          | 88,372           | 23,969         | 602,040           |
| 2001                       | 510,987           | 483,409          | 107,869          | 51,181         | 1,153,446         |
| 2002                       | 447,729           | 390,300          | 41,915           | 9,272          | 889,216           |
| 2003                       | 472,340           | 305,042          | 35,417           | 38,765         | 851,564           |
| 2004                       | 447,891           | 233,431          | 113,497          | 35,522         | 830,341           |
| 2005                       | 322,991           | 232,103          | 69,770           | 36,205         | 661,081           |
| 2006                       | 290,161           | 231,355          | 35,387           | 38,374         | 595,281           |
| 2007                       | 215,876           | 237,517          | 24,277           | 39,421         | 517,091           |
| 2008                       | 342,952           | 277,162          | 193,409          | 44,898         | 858,421           |
| 2009                       | 451,974           | 581,645          | 157,402          | 71,739         | 1,262,760         |
| 2010                       | 534,247           | 283,812          | 324,128          | 23,272         | 1,165,459         |
| 2011                       | 497,771           | 257,345          | 143,605          | 65,668         | 965,087           |
| 2012                       | 444,136           | 162,083          | 394,166          | 33,859         | 1,034,259         |
| <b>TOTALS</b>              | <b>11,217,419</b> | <b>7,947,043</b> | <b>3,392,982</b> | <b>784,086</b> | <b>23,342,260</b> |
| <b>10-Year<br/>Average</b> | <b>402,034</b>    | <b>280,150</b>   | <b>149,106</b>   | <b>42,772</b>  | <b>874,134</b>    |

\*Jacks included

1999 - Total includes 1 pink  
2005 - Total includes 12 pinks  
2006 - Total includes 1 chum and 3 pinks  
2011 - Total includes 698 pinks  
2012 - Total includes 15 pinks

TABLE 53

MONTHLY COUNT OF CHINOOK SALMON  
JOHN DAY DAM 1968 - 2012

| YEAR    | JAN | FEB | MAR   | APR     | MAY       | JUN       | JUL       | AUG     | SEP     | OCT       | NOV     | DEC    | TOTAL*     | SPRING          | SUMMER          | FALL             | JACKS     |
|---------|-----|-----|-------|---------|-----------|-----------|-----------|---------|---------|-----------|---------|--------|------------|-----------------|-----------------|------------------|-----------|
|         |     |     |       |         |           |           |           |         |         |           |         |        |            | Apr 1-<br>Jun 5 | Jun 6-<br>Aug 5 | Aug 6-<br>Oct 31 |           |
| 1968    |     |     |       | 29,973  | 46,272    | 30,702    | 42,212    | 16,726  | 62,709  | 4,851     | 209     |        | 233,654    | 77,482          | 75,494          | 80,678           | 67,284    |
| 1969    |     |     | 6     | 4,266   | 72,966    | 35,899    | 31,071    | 18,523  | 103,778 | 9,542     |         |        | 276,051    | 81,724          | 64,732          | 129,595          | 93,928    |
| 1970    |     |     |       | 35,750  | 35,248    | 20,439    | 21,542    | 24,784  | 80,969  | 3,774     |         |        | 222,506    | 72,555          | 43,093          | 106,858          | 74,090    |
| 1971    |     |     |       | 13,995  | 40,620    | 24,364    | 25,692    | 10,403  | 73,157  | 5,650     |         |        | 193,881    | 56,625          | 50,030          | 87,226           | 61,380    |
| 1972    |     |     |       | 28,535  | 41,882    | 15,833    | 27,484    | 14,208  | 90,181  | 7,508     |         |        | 225,631    | 71,569          | 44,542          | 109,520          | 82,646    |
| 1973    |     |     |       | 67,467  | 27,091    | 18,972    | 15,067    | 16,995  | 89,913  | 13,987    |         |        | 249,492    | 96,710          | 34,206          | 118,576          | 73,687    |
| 1974    |     |     |       | 5,174   | 38,058    | 8,115     | 18,985    | 8,112   | 77,296  | 12,148    |         |        | 167,888    | 46,191          | 25,865          | 95,832           | 61,669    |
| 1975    |     |     |       | 7,727   | 27,989    | 11,058    | 21,359    | 18,250  | 65,367  | 7,329     |         |        | 159,079    | 37,716          | 32,179          | 89,184           | 62,403    |
| 1976    |     |     |       | 10,428  | 32,985    | 17,836    | 18,506    | 10,114  | 72,467  | 13,575    |         |        | 175,911    | 45,419          | 36,037          | 94,455           | 62,793    |
| 1977    |     |     |       | 55,061  | 19,422    | 15,674    | 13,764    | 7,853   | 71,302  | 11,855    |         |        | 194,931    | 75,782          | 29,194          | 89,955           | 60,386    |
| 1978    |     |     |       | 34,735  | 35,206    | 15,104    | 16,764    | 8,149   | 52,975  | 11,919    |         |        | 174,852    | 72,723          | 30,371          | 71,758           | 36,289    |
| 1979    |     |     |       | 8,224   | 12,568    | 9,537     | 13,580    | 14,128  | 50,977  | 8,566     | 574     |        | 118,154    | 21,981          | 23,572          | 72,601           | 41,364    |
| 1980    |     |     |       | 7,995   | 18,311    | 7,125     | 12,522    | 9,063   | 37,023  | 8,625     |         |        | 100,664    | 27,202          | 19,664          | 53,798           | 25,877    |
| 1981    |     |     |       | 18,178  | 18,325    | 7,292     | 8,992     | 8,524   | 44,626  | 8,422     |         |        | 114,359    | 37,677          | 15,813          | 60,869           | 34,547    |
| 1982    |     |     |       | 3,396   | 30,444    | 11,031    | 7,359     | 10,881  | 67,271  | 13,700    |         |        | 144,082    | 36,530          | 16,360          | 91,192           | 56,966    |
| 1983    |     |     |       | 7,123   | 25,391    | 7,990     | 7,064     | 8,195   | 66,078  | 18,025    |         |        | 139,866    | 33,480          | 14,834          | 91,552           | 43,440    |
| 1984    |     |     |       | 4,329   | 26,561    | 9,706     | 12,892    | 15,422  | 96,399  | 22,255    | 809     |        | 188,373    | 32,035          | 22,795          | 133,543          | 69,874    |
| 1985    |     |     |       | 27,539  | 42,487    | 15,585    | 9,663     | 27,387  | 178,322 | 34,192    | 2,449   |        | 337,624    | 72,389          | 23,489          | 241,746          | 149,281   |
| 1986    |     |     | 21    | 38,075  | 37,959    | 13,227    | 9,703     | 10,797  | 194,928 | 41,990    |         |        | 346,700    | 77,884          | 22,051          | 246,765          | 133,827   |
| 1987    |     |     |       | 33,985  | 26,852    | 13,641    | 8,948     | 24,363  | 196,596 | 23,367    |         |        | 327,752    | 62,313          | 22,244          | 243,195          | 53,794    |
| 1988    |     |     |       | 33,323  | 20,170    | 14,731    | 9,648     | 37,002  | 147,553 | 14,824    |         |        | 277,251    | 55,195          | 23,569          | 198,487          | 51,330    |
| 1989    |     |     |       | 12,510  | 23,983    | 12,793    | 10,124    | 35,985  | 101,794 | 11,065    |         |        | 208,254    | 37,773          | 23,868          | 146,613          | 25,092    |
| 1990    |     |     |       | 23,689  | 18,854    | 11,209    | 9,199     | 13,542  | 71,508  | 8,312     |         |        | 156,313    | 43,127          | 20,532          | 92,654           | 22,195    |
| 1991    |     |     |       | 7,419   | 13,668    | 8,868     | 8,390     | 4,879   | 64,950  | 10,747    |         |        | 118,921    | 21,847          | 16,872          | 80,202           | 28,646    |
| 1992    |     |     |       | 27,538  | 16,623    | 9,452     | 5,263     | 7,677   | 58,140  | 7,332     |         |        | 132,025    | 45,457          | 13,910          | 72,658           | 22,084    |
| 1993    |     |     |       | 26,309  | 28,204    | 13,295    | 6,311     | 10,703  | 51,667  | 5,216     |         |        | 141,705    | 56,144          | 18,364          | 67,197           | 9,621     |
| 1994    |     |     |       | 4,436   | 4,937     | 6,305     | 6,397     | 13,345  | 79,538  | 11,687    |         |        | 126,645    | 9,745           | 12,935          | 103,965          | 18,867    |
| 1995    |     |     |       | 2,034   | 3,378     | 4,977     | 6,273     | 14,694  | 61,273  | 14,648    |         |        | 107,277    | 5,776           | 11,476          | 90,025           | 24,192    |
| 1996    |     |     |       | 1,860   | 18,616    | 7,419     | 6,356     | 18,550  | 68,198  | 9,603     |         |        | 130,602    | 21,599          | 13,148          | 95,855           | 12,071    |
| 1997    |     |     |       | 13,579  | 45,408    | 16,551    | 8,328     | 10,355  | 81,039  | 9,980     |         |        | 185,240    | 62,580          | 21,769          | 100,891          | 1,588     |
| 1998    |     |     |       | 9,279   | 12,439    | 10,076    | 7,535     | 11,073  | 62,107  | 17,519    |         |        | 130,028    | 22,177          | 17,780          | 90,071           | 13,745    |
| 1999    |     |     |       | 3,008   | 16,517    | 10,206    | 14,226    | 20,201  | 86,380  | 12,744    |         |        | 163,282    | 20,498          | 24,714          | 118,070          | 19,611    |
| 2000    |     |     |       | 48,176  | 47,705    | 19,201    | 13,579    | 44,377  | 86,737  | 9,596     |         |        | 269,371    | 98,710          | 31,056          | 139,605          | 56,892    |
| 2001    |     |     |       | 187,104 | 74,233    | 46,449    | 33,904    | 20,506  | 128,230 | 20,561    |         |        | 510,987    | 270,385         | 74,235          | 166,367          | 57,877    |
| 2002    |     |     |       | 36,677  | 99,270    | 69,941    | 44,890    | 37,086  | 143,126 | 16,739    |         |        | 447,729    | 142,290         | 110,969         | 194,470          | 37,568    |
| 2003    |     |     | 3,951 | 61,184  | 45,880    | 62,159    | 45,782    | 22,222  | 201,192 | 28,666    | 1,238   | 66     | 472,340    | 111,642         | 105,615         | 249,828          | 54,680    |
| 2004    |     |     | 127   | 62,999  | 50,288    | 55,728    | 30,998    | 24,383  | 192,606 | 29,301    | 1,410   | 51     | 447,891    | 118,520         | 83,060          | 244,723          | 47,708    |
| 2005    |     |     | 15    | 13,680  | 39,563    | 45,107    | 28,340    | 15,637  | 158,917 | 21,319    | 411     | 2      | 322,991    | 58,742          | 69,439          | 194,382          | 37,622    |
| 2006    |     |     |       | 420     | 49,051    | 50,206    | 28,688    | 14,821  | 118,233 | 27,015    | 1,710   | 17     | 290,161    | 52,406          | 77,964          | 158,064          | 28,507    |
| 2007    |     |     | 3     | 13,080  | 40,896    | 30,282    | 19,378    | 12,140  | 81,091  | 17,462    | 1,256   | 288    | 215,876    | 57,042          | 47,908          | 109,379          | 61,316    |
| 2008    |     |     |       | 14,050  | 77,177    | 58,652    | 22,929    | 29,293  | 126,961 | 13,890    |         |        | 342,952    | 96,697          | 77,329          | 168,926          | 60,788    |
| 2009    |     |     |       | 5,282   | 112,503   | 75,623    | 31,549    | 51,444  | 155,522 | 20,051    |         |        | 451,974    | 126,539         | 99,136          | 226,299          | 164,110   |
| 2010    |     |     |       | 69,747  | 108,746   | 64,519    | 30,528    | 29,389  | 197,139 | 34,179    |         |        | 534,247    | 191,240         | 83,430          | 259,577          | 69,502    |
| 2011    |     |     |       | 2,856   | 131,343   | 70,070    | 46,154    | 26,983  | 182,441 | 37,924    |         |        | 497,771    | 143,224         | 110,919         | 243,628          | 138,591   |
| 2012    |     |     |       | 5,071   | 100,761   | 47,139    | 30,572    | 27,013  | 205,132 | 28,448    |         |        | 444,136    | 114,410         | 71,229          | 258,497          | 108,693   |
| TOTAL   |     |     |       | 4,123   | 1,127,265 | 1,856,850 | 1,130,088 | 848,510 | 836,177 | 4,683,808 | 720,108 | 10,066 | 11,217,419 | 3,119,752       | 1,907,791       | 6,179,331        | 2,518,421 |
| 10-Year |     |     |       |         |           |           |           |         |         |           |         |        |            |                 |                 |                  |           |
| Average |     |     |       | 24,837  | 75,621    | 55,949    | 31,492    | 25,333  | 161,923 | 25,826    |         |        | 402,034    | 107,046         | 82,603          | 211,330          | 77,152    |

\*Jacks included



TABLE 54

**MONTHLY COUNT OF SOCKEYE SALMON  
JOHN DAY DAM  
1968 - 2012**

| YEAR                       | JAN | FEB | MAR | APR | MAY | JUN           | JUL              | AUG              | SEP           | OCT        | NOV       | DEC      | TOTAL            |
|----------------------------|-----|-----|-----|-----|-----|---------------|------------------|------------------|---------------|------------|-----------|----------|------------------|
| 1968                       |     |     |     |     |     | 42,175        | 44,942           | 690              | 32            | 7          | 1         |          | 87,847           |
| 1969                       |     |     |     |     |     | 13,383        | 26,174           | 245              | 37            | 8          |           |          | 39,847           |
| 1970                       |     |     |     |     |     | 18,029        | 58,176           | 1,909            | 19            |            |           |          | 78,133           |
| 1971                       |     |     |     |     |     | 5,219         | 66,183           | 787              | 38            | 5          |           |          | 72,232           |
| 1972                       |     |     |     |     |     | 6,762         | 43,704           | 1,257            | 68            | 2          |           |          | 51,793           |
| 1973                       |     |     |     |     | 2   | 21,283        | 42,588           | 864              | 6             | 1          |           |          | 64,744           |
| 1974                       |     |     |     |     |     | 2,024         | 30,687           | 403              | 6             | 1          |           |          | 33,121           |
| 1975                       |     |     |     |     |     | 6,154         | 44,454           | 163              | 2             | 1          |           |          | 50,774           |
| 1976                       |     |     |     |     |     | 8,907         | 21,278           | 258              | 1             | 2          |           |          | 30,446           |
| 1977                       |     |     |     |     | 6   | 52,852        | 32,269           | 537              | 34            | 3          |           |          | 85,701           |
| 1978                       |     |     |     |     |     | 5,633         | 8,006            | 119              | 20            |            |           |          | 13,778           |
| 1979                       |     |     |     |     |     | 13,466        | 29,603           | 560              | 1             |            |           |          | 43,630           |
| 1980                       |     |     |     |     |     | 9,596         | 40,536           | 530              | 13            |            |           |          | 50,675           |
| 1981                       |     |     |     |     |     | 17,064        | 28,975           | 94               | 13            |            |           |          | 46,146           |
| 1982                       |     |     |     |     |     | 8,708         | 28,974           | 286              | 2             |            |           |          | 37,970           |
| 1983                       |     |     |     |     |     | 27,372        | 63,995           | 506              | 37            | 7          |           |          | 91,917           |
| 1984                       |     |     |     |     |     | 54,975        | 51,728           | 1,230            | 16            | 2          |           |          | 107,951          |
| 1985                       |     |     |     |     |     | 78,326        | 46,184           | 421              | 10            |            |           |          | 124,941          |
| 1986                       |     |     |     |     |     | 13,472        | 32,116           | 738              | 0             | 1          |           |          | 46,327           |
| 1987                       |     |     |     |     |     | 35,022        | 39,983           | 513              | 11            |            |           |          | 75,529           |
| 1988                       |     |     |     |     |     | 25,001        | 22,855           | 225              | 12            | 2          |           |          | 48,095           |
| 1989                       |     |     |     |     |     | 18,883        | 20,330           | 148              | 12            | 1          |           |          | 39,374           |
| 1990                       |     |     |     |     | 1   | 15,247        | 26,580           | 245              | 4             |            |           |          | 42,077           |
| 1991                       |     |     |     |     |     | 10,917        | 52,130           | 699              | 9             | 5          |           |          | 63,760           |
| 1992                       |     |     |     |     | 1   | 38,618        | 30,788           | 303              | 20            | 1          |           |          | 69,731           |
| 1993                       |     |     |     |     | 1   | 30,668        | 30,348           | 198              | 2             | 1          |           |          | 61,218           |
| 1994                       |     |     |     |     |     | 7,004         | 4,141            | 22               | 2             | 1          |           |          | 11,170           |
| 1995                       |     |     |     |     | 1   | 4,242         | 4,352            | 71               | 1             |            |           |          | 8,667            |
| 1996                       |     |     |     |     |     | 15,316        | 10,323           | 59               | 0             |            |           |          | 25,698           |
| 1997                       |     |     |     |     | 10  | 11,605        | 23,604           | 603              | 4             | 4          |           |          | 35,830           |
| 1998                       |     |     |     |     |     | 4,371         | 5,314            | 131              | 19            | 2          |           |          | 9,837            |
| 1999                       |     |     |     |     | 1   | 4,803         | 9,910            | 88               | 2             | 5          |           |          | 14,809           |
| 2000                       |     |     |     |     | 15  | 73,119        | 15,122           | 108              | 7             | 1          |           |          | 88,372           |
| 2001                       |     |     |     |     | 7   | 86,624        | 21,062           | 100              | 75            | 1          |           |          | 107,869          |
| 2002                       |     |     |     |     | 1   | 20,044        | 21,772           | 96               | 1             | 1          |           |          | 41,915           |
| 2003                       |     |     |     |     |     | 19,260        | 16,004           | 151              | 2             |            |           |          | 35,417           |
| 2004                       |     |     |     |     | 34  | 84,659        | 28,663           | 133              | 5             | 3          |           |          | 113,497          |
| 2005                       |     |     |     |     | -3  | 35,616        | 33,988           | 162              | 6             | 1          |           |          | 69,770           |
| 2006                       |     |     |     |     |     | 20,279        | 14,949           | 154              | 5             |            |           |          | 35,387           |
| 2007                       |     |     |     |     | 6   | 16,083        | 7,994            | 141              | 53            |            |           |          | 24,277           |
| 2008                       |     |     |     |     | 1   | 150,928       | 42,325           | 153              | 2             |            |           |          | 193,409          |
| 2009                       |     |     |     |     | 3   | 100,136       | 57,110           | 142              | 8             | 3          |           |          | 157,402          |
| 2010                       |     |     |     |     | 14  | 226,244       | 97,705           | 153              | 8             | 4          |           |          | 324,128          |
| 2011                       |     |     |     |     |     | 41,854        | 101,278          | 471              | 2             | 0          |           |          | 143,605          |
| 2012                       |     |     |     |     | 2   | 241,353       | 152,501          | 285              | 22            | 3          |           |          | 394,166          |
| <b>TOTAL</b>               |     |     |     |     |     | <b>103</b>    | <b>1,743,296</b> | <b>1,631,703</b> | <b>17,151</b> | <b>649</b> | <b>79</b> | <b>1</b> | <b>3,392,982</b> |
| <b>10-Year<br/>Average</b> |     |     |     |     |     | <b>93,641</b> | <b>55,252</b>    | <b>195</b>       | <b>11</b>     |            |           |          | <b>149,106</b>   |

TABLE 55  
 MONTHLY COUNT OF COHO SALMON  
 JOHN DAY DAM 1968 - 2012

| YEAR            | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG   | SEP    | OCT     | NOV     | DEC   | TOTAL*  |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-------|--------|---------|---------|-------|---------|
| 1968            |     |     |     |     |     |     | 4   | 1,311 | 32,882 | 3,848   | 188     |       | 38,233  |
| 1969            |     |     |     |     |     |     | 25  | 308   | 9,879  | 3,377   |         |       | 13,589  |
| 1970            |     |     |     |     |     |     | 14  | 1,026 | 17,272 | 1,231   |         |       | 19,543  |
| 1971            |     |     |     |     |     |     |     | 944   | 36,401 | 3,485   |         |       | 40,830  |
| 1972            |     |     |     |     |     |     |     | 1,253 | 14,965 | 1,315   |         |       | 17,533  |
| 1973            |     |     |     |     |     |     |     | 788   | 11,350 | 1,221   |         |       | 13,359  |
| 1974            |     |     |     |     |     |     |     | 730   | 11,253 | 2,668   |         |       | 14,651  |
| 1975            |     |     |     |     |     |     |     | 85    | 4,266  | 1,954   |         |       | 6,305   |
| 1976            |     |     |     |     |     |     |     | 57    | 3,739  | 2,010   |         |       | 5,806   |
| 1977            |     |     |     |     |     |     |     | 8     | 534    | 581     |         |       | 1,123   |
| 1978            |     |     |     |     |     |     |     | 6     | 2,676  | 5,673   |         |       | 8,355   |
| 1979            |     |     |     |     |     |     | 1   | 132   | 2,853  | 1,753   | 322     |       | 5,061   |
| 1980            |     |     |     |     |     |     |     | 27    | 1,431  | 466     |         |       | 1,924   |
| 1981            |     |     |     |     |     |     |     | 90    | 2,030  | 442     |         |       | 2,562   |
| 1982            |     |     |     |     |     |     |     | 145   | 3,032  | 886     |         |       | 4,063   |
| 1983            |     |     |     |     |     |     |     | 99    | 1,353  | 188     |         |       | 1,640   |
| 1984            |     |     |     |     |     |     |     | 4     | 1,736  | 331     | 9       |       | 2,080   |
| 1985            |     |     |     |     |     |     |     | 95    | 1,140  | 395     | 22      |       | 1,652   |
| 1986            |     |     |     |     |     |     |     |       | 1,527  | 406     |         |       | 1,933   |
| 1987            |     |     |     |     |     |     | 1   | 16    | 3,205  | 133     |         |       | 3,355   |
| 1988            |     |     |     |     |     |     | 3   | 241   | 5,170  | 1,399   |         |       | 6,813   |
| 1989            |     |     |     |     |     |     |     | 264   | 6,832  | 2,567   |         |       | 9,663   |
| 1990            |     |     |     |     |     |     |     | 1     | 1,890  | 1,132   |         |       | 3,023   |
| 1991            |     |     |     |     |     |     |     | 5     | 6,140  | 1,876   |         |       | 8,021   |
| 1992            |     |     |     |     |     |     |     |       | 2,153  | 480     |         |       | 2,633   |
| 1993            |     |     |     |     |     |     |     | 11    | 2,233  | 751     |         |       | 2,995   |
| 1994            |     |     |     |     |     |     |     | 164   | 1,892  | 786     |         |       | 2,842   |
| 1995            |     |     |     |     |     |     |     | 63    | 1,199  | 855     |         |       | 2,117   |
| 1996            |     |     |     |     |     |     |     | 11    | 3,432  | 836     |         |       | 4,279   |
| 1997            |     |     |     |     |     |     |     | 1     | 2,860  | 1,368   |         |       | 4,229   |
| 1998            |     |     |     |     |     |     |     | 18    | 2,806  | 5,673   |         |       | 8,497   |
| 1999            |     |     |     |     |     |     |     | 8     | 9,471  | 3,753   |         |       | 13,232  |
| 2000            |     |     |     |     | 2   |     |     | 921   | 15,355 | 7,691   |         |       | 23,969  |
| 2001            |     |     |     |     |     |     | 49  | 480   | 23,204 | 27,448  |         |       | 51,181  |
| 2002            |     |     |     |     |     |     |     | 66    | 5,101  | 4,105   |         |       | 9,272   |
| 2003            |     |     |     |     |     |     |     | 282   | 24,786 | 13,509  | 183     | 5     | 38,765  |
| 2004            |     |     |     |     |     |     |     | 161   | 24,884 | 9,710   | 766     | 1     | 35,522  |
| 2005            |     |     |     |     |     |     |     | 334   | 20,981 | 12,882  | 2,005   | 3     | 36,205  |
| 2006            |     |     |     |     |     |     |     | 613   | 20,825 | 12,340  | 4,543   | 53    | 38,374  |
| 2007            |     |     |     |     |     | 1   | 1   | 248   | 21,179 | 17,799  | 193     |       | 39,421  |
| 2008            |     |     |     |     |     |     |     | 810   | 29,451 | 14,637  |         |       | 44,898  |
| 2009            |     |     |     |     |     |     | 1   | 4,826 | 29,003 | 37,909  |         |       | 71,739  |
| 2010            |     |     |     |     |     |     | 10  | 375   | 14,126 | 8,761   |         |       | 23,272  |
| 2011            |     |     |     |     |     |     |     | 2,234 | 37,683 | 25,751  |         |       | 65,668  |
| 2012            |     |     |     |     |     |     | 9   | 1,393 | 28,826 | 3,631   |         |       | 33,859  |
| TOTAL           |     |     |     |     | 0   | 2   | 1   | 118   | 20,654 | 505,006 | 250,012 | 8,231 | 784,086 |
| 10-Year Average |     |     |     |     |     |     |     | 1,128 | 25,174 | 15,693  |         |       | 42,772  |

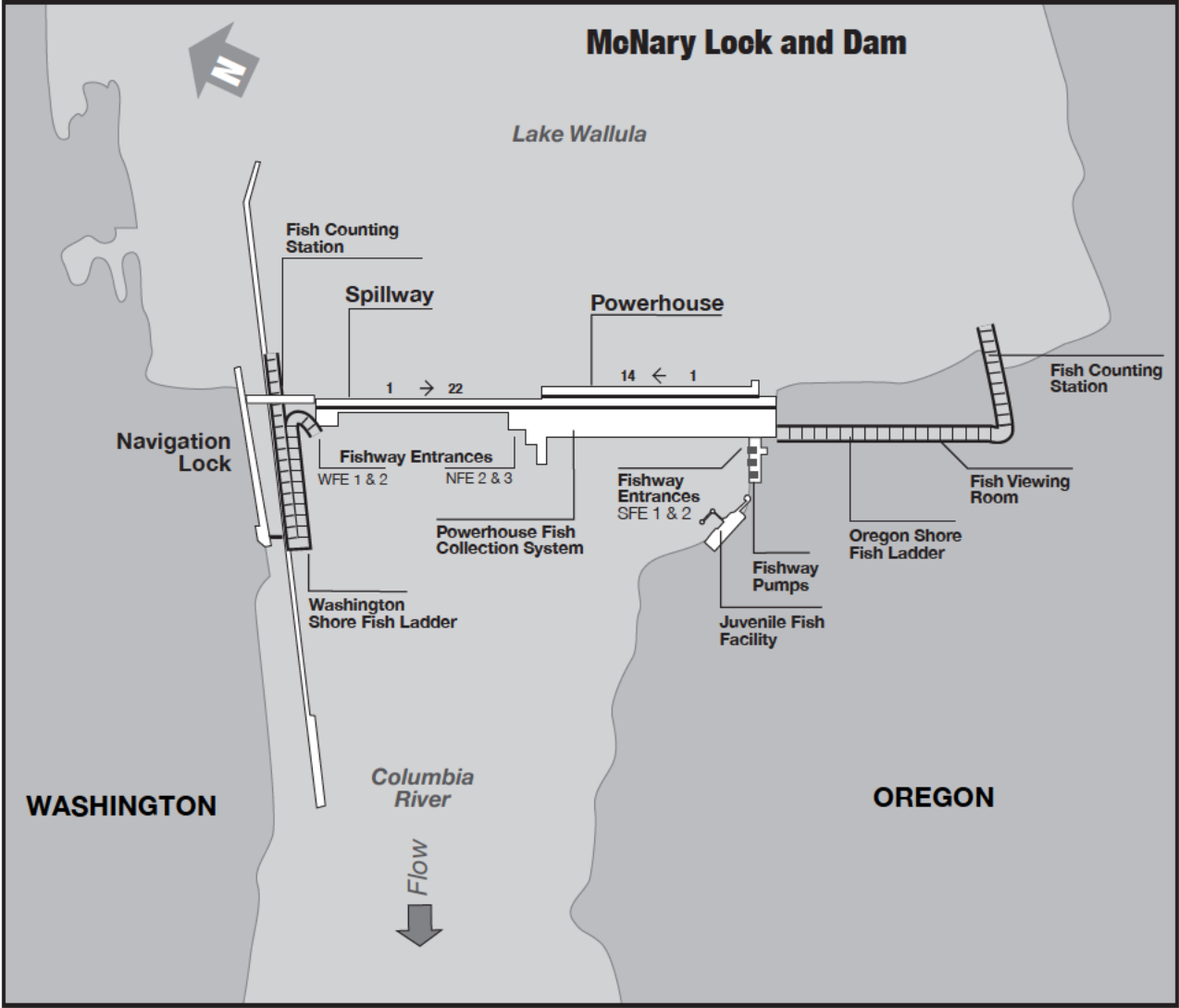
\*Jacks included

TABLE 56

**MONTHLY COUNT OF STEELHEAD  
JOHN DAY DAM 1968 - 2012**

| YEAR                     | JAN | FEB | MAR           | APR            | MAY           | JUN            | JUL            | AUG              | SEP              | OCT              | NOV           | DEC   | TOTAL            |
|--------------------------|-----|-----|---------------|----------------|---------------|----------------|----------------|------------------|------------------|------------------|---------------|-------|------------------|
| 1968                     |     |     |               | 3,939          | 2,659         | 151            | 6,094          | 26,824           | 68,791           | 11,405           | 1,393         |       | 121,256          |
| 1969                     |     |     | 314           | 3,986          | 3,691         | 714            | 12,004         | 13,267           | 40,082           | 12,290           |               |       | 86,348           |
| 1970                     |     |     |               | 1,987          | 1,279         | 253            | 7,373          | 19,412           | 46,036           | 6,100            |               |       | 82,440           |
| 1971                     |     |     |               | 1,472          | 592           | 263            | 17,459         | 19,693           | 63,868           | 12,630           |               |       | 115,977          |
| 1972                     |     |     |               | 1,523          | 1,966         | 356            | 17,656         | 20,502           | 78,138           | 21,487           |               |       | 141,628          |
| 1973                     |     |     |               | 8,019          | 3,546         | 785            | 12,134         | 15,608           | 46,566           | 14,782           |               |       | 101,440          |
| 1974                     |     |     |               | 1,713          | 2,363         | 1,361          | 9,713          | 8,419            | 12,479           | 7,708            |               |       | 43,756           |
| 1975                     |     |     |               | 760            | 428           | 648            | 6,251          | 8,583            | 9,977            | 6,004            |               |       | 32,651           |
| 1976                     |     |     |               | 929            | 1,248         | 1,868          | 9,254          | 17,964           | 22,754           | 5,791            |               |       | 59,808           |
| 1977                     |     |     |               | 1,319          | 418           | 2,341          | 18,366         | 7,088            | 56,134           | 16,892           |               |       | 102,558          |
| 1978                     |     |     |               | 741            | 631           | 1,601          | 5,573          | 6,911            | 22,896           | 5,835            |               |       | 44,188           |
| 1979                     |     |     |               | 602            | 136           | 253            | 8,012          | 10,717           | 16,202           | 18,072           | 1,883         |       | 55,877           |
| 1980                     |     |     |               | 4,131          | 555           | 577            | 5,850          | 18,114           | 34,700           | 14,272           |               |       | 78,199           |
| 1981                     |     |     |               | 2,061          | 1,539         | 2,515          | 15,999         | 18,283           | 34,098           | 20,677           |               |       | 95,172           |
| 1982                     |     |     |               | 3,393          | 1,698         | 1,167          | 10,168         | 19,693           | 50,725           | 21,759           |               |       | 108,603          |
| 1983                     |     |     |               | 1,492          | 434           | 560            | 15,088         | 31,453           | 83,215           | 22,183           |               |       | 154,425          |
| 1984                     |     |     |               | 3,316          | 1,787         | 2,101          | 21,442         | 19,743           | 100,437          | 46,506           | 5,822         |       | 201,154          |
| 1985                     |     |     |               | 6,821          | 1,723         | 3,583          | 19,631         | 64,456           | 109,488          | 37,227           | 4,164         |       | 247,093          |
| 1986                     |     |     | 3,611         | 2,040          | 887           | 2,362          | 37,732         | 31,576           | 107,002          | 52,800           |               |       | 238,010          |
| 1987                     |     |     |               | 3,926          | -747          | 942            | 23,614         | 34,203           | 69,585           | 39,131           |               |       | 170,654          |
| 1988                     |     |     |               | 4,290          | 525           | 2,188          | 17,649         | 25,741           | 81,859           | 32,398           |               |       | 164,650          |
| 1989                     |     |     |               | 2,940          | 508           | 2,445          | 18,254         | 22,548           | 104,521          | 42,244           |               |       | 193,460          |
| 1990                     |     |     |               | 3,339          | 600           | 1,902          | 10,544         | 9,445            | 42,888           | 39,131           |               |       | 107,849          |
| 1991                     |     |     |               | 2,547          | 660           | 1,256          | 12,827         | 18,310           | 87,277           | 37,380           |               |       | 160,257          |
| 1992                     |     |     |               | 1,334          | 406           | 2,337          | 10,732         | 17,326           | 143,823          | 19,236           |               |       | 195,194          |
| 1993                     |     |     |               | 3,453          | 808           | 2,845          | 9,434          | 11,018           | 46,447           | 21,637           |               |       | 95,642           |
| 1994                     |     |     |               | 2,286          | 413           | 1,647          | 6,961          | 7,140            | 44,175           | 30,453           |               |       | 93,075           |
| 1995                     |     |     |               | 1,498          | 488           | 1,757          | 7,755          | 26,450           | 45,087           | 40,211           |               |       | 123,246          |
| 1996                     |     |     |               | 1,597          | 462           | 1,576          | 11,885         | 42,853           | 67,171           | 30,458           |               |       | 156,002          |
| 1997                     |     |     |               | 2,171          | 810           | 2,021          | 12,847         | 22,179           | 75,119           | 41,891           |               |       | 157,038          |
| 1998                     |     |     |               | 4,367          | 1,018         | 2,460          | 9,827          | 9,053            | 67,322           | 64,500           |               |       | 158,547          |
| 1999                     |     |     |               | 2,702          | 764           | 1,975          | 17,083         | 42,160           | 72,719           | 27,911           |               |       | 165,314          |
| 2000                     |     |     |               | 2,607          | 784           | 4,500          | 23,496         | 37,827           | 113,619          | 37,495           |               |       | 220,328          |
| 2001                     |     |     |               | 1,946          | 550           | 11,031         | 52,946         | 50,723           | 230,803          | 135,410          |               |       | 483,409          |
| 2002                     |     |     |               | 7,330          | 972           | 5,875          | 42,167         | 59,430           | 170,893          | 103,633          |               |       | 390,300          |
| 2003                     |     |     | 9,792         | 1,327          | 222           | 4,888          | 28,019         | 23,687           | 177,058          | 50,975           | 7,666         | 1,408 | 305,042          |
| 2004                     |     | 186 | 2,591         | 1,437          | 537           | 6,840          | 20,250         | 24,594           | 145,241          | 28,300           | 3,401         | 54    | 233,431          |
| 2005                     |     | 106 | 2,571         | 843            | 456           | 3,424          | 24,705         | 27,445           | 116,336          | 49,965           | 6,158         | 94    | 232,103          |
| 2006                     |     | 32  | 1,252         | 2,104          | 343           | 2,575          | 15,719         | 25,008           | 125,323          | 46,050           | 12,909        | 40    | 231,355          |
| 2007                     |     | 400 | 3,584         | 1,592          | 641           | 2,450          | 16,497         | 43,710           | 119,499          | 42,809           | 5,509         | 826   | 237,517          |
| 2008                     |     |     |               | 2,363          | 1,004         | 5,973          | 45,572         | 41,931           | 144,781          | 35,538           |               |       | 277,162          |
| 2009                     |     |     |               | 2,502          | 674           | 5,136          | 43,692         | 167,086          | 262,375          | 100,180          |               |       | 581,645          |
| 2010                     |     |     |               | 2,156          | 442           | 7,589          | 73,271         | 36,206           | 123,408          | 40,740           |               |       | 283,812          |
| 2011                     |     |     |               | 2,396          | 408           | 1,090          | 32,498         | 101,526          | 83,950           | 35,477           |               |       | 257,345          |
| 2012                     |     |     |               | 1,657          | 277           | 1,995          | 27,799         | 34,466           | 67,996           | 27,893           |               |       | 162,083          |
| <b>TOTAL</b>             |     |     | <b>23,715</b> | <b>116,954</b> | <b>41,605</b> | <b>112,176</b> | <b>871,842</b> | <b>1,340,371</b> | <b>3,832,863</b> | <b>1,555,466</b> | <b>48,905</b> |       | <b>7,947,043</b> |
| <b>10-YR<br/>Average</b> |     |     |               | <b>1,838</b>   | <b>500</b>    | <b>4,196</b>   | <b>32,802</b>  | <b>52,566</b>    | <b>136,597</b>   | <b>45,793</b>    |               |       | <b>280,150</b>   |

# Plate 5 McNary Lock and Dam



## McNARY DAM

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### FISH COUNTING SCHEDULE

#### *Washington Ladder Schedule*

|                          |  |
|--------------------------|--|
| 1 January – 31 March     | No counting.                             |
| 1 April – 31 October     | Visual counts daily 0400-2000 hours PST. |
| 1 July – 30 September    | Night Video Lamprey counts.              |
| 1 November – 31 December | Counts by video tape review.             |

#### *Oregon Ladder Schedule*

|                          |  |
|--------------------------|--|
| 1 January - 31 March     | No counting.                               |
| 1 April – 31 October     | Visual counting daily 0400-2000 hours PST. |
| 1 July – 30 September    | Night video lamprey counts.                |
| 1 November – 31 December | Counts by video tape review.               |

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### FISH LADDER OPERATING SCHEDULE

#### *Washington Ladder*

|                           |  |
|---------------------------|--|
| 1 January - 2 February    | Ladder in service.                       |
| 2 February – 16 February  | Ladder dewatered for annual maintenance. |
| 16 February - 31 December | Ladder in service.                       |

#### *Oregon Ladder*

|                          |  |
|--------------------------|--|
| 1 January - 4 January    | Ladder in service.   |
| 4 January – 31 January   | Ladder in orifice flow for annual maintenance, not dewatered due to failed exit crane. |
| 31 January - 31 December | Ladder in service.   |

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### FISHWAY ACTIVITIES

Both ladders had new electrical wiring installed for the exit cranes. New cranes will be installed the winter of 2013.

Washington ladder maintenance activities consisted of a camera inspection of diffuser gratings with maintenance performed on all above-water structures and in the ladder to tailwater elevation. The junction pool still can not be dewatered due to problems with the concrete spillway bulkheads.

The Wasco county PUD was out of service from 31 January to 17 February for annual maintenance.

Due to failure of the exit crane, the Oregon ladder was not dewatered. Activities consisted of annual maintenance performed on above water structures, all regulating equipment and the exit traveling screens. PIT tag detectors were replaced at the count station. For lamprey passage, the project installed stilts on SFEW2. Camera inspections of all diffuser gratings were completed.

Fish pump 2 remains out of service for major overhaul. Fish pumps 1 and 3 were out of service from 4 January to 31 January for annual maintenance. Both pumps were operational from 1 March to 31 December.

The 1000 cfs gravity conduit was never closed due to failure of the exit crane which is required to close the Tainter valve at the conduit's intake and/or failure of the roto-valves which are at the conduit's discharges which also need to be replaced. We were able to modify the SeaSnake camera to conduct the required ladder diffuser inspection.

The juvenile bypass channel was operated for both juvenile and adult fallback passage, from 29 March to 20 December. From 3 to 9 April, the system was in emergency bypass due to failure of rectangular screen cleaning device which was repaired and for repainting the main full flow flume. From 6 November to 20 December, the system was in emergency bypass again due to failure of the rectangular screen cleaning device. When in emergency bypass, the system does not provide auxiliary flow to the Oregon ladder's north powerhouse entrances.

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TABLE 57

MONTHLY TOTALS OF SALMONIDS, SHAD, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER McNARY DAM  
2012

| SPECIES      | JAN | FEB | MAR          | APR          | MAY           | JUN            | JUL            | AUG           | SEP            | OCT           | NOV   | DEC   | TOTAL*         |
|--------------|-----|-----|--------------|--------------|---------------|----------------|----------------|---------------|----------------|---------------|-------|-------|----------------|
| CHINOOK*     |     |     |              | 1,877        | 94,385        | 45,725         | 31,612         | 19,396        | 174,650        | 36,164        | 1,306 | 87    | 405,202        |
| STEELHEAD    |     |     | 3,009        | 1,521        | 234           | 1,744          | 18,373         | 33,983        | 62,318         | 28,580        | 4,931 | 2,325 | 157,018        |
| SOCKEYE      |     |     |              |              | 1             | 165,803        | 198,037        | 292           | 14             |               |       |       | 364,147        |
| COHO*        |     |     |              |              |               |                |                | 424           | 14,779         | 2,998         | 550   | 50    | 18,801         |
| CHUM         |     |     |              |              |               |                |                |               |                |               |       |       | 0              |
| PINK         |     |     |              |              |               |                |                |               |                |               |       |       | 0              |
| <b>TOTAL</b> |     |     | <b>3,009</b> | <b>3,398</b> | <b>94,620</b> | <b>213,272</b> | <b>248,022</b> | <b>54,095</b> | <b>251,761</b> | <b>67,742</b> |       |       | <b>945,168</b> |
| SHAD         |     |     |              |              | 29            | 311,763        | 344,616        | 19,013        |                |               |       |       | 675,421        |
| LAMPREY      |     |     |              | 3            | 2             | 0              | 154            | 556           | 232            | 23            |       |       | 970            |
| STURGEON     |     |     |              |              |               |                |                |               |                |               |       |       | 0              |
| BULL TROUT   |     |     |              |              |               |                |                |               |                |               |       |       | 0              |

\*Jacks Included  
Count began March 31.

TABLE 58

## DISCHARGE AND WATER QUALITY DATA

## MCNARY PROJECT 2012

| JANUARY |       |       |           |       | FEBRUARY |       |       |           |       |
|---------|-------|-------|-----------|-------|----------|-------|-------|-----------|-------|
| DATE    | DISCH | SPILL | TURBIDITY |       | DATE     | DISCH | SPILL | TURBIDITY |       |
|         | KCFS  | KCFS  | SECCHI    | DEG F |          | KCFS  | KCFS  | SECCHI    | DEG F |
| Jan 1   | 138.7 | 0.0   | 6+        | 42.0  | Feb 1    | 112.6 | 0.0   | 6+        | 37.0  |
| Jan 2   | 112.3 | 0.0   | 6+        | 42.0  | Feb 2    | 120.7 | 0.0   | 6+        | 37.0  |
| Jan 3   | 131.4 | 0.0   | 6+        | 42.0  | Feb 3    | 138.1 | 0.0   | 6+        | 37.0  |
| Jan 4   | 132.3 | 0.0   | 6+        | 42.0  | Feb 4    | 124.7 | 0.0   | 6+        | 37.0  |
| Jan 5   | 117.2 | 0.0   | 6+        | 42.0  | Feb 5    | 104.3 | 0.0   | 6+        | 37.0  |
| Jan 6   | 111.0 | 0.0   | 6+        | 42.0  | Feb 6    | 131.9 | 0.0   | 6+        | 38.0  |
| Jan 7   | 107.5 | 0.0   | 6+        | 42.0  | Feb 7    | 119.0 | 0.0   | 6+        | 38.0  |
| Jan 8   | 117.0 | 0.0   | 6+        | 40.0  | Feb 8    | 136.5 | 0.0   | 6+        | 38.0  |
| Jan 9   | 139.2 | 0.0   | 6+        | 40.0  | Feb 9    | 122.4 | 0.0   | 6+        | 38.0  |
| Jan 10  | 127.2 | 0.0   | 6+        | 40.0  | Feb 10   | 133.0 | 0.0   | 6+        | 38.0  |
| Jan 11  | 130.7 | 0.0   | 6+        | 40.0  | Feb 11   | 122.2 | 0.0   | 6+        | 38.0  |
| Jan 12  | 146.8 | 0.0   | 6+        | 40.0  | Feb 12   | 129.6 | 0.0   | 6+        | 37.0  |
| Jan 13  | 142.5 | 0.0   | 6+        | 40.0  | Feb 13   | 115.4 | 0.0   | 6+        | 37.0  |
| Jan 14  | 117.4 | 0.0   | 6+        | 40.0  | Feb 14   | 131.5 | 0.0   | 6+        | 37.0  |
| Jan 15  | 119.1 | 0.0   | 6+        | 40.0  | Feb 15   | 140.5 | 0.0   | 6.0       | 37.0  |
| Jan 16  | 125.9 | 0.0   | 6+        | 40.0  | Feb 16   | 139.0 | 0.0   | 6.0       | 37.0  |
| Jan 17  | 127.8 | 0.0   | 6+        | 40.0  | Feb 17   | 124.2 | 0.0   | 5.9       | 38.0  |
| Jan 18  | 161.5 | 0.0   | 6+        | 40.0  | Feb 18   | 119.4 | 0.0   | 5.9       | 38.0  |
| Jan 19  | 157.4 | 0.0   | 6+        | 40.0  | Feb 19   | 115.8 | 0.0   | 6+        | 38.0  |
| Jan 20  | 148.1 | 0.0   | 6+        | 38.0  | Feb 20   | 121.9 | 0.0   | 6+        | 38.0  |
| Jan 21  | 130.5 | 0.0   | 6+        | 37.0  | Feb 21   | 123.9 | 0.0   | 6+        | 38.0  |
| Jan 22  | 122.5 | 0.0   | 6+        | 37.0  | Feb 22   | 130.5 | 0.0   | 6+        | 38.0  |
| Jan 23  | 134.3 | 0.0   | 6+        | 36.0  | Feb 23   | 149.4 | 0.0   | 6+        | 39.0  |
| Jan 24  | 133.1 | 0.0   | 6+        | 36.0  | Feb 24   | 156.8 | 0.0   | 6+        | 39.0  |
| Jan 25  | 130.9 | 0.0   | 6+        | 36.0  | Feb 25   | 119.7 | 0.0   | 6+        | 40.0  |
| Jan 26  | 127.9 | 0.0   | 6+        | 37.0  | Feb 26   | 121.3 | 0.0   | 6+        | 40.0  |
| Jan 27  | 144.6 | 0.0   | 6+        | 37.0  | Feb 27   | 135.3 | 0.0   | 6+        | 40.0  |
| Jan 28  | 147.0 | 0.0   | 6+        | 37.0  | Feb 28   | 146.0 | 0.0   | N/A       | 40.0  |
| Jan 29  | 122.4 | 0.0   | 6+        | 37.0  | Feb 29   | 122.4 | 0.0   | 3.5       | 40.0  |
| Jan 30  | 114.0 | 0.0   | 6+        | 37.0  |          |       |       |           |       |
| Jan 31  | 112.0 | 0.0   | 6+        | 37.0  |          |       |       |           |       |
| AVG.    | 130.0 | 0.0   | 6+        | 39.2  | AVG.     | 127.9 | 0.0   | 6+        | 38.1  |



TABLE 59

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| DATE         | MCNARY PROJECT - FISH COUNTS |        |      |         |       |      |              |              |           |      |      | MARCH 2012 |              |             |            |             |  |
|--------------|------------------------------|--------|------|---------|-------|------|--------------|--------------|-----------|------|------|------------|--------------|-------------|------------|-------------|--|
|              | CHINOOK ADULT                |        |      | CHINOOK | COHO  | COHO | TOTAL        |              | unclipped |      | PINK | SHAD       | LAMPREY      | DISCH       | SPILL      | TURBIDITY   |  |
|              | SPRING                       | SUMMER | FALL | JACK    | ADULT | JACK | SOCKEYE      | STEELHEAD    | STEELHEAD | KCFS |      |            |              | KCFS        | SECCHI     | DEG F       |  |
| Mar 1        |                              |        |      |         |       |      | 45           | 20           |           |      |      |            | 133.7        | 0.0         | 3.8        | 40.0        |  |
| Mar 2        |                              |        |      |         |       |      | 81           | 37           |           |      |      |            | 133.5        | 0.0         | 5.1        | 40.0        |  |
| Mar 3        |                              |        |      |         |       |      | 72           | 27           |           |      |      |            | 131.0        | 0.0         | N/A        | 39.0        |  |
| Mar 4        |                              |        |      |         |       |      | 27           | 7            |           |      |      |            | 127.8        | 0.0         | N/A        | 40.0        |  |
| Mar 5        |                              |        |      |         |       |      | 51           | 18           |           |      |      |            | 109.7        | 0.0         | 5.6        | 40.0        |  |
| Mar 6        |                              |        |      |         |       |      | 93           | 48           |           |      |      |            | 146.8        | 0.0         | 6.0        | 40.0        |  |
| Mar 7        |                              |        |      |         |       |      | 125          | 60           |           |      |      |            | 162.7        | 0.0         | 6.0        | 40.0        |  |
| Mar 8        |                              |        |      |         |       |      | 83           | 28           |           |      |      |            | 160.4        | 0.0         | 6.0        | 40.0        |  |
| Mar 9        |                              |        |      |         |       |      | 82           | 31           |           |      |      |            | 153.7        | 0.0         | 6.0        | 40.0        |  |
| Mar 10       |                              |        |      |         |       |      | 33           | 18           |           |      |      |            | 147.3        | 0.0         | 6.0        | 40.0        |  |
| Mar 11       |                              |        |      |         |       |      | 66           | 31           |           |      |      |            | 133.7        | 0.0         | 6.0        | 40.0        |  |
| Mar 12       |                              |        |      |         |       |      | 82           | 29           |           |      |      |            | 162.8        | 0.0         | 6.0        | 40.0        |  |
| Mar 13       |                              |        |      |         |       |      | 60           | 31           |           |      |      |            | 168.0        | 0.0         | 6+         | 40.0        |  |
| Mar 14       |                              |        |      |         |       |      | 43           | 19           |           |      |      |            | 179.0        | 24.5        | 6+         | 40.0        |  |
| Mar 15       |                              |        |      |         |       |      | 88           | 38           |           |      |      |            | 189.2        | 61.6        | 6+         | 40.0        |  |
| Mar 16       |                              |        |      |         |       |      | 73           | 37           |           |      |      |            | 199.3        | 72.6        | 6+         | 40.0        |  |
| Mar 17       |                              |        |      |         |       |      | 96           | 42           |           |      |      |            | 214.7        | 76.4        | 6+         | 41.0        |  |
| Mar 18       |                              |        |      |         |       |      | 111          | 47           |           |      |      |            | 194.7        | 54.9        | 6+         | 41.0        |  |
| Mar 19       |                              |        |      |         |       |      | 109          | 48           |           |      |      |            | 197.8        | 46.5        | 6+         | 41.0        |  |
| Mar 20       |                              |        |      |         |       |      | 171          | 57           |           |      |      |            | 172.9        | 8.0         | 3.1        | 41.0        |  |
| Mar 21       |                              |        |      |         |       |      | 171          | 64           |           |      |      |            | 213.1        | 35.8        | 6+         | 41.0        |  |
| Mar 22       |                              |        |      |         |       |      | 204          | 57           |           |      |      |            | 220.8        | 53.4        | 5.4        | 41.0        |  |
| Mar 23       |                              |        |      |         |       |      | 110          | 45           |           |      |      |            | 245.2        | 76.2        | 4.3        | 41.0        |  |
| Mar 24       |                              |        |      |         |       |      | 144          | 71           |           |      |      |            | 248.7        | 74.8        | 4.2        | 41.0        |  |
| Mar 25       |                              |        |      |         |       |      | 141          | 54           |           |      |      |            | 249.5        | 72.6        | 3.4        | 41.0        |  |
| Mar 26       |                              |        |      |         |       |      | 114          | 45           |           |      |      |            | 233.9        | 52.2        | 3.5        | 42.0        |  |
| Mar 27       |                              |        |      |         |       |      | 127          | 51           |           |      |      |            | 257.9        | 62.7        | 3.4        | 42.0        |  |
| Mar 28       |                              |        |      |         |       |      | 152          | 61           |           |      |      |            | 277.4        | 83.0        | 3.5        | 42.0        |  |
| Mar 29       |                              |        |      |         |       |      | 96           | 39           |           |      |      |            | 290.3        | 96.2        | 3.2        | 42.0        |  |
| Mar 30       |                              |        |      |         |       |      | 88           | 30           |           |      |      |            | 288.2        | 91.7        | 3.0        | 42.0        |  |
| Mar 31       |                              |        |      |         |       |      | 71           | 34           |           |      |      |            | 321.9        | 124.9       | 3.5        | 42.0        |  |
| <b>TOTAL</b> |                              |        |      |         |       |      | <b>3,009</b> | <b>1,224</b> |           |      |      |            |              |             |            |             |  |
| <b>AVG.</b>  |                              |        |      |         |       |      | <b>97</b>    | <b>39</b>    |           |      |      |            | <b>195.7</b> | <b>37.7</b> | <b>4.6</b> | <b>40.6</b> |  |

Note: March counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Spring Chinook run started April 1. March chinook counts were not added to spring totals.

TABLE 60

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL        |                     | PINK | SHAD | LAMPREY  | DISCH KCFS   | SPILL KCFS   | TURBIDITY SECCHI | TEMP DEG F  |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|--------------|---------------------|------|------|----------|--------------|--------------|------------------|-------------|
|              | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD    | unclipped STEELHEAD |      |      |          |              |              |                  |             |
| Apr 1        | -1            |        |      | 0            |            |           |         | 38           | 22                  |      |      | 0        | 341.7        | 192.0        | 2.6              | 43.0        |
| Apr 2        | 0             |        |      | 0            |            |           |         | 57           | 32                  |      |      | 0        | 297.0        | 147.8        | 2.0              | 42.0        |
| Apr 3        | 1             |        |      | 0            |            |           |         | 97           | 53                  |      |      | 0        | 284.9        | 142.2        | 1.5              | 42.0        |
| Apr 4        | 1             |        |      | 0            |            |           |         | 91           | 35                  |      |      | 0        | 291.1        | 142.1        | 1.5              | 43.0        |
| Apr 5        | 0             |        |      | 0            |            |           |         | 66           | 24                  |      |      | 0        | 273.8        | 125.3        | N/A              | 43.0        |
| Apr 6        | 0             |        |      | 0            |            |           |         | 67           | 29                  |      |      | 0        | 296.2        | 146.7        | 1.5              | 44.0        |
| Apr 7        | 1             |        |      | 0            |            |           |         | 52           | 32                  |      |      | 0        | 306.9        | 157.2        | 2.4              | 44.0        |
| Apr 8        | 1             |        |      | 0            |            |           |         | 78           | 50                  |      |      | 1        | 280.5        | 130.5        | 2.5              | 44.0        |
| Apr 9        | 0             |        |      | 0            |            |           |         | 41           | 31                  |      |      | 0        | 276.1        | 131.1        | 2.8              | 45.0        |
| Apr 10       | 0             |        |      | 0            |            |           |         | 49           | 31                  |      |      | 0        | 281.4        | 135.8        | 2.5              | 45.0        |
| Apr 11       | 1             |        |      | 0            |            |           |         | 27           | 13                  |      |      | 0        | 296.5        | 151.5        | 3.6              | 45.0        |
| Apr 12       | 0             |        |      | 0            |            |           |         | 37           | 19                  |      |      | 0        | 289.1        | 145.0        | 3.4              | 45.0        |
| Apr 13       | 0             |        |      | 0            |            |           |         | 48           | 34                  |      |      | 0        | 301.5        | 156.7        | 3.7              | 45.0        |
| Apr 14       | 2             |        |      | 0            |            |           |         | 53           | 33                  |      |      | 0        | 292.6        | 150.0        | 4.1              | 46.0        |
| Apr 15       | 2             |        |      | 0            |            |           |         | 77           | 54                  |      |      | 0        | 294.5        | 144.4        | 4.4              | 46.0        |
| Apr 16       | 7             |        |      | 1            |            |           |         | 73           | 49                  |      |      | 0        | 278.7        | 131.9        | 4.5              | 47.0        |
| Apr 17       | 6             |        |      | 0            |            |           |         | 65           | 44                  |      |      | 0        | 288.3        | 142.0        | 4.3              | 47.0        |
| Apr 18       | 2             |        |      | 0            |            |           |         | 50           | 31                  |      |      | 0        | 302.6        | 151.4        | 4.7              | 47.0        |
| Apr 19       | 2             |        |      | 0            |            |           |         | 30           | 17                  |      |      | 0        | 299.6        | 151.9        | 3.9              | 47.0        |
| Apr 20       | 12            |        |      | 0            |            |           |         | 42           | 25                  |      |      | 0        | 311.7        | 164.8        | 4.4              | 47.0        |
| Apr 21       | 15            |        |      | 0            |            |           |         | 41           | 22                  |      |      | 1        | 311.6        | 160.2        | 3.5              | 47.0        |
| Apr 22       | 7             |        |      | 0            |            |           |         | 39           | 27                  |      |      | 0        | 319.7        | 168.4        | 4.0              | 48.0        |
| Apr 23       | 29            |        |      | 0            |            |           |         | 43           | 32                  |      |      | 0        | 333.3        | 182.3        | 4.2              | 49.0        |
| Apr 24       | 73            |        |      | 0            |            |           |         | 62           | 45                  |      |      | 0        | 354.6        | 205.6        | 4.1              | 50.0        |
| Apr 25       | 54            |        |      | 0            |            |           |         | 48           | 31                  |      |      | 0        | 411.8        | 272.0        | 4.0              | 50.0        |
| Apr 26       | 82            |        |      | 1            |            |           |         | 42           | 23                  |      |      | 0        | 375.6        | 228.8        | 3.1              | 50.0        |
| Apr 27       | 112           |        |      | 1            |            |           |         | 32           | 18                  |      |      | 1        | 394.7        | 240.0        | N/A              | 50.0        |
| Apr 28       | 267           |        |      | 4            |            |           |         | 27           | 18                  |      |      | 0        | 394.9        | 221.7        | 2.7              | 50.0        |
| Apr 29       | 556           |        |      | 11           |            |           |         | 20           | 13                  |      |      | 0        | 381.0        | 206.3        | 3.0              | 51.0        |
| Apr 30       | 626           |        |      | 1            |            |           |         | 29           | 14                  |      |      | 0        | 382.6        | 210.4        | 2.5              | 51.0        |
| <b>TOTAL</b> | <b>1,858</b>  |        |      | <b>19</b>    |            |           |         | <b>1,521</b> | <b>901</b>          |      |      | <b>3</b> |              |              |                  |             |
| <b>AVG.</b>  | <b>62</b>     |        |      | <b>1</b>     |            |           |         | <b>51</b>    | <b>30</b>           |      |      | <b>0</b> | <b>318.2</b> | <b>167.9</b> | <b>3.3</b>       | <b>46.4</b> |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. Official Spring Chinook run started April 1.

TABLE 61

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT |                      | CHINOOK JACK        | COHO ADULT | COHO JACK | SOCKEYE  | TOTAL unclipped        |                            | PINK | SHAD        | LAMPREY        | DISCH KCFS   | SPILL KCFS   | TURBIDITY SECCHI | TEMP DEG F  |
|-----------------------|---------------|----------------------|---------------------|------------|-----------|----------|------------------------|----------------------------|------|-------------|----------------|--------------|--------------|------------------|-------------|
|                       | SPRING        | SUMMER               |                     |            |           |          | FALL                   | STEELHEAD                  |      |             |                |              |              |                  |             |
| May 1                 | 806           |                      | 27                  |            |           | 0        | 12                     | 8                          |      | 0           | 0              | 393.1        | 221.3        | 2.8              | 51.0        |
| May 2                 | 735           |                      | 4                   |            |           | 0        | 12                     | 9                          |      | 0           | 0              | 397.6        | 224.2        | 3.0              | 51.0        |
| May 3                 | 468           |                      | 10                  |            |           | 0        | 11                     | 9                          |      | 0           | 0              | 398.8        | 225.3        | 3.1              | 50.0        |
| May 4                 | 897           |                      | 18                  |            |           | 0        | 10                     | 7                          |      | 0           | 0              | 393.2        | 219.5        | 3.0              | 50.0        |
| May 5                 | 886           |                      | 39                  |            |           | 0        | 16                     | 9                          |      | 0           | 0              | 379.9        | 206.9        | 3.2              | 49.0        |
| May 6                 | 882           |                      | 14                  |            |           | 0        | 7                      | 5                          |      | 0           | 0              | 355.5        | 181.1        | 3.1              | 50.0        |
| May 7                 | 702           |                      | 30                  |            |           | 0        | 5                      | 0                          |      | 0           | 0              | 347.6        | 173.8        | 3.0              | 50.0        |
| May 8                 | 720           |                      | 23                  |            |           | 0        | 7                      | 5                          |      | 0           | 0              | 344.7        | 170.8        | 3.2              | 50.0        |
| May 9                 | 1,048         |                      | 35                  |            |           | 0        | 13                     | 6                          |      | 0           | 0              | 340.3        | 183.1        | 3.3              | 50.0        |
| May 10                | 1,553         |                      | 41                  |            |           | 0        | 2                      | 2                          |      | 0           | 0              | 334.2        | 164.5        | 3.0              | 50.0        |
| May 11                | 3,085         |                      | 89                  |            |           | 0        | 9                      | 5                          |      | 0           | 0              | 353.2        | 177.5        | 3.6              | 53.0        |
| May 12                | 3,730         |                      | 110                 |            |           | 0        | 2                      | 1                          |      | 0           | 0              | 344.6        | 168.4        | 4.4              | 53.0        |
| May 13                | 8,053         |                      | 162                 |            |           | 0        | 3                      | 1                          |      | 0           | 0              | 298.3        | 123.2        | 4.8              | 53.0        |
| May 14                | 10,113        |                      | 326                 |            |           | 0        | 6                      | 0                          |      | 0           | 0              | 312.3        | 136.6        | 4.8              | 53.0        |
| May 15                | 9,850         |                      | 368                 |            |           | 0        | 19                     | 8                          |      | 0           | 0              | 337.9        | 162.5        | 4.0              | 53.0        |
| May 16                | 6,067         |                      | 239                 |            |           | 0        | 1                      | 0                          |      | 0           | 0              | 326.3        | 150.6        | 4.8              | 55.0        |
| May 17                | 5,525         |                      | 240                 |            |           | 0        | 5                      | 1                          |      | 0           | 0              | 345.1        | 168.7        | 5.1              | 55.0        |
| May 18                | 6,199         |                      | 256                 |            |           | 0        | 6                      | 0                          |      | 0           | 0              | 387.4        | 213.7        | 5.0              | 56.0        |
| May 19                | 5,523         |                      | 350                 |            |           | 0        | 11                     | 0                          |      | 0           | 0              | 361.1        | 186.2        | 5.0              | 56.0        |
| May 20                | 4,155         |                      | 286                 |            |           | 0        | 5                      | 0                          |      | 0           | 0              | 353.3        | 178.3        | 5.0              | 56.0        |
| May 21                | 2,805         |                      | 219                 |            |           | 0        | 6                      | 2                          |      | 0           | 1              | 362.7        | 192.0        | 5.2              | 56.0        |
| May 22                | 2,821         |                      | 219                 |            |           | 0        | 4                      | 0                          |      | 0           | 0              | 361.6        | 190.1        | 5.3              | 55.0        |
| May 23                | 1,995         |                      | 159                 |            |           | 0        | 6                      | 0                          |      | 0           | 0              | 370.6        | 197.1        | 4.2              | 55.0        |
| May 24                | 1,548         |                      | 147                 |            |           | 0        | 5                      | 1                          |      | 1           | 0              | 367.5        | 192.3        | 4.4              | 55.0        |
| May 25                | 2,256         |                      | 186                 |            |           | 0        | 7                      | 0                          |      | 0           | 1              | 359.3        | 184.2        | 4.2              | 55.0        |
| May 26                | 1,231         |                      | 110                 |            |           | 0        | 1                      | 0                          |      | 1           | 0              | 330.2        | 161.4        | 4.1              | 55.0        |
| May 27                | 1,465         |                      | 139                 |            |           | 0        | 8                      | 2                          |      | 2           | 0              | 336.9        | 166.8        | 4.0              | 54.0        |
| May 28                | 1,698         |                      | 120                 |            |           | 0        | 5                      | 1                          |      | 1           | 0              | 297.5        | 125.6        | 4.2              | 54.0        |
| May 29                | 1,044         |                      | 81                  |            |           | 0        | 16                     | 1                          |      | 3           | 0              | 301.2        | 130.9        | 4.8              | 55.0        |
| May 30                | 1,036         |                      | 105                 |            |           | 1        | 6                      | 1                          |      | 11          | 0              | 295.0        | 121.2        | 5.0              | 55.0        |
| May 31                | 1,273         |                      | 64                  |            |           | 0        | 8                      | 3                          |      | 10          | 0              | 284.9        | 114.7        | 5.1              | 56.0        |
| <b>TOTAL</b>          | <b>90,169</b> |                      | <b>4,216</b>        |            |           | <b>1</b> | <b>234</b>             | <b>87</b>                  |      | <b>29</b>   | <b>2</b>       |              |              |                  |             |
| <b>AVG.</b>           | <b>2,909</b>  |                      | <b>136</b>          |            |           | <b>0</b> | <b>8</b>               | <b>3</b>                   |      | <b>1</b>    | <b>0</b>       | <b>347.5</b> | <b>174.6</b> | <b>4.1</b>       | <b>53.2</b> |
| <b>RUN YEAR</b>       |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |            |           |          | <b>TOTAL STEELHEAD</b> | <b>unclipped STEELHEAD</b> |      | <b>SHAD</b> | <b>LAMPREY</b> |              |              |                  |             |
| <b>TOTALS TO DATE</b> |               | <b>92,027</b>        | <b>4,235</b>        |            |           |          | <b>1,755</b>           | <b>988</b>                 |      | <b>29</b>   | <b>5</b>       |              |              |                  |             |
| <b>SPRING</b>         |               |                      |                     |            |           | <b>1</b> |                        |                            |      |             |                |              |              |                  |             |

TABLE 62

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |               | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE        | TOTAL unclipped |            |           | SHAD           | LAMPREY  | DISCH KCFS | SPILL KCFS | TURBIDITY |        |
|--------------|---------------|---------------|--------------|------------|-----------|----------------|-----------------|------------|-----------|----------------|----------|------------|------------|-----------|--------|
|              | SPRING        | SUMMER        |              |            |           |                | FALL            | STEELHEAD  | STEELHEAD |                |          |            |            | PINK      | SECCHI |
| Jun 1        | 1,460         |               | 90           |            |           | 0              | 6               | 1          |           | 6              | -1       | 282.1      | 113.3      | 4.3       | 56.0   |
| Jun 2        | 760           |               | 41           |            |           | 1              | 10              | 1          |           | 10             | 0        | 283.4      | 113.7      | 4.3       | 56.0   |
| Jun 3        | 963           |               | 69           |            |           | 1              | 6               | 2          |           | 23             | 0        | 279.5      | 112.2      | 4.3       | 57.0   |
| Jun 4        | 1,220         |               | 44           |            |           | 5              | 5               | 1          |           | 32             | 0        | 313.3      | 146.4      | 4.4       | 57.0   |
| Jun 5        | 1,543         |               | 71           |            |           | 12             | 10              | 2          |           | 36             | 0        | 311.2      | 157.6      | 4.8       | 57.0   |
| Jun 6        | 1,077         |               | 68           |            |           | 11             | 10              | 0          |           | 23             | 0        | 328.4      | 183.5      | 4.8       | 57.0   |
| Jun 7        | 1,807         |               | 117          |            |           | 20             | 17              | 1          |           | 34             | 0        | 356.8      | 193.0      | 4.6       | 57.0   |
| Jun 8        | 1,906         |               | 52           |            |           | 87             | 16              | 2          |           | 224            | 0        | 354.7      | 198.5      | 4.2       | 57.0   |
| Jun 9        |               | 1,218         | 44           |            |           | 165            | 10              | 1          |           | 147            | 0        | 351.2      | 205.6      | 4.2       | 56.0   |
| Jun 10       |               | 1,008         | 49           |            |           | 207            | 17              | 0          |           | 457            | 0        | 339.3      | 178.4      | 4.0       | 55.0   |
| Jun 11       |               | 1,167         | 12           |            |           | 261            | 24              | 2          |           | 1,226          | 0        | 353.0      | 201.3      | 5.6       | 56.0   |
| Jun 12       |               | 1,206         | 80           |            |           | 303            | 24              | 5          |           | 4,754          | 0        | 330.1      | 181.8      | 4.2       | 56.0   |
| Jun 13       |               | 1,069         | 69           |            |           | 437            | 34              | 0          |           | 5,921          | -1       | 345.6      | 198.9      | 4.3       | 56.0   |
| Jun 14       |               | 1,084         | 60           |            |           | 875            | 27              | 9          |           | 11,475         | 0        | 339.5      | 190.2      | 4.1       | 57.0   |
| Jun 15       |               | 1,107         | 52           |            |           | 1,298          | 27              | 6          |           | 19,561         | 0        | 339.7      | 190.0      | 4.9       | 57.0   |
| Jun 16       |               | 1,058         | 37           |            |           | 2,028          | 31              | 5          |           | 23,707         | 0        | 308.3      | 160.7      | 5.1       | 58.0   |
| Jun 17       |               | 1,458         | 53           |            |           | 2,291          | 75              | 26         |           | 17,346         | 1        | 333.8      | 189.6      | 5.4       | 58.0   |
| Jun 18       |               | 1,994         | 53           |            |           | 4,935          | 56              | 19         |           | 19,584         | 1        | 331.1      | 201.2      | 4.1       | 58.0   |
| Jun 19       |               | 1,512         | 80           |            |           | 4,578          | 57              | 15         |           | 17,023         | 0        | 351.2      | 230.8      | 4.4       | 58.0   |
| Jun 20       |               | 1,502         | 44           |            |           | 5,370          | 73              | 21         |           | 19,313         | 0        | 353.8      | 233.3      | 4.2       | 58.0   |
| Jun 21       |               | 1,767         | 73           |            |           | 7,435          | 56              | 12         |           | 22,303         | 0        | 351.3      | 222.4      | 4.9       | 58.0   |
| Jun 22       |               | 1,984         | 90           |            |           | 8,885          | 91              | 29         |           | 15,833         | 0        | 364.4      | 222.6      | 4.8       | 58.0   |
| Jun 23       |               | 1,903         | 120          |            |           | 11,936         | 86              | 19         |           | 23,128         | 0        | 353.6      | 216.2      | 4.6       | 56.0   |
| Jun 24       |               | 1,902         | 145          |            |           | 13,137         | 82              | 19         |           | 24,764         | 0        | 355.8      | 228.9      | 4.7       | 56.0   |
| Jun 25       |               | 2,065         | 151          |            |           | 15,924         | 129             | 37         |           | 20,649         | 0        | 394.3      | 277.9      | 4.5       | 59.0   |
| Jun 26       |               | 1,409         | 171          |            |           | 14,419         | 198             | 54         |           | 10,827         | 0        | 406.3      | 297.0      | 4.1       | 60.0   |
| Jun 27       |               | 1,466         | 270          |            |           | 19,372         | 191             | 74         |           | 11,679         | 0        | 414.4      | 303.2      | 4.7       | 59.0   |
| Jun 28       |               | 1,360         | 124          |            |           | 14,203         | 110             | 26         |           | 14,841         | 0        | 403.3      | 291.9      | 4.6       | 59.0   |
| Jun 29       |               | 1,662         | 151          |            |           | 16,630         | 112             | 34         |           | 15,735         | 0        | 393.2      | 268.5      | 4.8       | 59.0   |
| Jun 30       |               | 1,482         | 126          |            |           | 20,977         | 154             | 34         |           | 11,102         | 0        | 386.0      | 250.4      | 6.0       | 59.0   |
| <b>TOTAL</b> | <b>10,736</b> | <b>32,383</b> | <b>2,606</b> |            |           | <b>165,803</b> | <b>1,744</b>    | <b>457</b> |           | <b>311,763</b> | <b>0</b> |            |            |           |        |

|      |       |       |    |  |  |       |    |    |  |        |   |       |       |     |      |
|------|-------|-------|----|--|--|-------|----|----|--|--------|---|-------|-------|-----|------|
| AVG. | 1,342 | 1,472 | 87 |  |  | 5,527 | 58 | 15 |  | 10,392 | 0 | 347.0 | 205.3 | 4.6 | 57.3 |
|------|-------|-------|----|--|--|-------|----|----|--|--------|---|-------|-------|-----|------|

| RUN YEAR     | CHINOOK ADULT  | CHINOOK JACK   | TOTAL SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|--------------|----------------|----------------|---------------|-----------------|---------------------|---------|---------|
|              | TOTALS TO DATE | TOTALS TO DATE |               | TOTALS TO DATE  | TOTALS TO DATE      |         |         |
| SPRING       | 102,763        | 4,787          | 165,804       | 3,499           | 1,445               | 311,792 | 5       |
| SUMMER       | 32,383         | 2,054          |               |                 |                     |         |         |
| <b>TOTAL</b> | <b>135,146</b> | <b>6,841</b>   |               |                 |                     |         |         |

TABLE 63

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

JULY 2012

| DATE   | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL     |                     | PINK | SHAD   | LAMPREY | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|--------|---------------|--------|------|--------------|------------|-----------|---------|-----------|---------------------|------|--------|---------|------------|------------|-----------|-------|
|        | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD | unclipped STEELHEAD |      |        |         |            |            | SECCHI    | DEG F |
| Jul 1  |               | 1,077  |      | 72           |            |           | 20,821  | 117       | 36                  |      | 6,395  | 1       | 394.2      | 257.7      | 4.9       | 59.0  |
| Jul 2  |               | 1,573  |      | 105          |            |           | 34,416  | 162       | 49                  |      | 18,151 | 0       | 364.1      | 228.3      | 4.2       | 59.0  |
| Jul 3  |               | 1,650  |      | 121          |            |           | 20,789  | 223       | 84                  |      | 17,922 | 0       | 354.3      | 216.0      | 4.1       | 59.0  |
| Jul 4  |               | 1,164  |      | 90           |            |           | 16,501  | 167       | 60                  |      | 35,276 | 2       | 348.0      | 199.1      | 4.1       | 59.0  |
| Jul 5  |               | 810    |      | 69           |            |           | 8,708   | 180       | 55                  |      | 17,876 | 0       | 362.7      | 212.7      | 4.4       | 60.0  |
| Jul 6  |               | 1,026  |      | 85           |            |           | 9,501   | 166       | 54                  |      | 22,557 | 2       | 359.7      | 210.9      | 5.4       | 61.0  |
| Jul 7  |               | 791    |      | 56           |            |           | 9,009   | 158       | 48                  |      | 27,198 | 0       | 327.0      | 176.9      | 5.9       | 61.0  |
| Jul 8  |               | 1,096  |      | 90           |            |           | 12,252  | 206       | 62                  |      | 27,512 | 4       | 318.2      | 169.4      | 6.0       | 62.0  |
| Jul 9  |               | 1,279  |      | 134          |            |           | 12,092  | 271       | 87                  |      | 22,926 | 3       | 347.7      | 216.1      | 5.4       | 62.0  |
| Jul 10 |               | 1,241  |      | 108          |            |           | 9,499   | 250       | 99                  |      | 16,729 | 5       | 340.1      | 214.1      | 5.7       | 62.0  |
| Jul 11 |               | 1,210  |      | 90           |            |           | 10,223  | 291       | 113                 |      | 14,833 | 0       | 343.1      | 216.7      | 5.8       | 62.0  |
| Jul 12 |               | 973    |      | 72           |            |           | 6,099   | 294       | 130                 |      | 15,285 | 3       | 334.1      | 204.2      | 5.6       | 63.0  |
| Jul 13 |               | 1,236  |      | 124          |            |           | 6,697   | 299       | 115                 |      | 20,668 | 2       | 338.9      | 188.9      | NA        | 63.0  |
| Jul 14 |               | 1,163  |      | 97           |            |           | 4,837   | 395       | 156                 |      | 14,032 | 6       | 329.6      | 179.9      | 6.0       | 64.0  |
| Jul 15 |               | 972    |      | 93           |            |           | 3,517   | 391       | 166                 |      | 7,288  | 2       | 336.7      | 186.3      | 5.6       | 64.0  |
| Jul 16 |               | 1,017  |      | 110          |            |           | 3,537   | 370       | 160                 |      | 4,774  | 1       | 357.4      | 214.9      | 5.5       | 64.0  |
| Jul 17 |               | 1,193  |      | 89           |            |           | 2,604   | 512       | 246                 |      | 4,835  | 7       | 332.5      | 197.9      | 5.5       | 64.0  |
| Jul 18 |               | 1,128  |      | 101          |            |           | 2,380   | 621       | 273                 |      | 7,480  | 12      | 297.3      | 164.0      | 5.5       | 64.0  |
| Jul 19 |               | 1,039  |      | 94           |            |           | 1,742   | 676       | 285                 |      | 6,484  | 12      | 298.8      | 168.4      | 5.5       | 64.0  |
| Jul 20 |               | 776    |      | 89           |            |           | 788     | 840       | 362                 |      | 4,411  | 9       | 323.5      | 188.4      | 5.8       | 64.0  |
| Jul 21 |               | 768    |      | 61           |            |           | 501     | 603       | 247                 |      | 3,509  | 7       | 340.1      | 201.3      | 5.9       | 64.0  |
| Jul 22 |               | 714    |      | 62           |            |           | 321     | 753       | 322                 |      | 3,643  | 2       | 333.3      | 194.1      | 6.0       | 65.0  |
| Jul 23 |               | 732    |      | 63           |            |           | 189     | 759       | 366                 |      | 3,337  | 3       | 324.3      | 193.4      | 6.0       | 65.0  |
| Jul 24 |               | 741    |      | 72           |            |           | 213     | 806       | 326                 |      | 2,388  | 9       | 310.9      | 184.7      | 6.0       | 65.0  |
| Jul 25 |               | 546    |      | 82           |            |           | 174     | 857       | 372                 |      | 2,376  | 13      | 284.5      | 158.5      | 6.0       | 65.0  |
| Jul 26 |               | 514    |      | 45           |            |           | 114     | 811       | 374                 |      | 1,556  | 6       | 308.3      | 179.5      | 6.0       | 65.0  |
| Jul 27 |               | 509    |      | 61           |            |           | 152     | 1,084     | 443                 |      | 3,829  | 6       | 286.4      | 153.2      | 6.0       | 66.0  |
| Jul 28 |               | 461    |      | 56           |            |           | 138     | 1,108     | 463                 |      | 3,389  | 5       | 257.3      | 138.5      | 4.5       | 66.0  |
| Jul 29 |               | 629    |      | 53           |            |           | 89      | 1,860     | 766                 |      | 2,816  | 12      | 273.0      | 141.9      | 5.0       | 66.0  |
| Jul 30 |               | 579    |      | 64           |            |           | 82      | 1,929     | 792                 |      | 3,219  | 10      | 264.2      | 145.0      | 4.8       | 66.0  |
| Jul 31 |               | 426    |      | 71           |            |           | 52      | 1,214     | 523                 |      | 1,922  | 10      | 266.9      | 141.3      | 5.8       | 66.0  |

**TOTAL**

|        |       |         |        |       |         |     |
|--------|-------|---------|--------|-------|---------|-----|
| 29,033 | 2,579 | 198,037 | 18,373 | 7,634 | 344,616 | 154 |
|--------|-------|---------|--------|-------|---------|-----|

AVG.

|     |    |       |     |     |        |   |       |       |     |      |
|-----|----|-------|-----|-----|--------|---|-------|-------|-----|------|
| 937 | 83 | 6,388 | 593 | 246 | 11,117 | 5 | 324.4 | 188.5 | 5.4 | 63.2 |
|-----|----|-------|-----|-----|--------|---|-------|-------|-----|------|

RUN YEAR

| TOTALS TO DATE | CHINOOK ADULT  | CHINOOK JACK |
|----------------|----------------|--------------|
| SPRING         | 102,763        | 4,787        |
| SUMMER         | 61,416         | 4,633        |
| <b>TOTAL</b>   | <b>164,179</b> | <b>9,420</b> |

| TOTAL SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD |
|---------------|-----------------|---------------------|
| 363,841       | 21,872          | 9,079               |

| SHAD    | LAMPREY |
|---------|---------|
| 656,408 | 159     |

TABLE 64

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |              | CHINOOK JACK  | COHO ADULT   | COHO JACK  | SOCKEYE   | TOTAL      |               | PINK          | SHAD | LAMPREY       | DISCH KCFS | SPILL KCFS   | TURBIDITY SECCHI | TEMP DEG F |                     |
|--------------|---------------|--------------|---------------|--------------|------------|-----------|------------|---------------|---------------|------|---------------|------------|--------------|------------------|------------|---------------------|
|              | SPRING        | SUMMER       |               |              |            |           | FALL       | STEELHEAD     |               |      |               |            |              |                  |            | unclipped STEELHEAD |
| Aug 1        |               | 369          |               | 53           | 0          | 0         | 37         | 1,353         | 562           |      | 2,268         | 8          | 252.5        | 126.4            | 6+         | 66.0                |
| Aug 2        |               | 460          |               | 47           | 0          | 0         | 34         | 1,244         | 556           |      | 1,484         | 9          | 238.5        | 119.8            | 5.2        | 66.0                |
| Aug 3        |               | 315          |               | 55           | 0          | 0         | 43         | 1,554         | 696           |      | 1,579         | 13         | 255.7        | 128.5            | 5.6        | 67.0                |
| Aug 4        |               | 347          |               | 60           | 0          | 0         | 34         | 1,420         | 585           |      | 1,493         | 30         | 225.7        | 113.2            | 6+         | 68.0                |
| Aug 5        |               | 303          |               | 37           | 0          | 0         | 27         | 1,187         | 447           |      | 1,012         | 26         | 238.4        | 119.4            | 6+         | 68.0                |
| Aug 6        |               | 405          |               | 72           | 0          | 0         | 24         | 1,076         | 425           |      | 1,116         | 32         | 228.5        | 114.2            | 6+         | 68.0                |
| Aug 7        |               | 467          |               | 82           | 1          | 0         | 20         | 1,909         | 778           |      | 1,448         | 28         | 227.4        | 113.7            | 6+         | 68.0                |
| Aug 8        |               | 346          |               | 65           | 1          | 0         | 16         | 1,383         | 581           |      | 1,553         | 35         | 222.2        | 111.5            | 6+         | 68.0                |
| Aug 9        |               |              | 428           | 59           | 0          | 0         | 12         | 2,208         | 874           |      | 900           | 35         | 217.3        | 108.8            | 6+         | 68.0                |
| Aug 10       |               |              | 339           | 53           | 0          | 0         | 9          | 1,366         | 565           |      | 504           | 31         | 213.2        | 106.7            | 6+         | 69.0                |
| Aug 11       |               |              | 365           | 60           | 1          | 0         | 3          | 1,434         | 588           |      | 339           | 17         | 218.5        | 109.4            | 6+         | 69.0                |
| Aug 12       |               |              | 359           | 56           | 0          | 0         | 2          | 1,803         | 738           |      | 546           | 15         | 219.6        | 110.1            | 6+         | 69.0                |
| Aug 13       |               |              | 403           | 56           | 0          | 0         | 5          | 1,588         | 680           |      | 515           | 6          | 212.5        | 106.6            | 6+         | 69.0                |
| Aug 14       |               |              | 237           | 72           | 0          | 0         | 2          | 1,438         | 486           |      | 375           | 15         | 207.3        | 103.8            | 6+         | 69.0                |
| Aug 15       |               |              | 366           | 90           | 0          | 0         | 4          | 1,033         | 376           |      | 468           | 13         | 201.4        | 101.0            | 6+         | 69.0                |
| Aug 16       |               |              | 251           | 67           | 1          | 0         | 0          | 1,183         | 449           |      | 297           | 13         | 177.9        | 89.2             | 6+         | 69.0                |
| Aug 17       |               |              | 330           | 43           | 1          | 0         | 5          | 1,432         | 544           |      | 479           | 25         | 208.2        | 104.3            | 6+         | 69.0                |
| Aug 18       |               |              | 374           | 63           | 0          | 0         | 2          | 962           | 327           |      | 453           | 36         | 200.9        | 100.4            | 6+         | 69.0                |
| Aug 19       |               |              | 354           | 41           | 2          | 0         | 10         | 950           | 314           |      | 421           | 38         | 193.0        | 96.7             | 6+         | 69.0                |
| Aug 20       |               |              | 427           | 68           | 2          | 1         | 1          | 759           | 277           |      | 444           | 21         | 203.0        | 101.8            | 6+         | 69.0                |
| Aug 21       |               |              | 408           | 68           | 0          | 1         | 2          | 767           | 290           |      | 162           | 5          | 190.6        | 95.6             | 6+         | 69.0                |
| Aug 22       |               |              | 414           | 86           | 2          | 0         | 0          | 742           | 301           |      | 188           | 10         | 202.5        | 101.5            | 6+         | 69.0                |
| Aug 23       |               |              | 366           | 65           | 1          | 0         | 0          | 713           | 303           |      | 140           | 3          | 195.7        | 98.3             | 6+         | 69.0                |
| Aug 24       |               |              | 211           | 76           | 1          | 0         | 1          | 522           | 194           |      | 193           | 13         | 191.8        | 96.1             | 6+         | 69.0                |
| Aug 25       |               |              | 440           | 125          | 2          | 4         | 0          | 557           | 188           |      | 162           | 29         | 188.2        | 94.2             | 5.8        | 68.0                |
| Aug 26       |               |              | 458           | 125          | 3          | 2         | 0          | 457           | 169           |      | 147           | 22         | 171.7        | 86.0             | 6+         | 68.0                |
| Aug 27       |               |              | 1,009         | 261          | 14         | 1         | 0          | 421           | 157           |      | 82            | 8          | 184.8        | 92.5             | 6+         | 68.0                |
| Aug 28       |               |              | 1,627         | 209          | 13         | 1         | 0          | 575           | 238           |      | 60            | 6          | 159.0        | 79.5             | 6+         | 68.0                |
| Aug 29       |               |              | 1,008         | 126          | 155        | 58        | 0          | 553           | 216           |      | 81            | 8          | 168.6        | 84.4             | 6+         | 68.0                |
| Aug 30       |               |              | 1,514         | 230          | 68         | 17        | -1         | 731           | 293           |      | 56            | 2          | 173.1        | 86.8             | 6+         | 68.0                |
| Aug 31       |               |              | 1,784         | 342          | 61         | 10        | 0          | 663           | 244           |      | 48            | 4          | 196.9        | 98.7             | 6+         | 68.0                |
| <b>TOTAL</b> |               | <b>3,012</b> | <b>13,472</b> | <b>2,912</b> | <b>329</b> | <b>95</b> | <b>292</b> | <b>33,983</b> | <b>13,441</b> |      | <b>19,013</b> | <b>556</b> |              |                  |            |                     |
| <b>AVG.</b>  |               | <b>377</b>   | <b>586</b>    | <b>94</b>    | <b>11</b>  | <b>3</b>  | <b>9</b>   | <b>1,096</b>  | <b>434</b>    |      | <b>613</b>    | <b>18</b>  | <b>206.0</b> | <b>103.2</b>     | <b>6+</b>  | <b>68.3</b>         |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 102,763        | 4,787         |
| SUMMER         | 64,428         | 5,104         |
| FALL           | 13,472         | 2,441         |
| <b>TOTAL</b>   | <b>180,663</b> | <b>12,332</b> |

| COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD |
|------------|-----------|---------|-----------------|---------------------|
| 329        | 95        | 364,133 | 55,855          | 22,520              |

| SHAD    | LAMPREY |
|---------|---------|
| 675,421 | 715     |

TABLE 65

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE   | CHINOOK ADULT |        | CHINOOK | COHO  | COHO  | TOTAL |         | unclipped |           |      |      | DISCH SPILL TURBIDITY |      |      |        |
|--------|---------------|--------|---------|-------|-------|-------|---------|-----------|-----------|------|------|-----------------------|------|------|--------|
|        | SPRING        | SUMMER | FALL    | JACK  | ADULT | JACK  | SOCKEYE | STEELHEAD | STEELHEAD | PINK | SHAD | LAMPREY               | KCFS | KCFS | SECCHI |
| Sep 1  |               |        | 2,454   | 386   | 66    | 13    | 0       | 778       | 260       |      | 5    | 141.5                 | 16.4 | 6+   | 67.0   |
| Sep 2  |               |        | 3,894   | 537   | 138   | 6     | 0       | 1,048     | 349       |      | 13   | 95.4                  | 0.0  | 6+   | 67.0   |
| Sep 3  |               |        | 4,376   | 510   | 164   | 2     | 0       | 1,008     | 344       |      | 14   | 102.6                 | 0.0  | 6+   | 67.0   |
| Sep 4  |               |        | 4,924   | 842   | 222   | 12    | 1       | 1,755     | 491       |      | 18   | 114.2                 | 14.3 | 6+   | 67.0   |
| Sep 5  |               |        | 4,631   | 963   | 204   | 12    | 2       | 1,582     | 442       |      | 16   | 155.0                 | 58.7 | 6+   | 67.0   |
| Sep 6  |               |        | 3,584   | 935   | 351   | 18    | 0       | 1,570     | 474       |      | 9    | 153.2                 | 47.8 | 6+   | 67.0   |
| Sep 7  |               |        | 4,431   | 1,109 | 593   | 42    | 1       | 2,213     | 598       |      | 20   | 110.0                 | 0.0  | 6+   | 67.0   |
| Sep 8  |               |        | 3,164   | 589   | 358   | 40    | 0       | 1,565     | 564       |      | 4    | 123.1                 | 10.9 | 6+   | 67.0   |
| Sep 9  |               |        | 5,097   | 1,290 | 642   | 55    | 1       | 2,122     | 644       |      | 13   | 105.9                 | 0.0  | 6+   | 67.0   |
| Sep 10 |               |        | 4,893   | 1,018 | 895   | 46    | 0       | 2,771     | 814       |      | 12   | 104.5                 | 0.0  | 5.6  | 67.0   |
| Sep 11 |               |        | 6,515   | 1,008 | 744   | 23    | 0       | 2,427     | 745       |      | 6    | 110.2                 | 10.7 | 5.8  | 67.0   |
| Sep 12 |               |        | 6,463   | 1,009 | 420   | 15    | 0       | 1,472     | 430       |      | 23   | 126.2                 | 21.6 | 6+   | 67.0   |
| Sep 13 |               |        | 4,990   | 792   | 596   | 20    | 4       | 1,658     | 432       |      | 12   | 102.8                 | 0.0  | 6+   | 67.0   |
| Sep 14 |               |        | 4,792   | 1,457 | 595   | 50    | 4       | 2,094     | 516       |      | 11   | 115.4                 | 12.0 | 6+   | 67.0   |
| Sep 15 |               |        | 4,908   | 1,674 | 642   | 67    | 0       | 2,042     | 493       |      | 5    | 106.9                 | 9.6  | 6+   | 66.0   |
| Sep 16 |               |        | 4,727   | 1,707 | 544   | 32    | 0       | 1,706     | 453       |      | 6    | 101.2                 | 0.0  | 6+   | 66.0   |
| Sep 17 |               |        | 4,516   | 1,751 | 432   | 16    | 1       | 1,781     | 497       |      | 6    | 109.4                 | 8.6  | 6+   | 66.0   |
| Sep 18 |               |        | 5,026   | 1,031 | 365   | 28    | 0       | 2,002     | 618       |      | 1    | 127.0                 | 18.4 | 6+   | 66.0   |
| Sep 19 |               |        | 7,406   | 1,757 | 511   | 48    | 1       | 2,923     | 830       |      | 5    | 128.9                 | 26.8 | 6+   | 66.0   |
| Sep 20 |               |        | 6,732   | 1,907 | 829   | 50    | 0       | 3,105     | 864       |      | 5    | 108.8                 | 4.0  | 6+   | 66.0   |
| Sep 21 |               |        | 5,261   | 2,101 | 601   | 27    | 0       | 2,048     | 548       |      | 5    | 114.4                 | 0.1  | 6+   | 66.0   |
| Sep 22 |               |        | 4,187   | 1,501 | 657   | 47    | 0       | 1,895     | 561       |      | 2    | 96.0                  | 0.0  | 6+   | 66.0   |
| Sep 23 |               |        | 6,151   | 2,613 | 931   | 52    | -1      | 2,953     | 779       |      | 3    | 96.6                  | 0.0  | 6+   | 66.0   |
| Sep 24 |               |        | 4,585   | 2,007 | 460   | 23    | 0       | 2,213     | 515       |      | 1    | 103.2                 | 0.0  | 6+   | 66.0   |
| Sep 25 |               |        | 3,648   | 1,907 | 420   | 34    | 0       | 2,732     | 678       |      | 5    | 102.1                 | 0.0  | 6+   | 66.0   |
| Sep 26 |               |        | 5,404   | 1,452 | 501   | 34    | 0       | 4,791     | 1,454     |      | 0    | 101.8                 | 0.0  | 6+   | 66.0   |
| Sep 27 |               |        | 3,365   | 1,459 | 252   | 22    | 0       | 2,641     | 671       |      | 3    | 101.4                 | 0.0  | 6+   | 66.0   |
| Sep 28 |               |        | 1,628   | 696   | 269   | 24    | 0       | 2,092     | 569       |      | 5    | 104.3                 | 0.0  | 6+   | 65.0   |
| Sep 29 |               |        | 1,840   | 915   | 200   | 18    | 0       | 1,465     | 400       |      | 3    | 107.1                 | 0.0  | 6+   | 64.0   |
| Sep 30 |               |        | 2,888   | 1,247 | 265   | 36    | 0       | 1,866     | 533       |      | 1    | 90.3                  | 0.0  | 6+   | 64.0   |

|              |         |        |        |     |    |        |        |  |  |  |     |       |     |    |      |
|--------------|---------|--------|--------|-----|----|--------|--------|--|--|--|-----|-------|-----|----|------|
| <b>TOTAL</b> | 136,480 | 38,170 | 13,867 | 912 | 14 | 62,318 | 17,566 |  |  |  | 232 |       |     |    |      |
| <b>AVG.</b>  | 4,549   | 1272   | 462    | 30  | 0  | 2,077  | 586    |  |  |  | 8   | 112.0 | 8.7 | 6+ | 66.3 |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|----------------|----------------|---------------|------------|-----------|---------|-----------------|---------------------|---------|---------|
| TOTALS TO DATE |                |               |            |           |         |                 |                     |         |         |
| SPRING         | 102,763        | 4,787         | 14,196     | 1,007     | 364,147 | 118,173         | 40,086              | 675,421 | 947     |
| SUMMER         | 64,428         | 5,104         |            |           |         |                 |                     |         |         |
| FALL           | 149,952        | 40,611        |            |           |         |                 |                     |         |         |
| <b>TOTAL</b>   | <b>317,143</b> | <b>50,502</b> |            |           |         |                 |                     |         |         |

TABLE 66

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK       | COHO          | COHO         | TOTAL      |         |               |              |      | DISCH | SPILL TURBIDITY |         |      |      |        |
|--------------|---------------|--------|---------------|---------------|--------------|------------|---------|---------------|--------------|------|-------|-----------------|---------|------|------|--------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT        | JACK       | SOCKEYE | STEELHEAD     | STEELHEAD    | PINK |       | SHAD            | LAMPREY | KCFS | KCFS | SECCHI |
| Oct 1        |               |        | 3,121         | 1,064         | 329          | 63         |         | 1,573         | 421          |      |       | 2               | 78.4    | 0.0  | 6+   | 64.0   |
| Oct 2        |               |        | 1,958         | 935           | 95           | 20         |         | 1,012         | 335          |      |       | 3               | 89.8    | 0.2  | 6+   | 64.0   |
| Oct 3        |               |        | 1,999         | 1,160         | 108          | 5          |         | 1,379         | 400          |      |       | 5               | 91.2    | 0.0  | 6+   | 64.0   |
| Oct 4        |               |        | 930           | 840           | 59           | 5          |         | 809           | 224          |      |       | 0               | 99.2    | 0.0  | 6+   | 64.0   |
| Oct 5        |               |        | 1,535         | 1,006         | 60           | 25         |         | 1,181         | 347          |      |       | 1               | 95.4    | 0.0  | 6+   | 64.0   |
| Oct 6        |               |        | 1,539         | 864           | 84           | 22         |         | 1,332         | 327          |      |       | 2               | 78.0    | 0.0  | 6+   | 64.0   |
| Oct 7        |               |        | 1,071         | 618           | 72           | 12         |         | 1,190         | 302          |      |       | 4               | 75.3    | 0.0  | 6+   | 64.0   |
| Oct 8        |               |        | 802           | 386           | 150          | 40         |         | 788           | 176          |      |       | 2               | 78.1    | 0.0  | 6+   | 63.0   |
| Oct 9        |               |        | 1,021         | 446           | 171          | 77         |         | 894           | 231          |      |       | 1               | 97.0    | 0.6  | 6+   | 62.0   |
| Oct 10       |               |        | 922           | 481           | 71           | 29         |         | 1,039         | 223          |      |       | 1               | 95.7    | 0.0  | 6+   | 61.0   |
| Oct 11       |               |        | 958           | 602           | 78           | 20         |         | 1,103         | 297          |      |       | 0               | 90.6    | 0.0  | 6.0  | 61.0   |
| Oct 12       |               |        | 693           | 437           | 52           | 7          |         | 809           | 245          |      |       | 1               | 82.0    | 0.0  | 6.0  | 61.0   |
| Oct 13       |               |        | 774           | 588           | 78           | 9          |         | 1,508         | 496          |      |       | 0               | 66.6    | 0.0  | 6.0  | 61.0   |
| Oct 14       |               |        | 981           | 522           | 68           | 2          |         | 1,278         | 405          |      |       | 0               | 57.5    | 0.0  | 6.0  | 61.0   |
| Oct 15       |               |        | 954           | 435           | 94           | 0          |         | 1,296         | 439          |      |       | 0               | 72.4    | 0.0  | 6+   | 61.0   |
| Oct 16       |               |        | 656           | 221           | 75           | 16         |         | 1,003         | 328          |      |       | 0               | 73.5    | 0.0  | 6+   | 61.0   |
| Oct 17       |               |        | 485           | 230           | 91           | 1          |         | 846           | 343          |      |       | 1               | 82.4    | 0.0  | 6+   | 61.0   |
| Oct 18       |               |        | 365           | 169           | 50           | 2          |         | 740           | 262          |      |       | 0               | 83.9    | 0.0  | 6+   | 60.0   |
| Oct 19       |               |        | 272           | 167           | 106          | 5          |         | 721           | 305          |      |       | 0               | 76.7    | 0.0  | 6+   | 60.0   |
| Oct 20       |               |        | 470           | 184           | 174          | 13         |         | 1,598         | 759          |      |       | 0               | 67.8    | 0.0  | 6+   | 60.0   |
| Oct 21       |               |        | 447           | 292           | 166          | 15         |         | 2,397         | 1,170        |      |       | 0               | 71.4    | 0.0  | 6+   | 60.0   |
| Oct 22       |               |        | 166           | 127           | 79           | 7          |         | 911           | 426          |      |       | 0               | 98.5    | 0.0  | 6+   | 60.0   |
| Oct 23       |               |        | 152           | 93            | 61           | 5          |         | 655           | 278          |      |       | 0               | 110.2   | 0.0  | 6+   | 60.0   |
| Oct 24       |               |        | 165           | 93            | 49           | 4          |         | 421           | 199          |      |       | 0               | 110.3   | 0.0  | 6+   | 60.0   |
| Oct 25       |               |        | 145           | 102           | 21           | 1          |         | 372           | 167          |      |       | 0               | 113.7   | 0.0  | 6+   | 60.0   |
| Oct 26       |               |        | 162           | 103           | 24           | 2          |         | 387           | 170          |      |       | 0               | 112.8   | 0.0  | 6.0  | 56.0   |
| Oct 27       |               |        | 123           | 59            | 24           | 4          |         | 257           | 113          |      |       | 0               | 117.7   | 4.1  | 6.0  | 56.0   |
| Oct 28       |               |        | 128           | 73            | 32           | 1          |         | 226           | 88           |      |       | 0               | 113.7   | 0.0  | 6.0  | 55.0   |
| Oct 29       |               |        | 147           | 88            | 17           | 1          |         | 223           | 70           |      |       | 0               | 113.4   | 0.0  | 6.0  | 56.0   |
| Oct 30       |               |        | 185           | 140           | 28           | 5          |         | 374           | 113          |      |       | 0               | 105.2   | 0.0  | 6.0  | 56.0   |
| Oct 31       |               |        | 194           | 119           | 14           | 0          |         | 258           | 105          |      |       | 0               | 104.9   | 0.0  | 6.0  | 56.0   |
| <b>TOTAL</b> |               |        | <b>23,520</b> | <b>12,644</b> | <b>2,580</b> | <b>418</b> |         | <b>28,580</b> | <b>9,764</b> |      |       | <b>23</b>       |         |      |      |        |
| AVG.         |               |        | 759           | 408           | 83           | 13         |         | 922           | 315          |      |       | 1               | 90.4    | 0.2  | 6+   | 60.5   |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 102,763        | 4,787         |
| SUMMER         | 64,428         | 5,104         |
| FALL           | 173,472        | 53,255        |
| <b>TOTAL</b>   | <b>340,663</b> | <b>63,146</b> |

| COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD |
|------------|-----------|---------|-----------------|---------------------|
| 16,776     | 1,425     | 364,147 | 146,753         | 49,850              |

| SHAD    | LAMPREY |
|---------|---------|
| 675,421 | 970     |

Note: Visual counts ended October 31.  
Official Fall Chinook run ended October 31.



TABLE 67  
MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

MCNARY PROJECT - FISH COUNTS

NOVEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK    | COHO       | COHO       | TOTAL    |         | PINK | SHAD | LAMPREY | DISCH        | SPILL        | TURBIDITY |      |              |            |            |             |
|--------------|---------------|--------|------------|------------|------------|----------|---------|------|------|---------|--------------|--------------|-----------|------|--------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL       | JACK       | ADULT      | JACK     | SOCKEYE |      |      |         | STEELHEAD    | STEELHEAD    | KCFS      | KCFS | SECCHI       | DEG F      |            |             |
| Nov 1        |               |        | 72         | 37         | 4          | 0        |         |      |      |         | 236          | 43           |           |      | 103.4        | 0.0        | 5.1        | 56.0        |
| Nov 2        |               |        | 117        | 41         | 5          | 0        |         |      |      |         | 291          | 39           |           |      | 115.1        | 0.0        | 5.8        | 56.0        |
| Nov 3        |               |        | 160        | 65         | 3          | 0        |         |      |      |         | 493          | 78           |           |      | 110.0        | 0.0        | 5.0        | 56.0        |
| Nov 4        |               |        | 150        | 63         | 11         | 0        |         |      |      |         | 404          | 67           |           |      | 109.7        | 0.0        | 5.0        | 56.0        |
| Nov 5        |               |        | 57         | 39         | 37         | 0        |         |      |      |         | 467          | 86           |           |      | 94.7         | 0.0        | 5.4        | 56.0        |
| Nov 6        |               |        | 36         | 30         | 28         | 0        |         |      |      |         | 366          | 47           |           |      | 117.0        | 0.0        | 5.7        | 56.0        |
| Nov 7        |               |        | 14         | 33         | 9          | 0        |         |      |      |         | 310          | 95           |           |      | 122.5        | 0.0        | 5.1        | 56.0        |
| Nov 8        |               |        | 41         | 19         | 13         | 0        |         |      |      |         | 358          | 80           |           |      | 120.6        | 0.0        | 6+         | 56.0        |
| Nov 9        |               |        | 19         | 16         | 25         | 0        |         |      |      |         | 236          | 33           |           |      | 107.4        | 0.0        | 6+         | 56.0        |
| Nov 10       |               |        | 16         | 16         | 13         | 0        |         |      |      |         | 125          | 27           |           |      | 114.4        | 0.0        | 6.0        | 56.0        |
| Nov 11       |               |        | 60         | 13         | 32         | 1        |         |      |      |         | 101          | 25           |           |      | 129.5        | 0.0        | 6.0        | 56.0        |
| Nov 12       |               |        | 14         | 2          | 39         | 0        |         |      |      |         | 157          | 27           |           |      | 122.7        | 0.0        | 5.5        | 55.0        |
| Nov 13       |               |        | 18         | 4          | 31         | 2        |         |      |      |         | 91           | 17           |           |      | 126.9        | 0.0        | 5.5        | 54.0        |
| Nov 14       |               |        | 5          | 4          | 22         | 0        |         |      |      |         | 53           | 21           |           |      | 110.7        | 0.0        | 5.7        | 53.0        |
| Nov 15       |               |        | 3          | 1          | 20         | 0        |         |      |      |         | 44           | 13           |           |      | 121.7        | 0.0        | 5.6        | 52.0        |
| Nov 16       |               |        | 1          | 1          | 28         | 0        |         |      |      |         | 70           | 18           |           |      | 133.5        | 0.0        | 5.4        | 52.0        |
| Nov 17       |               |        | 8          | 4          | 25         | 0        |         |      |      |         | 69           | 23           |           |      | 119.0        | 0.0        | 5.4        | 52.0        |
| Nov 18       |               |        | 14         | 3          | 14         | 1        |         |      |      |         | 98           | 39           |           |      | 127.9        | 0.0        | 5.6        | 52.0        |
| Nov 19       |               |        | 8          | 1          | 19         | 0        |         |      |      |         | 64           | 22           |           |      | 116.8        | 0.0        | 5.9        | 52.0        |
| Nov 20       |               |        | 5          | 0          | 20         | 0        |         |      |      |         | 51           | 18           |           |      | 150.3        | 0.0        | 6+         | 52.0        |
| Nov 21       |               |        | 10         | 1          | 21         | 0        |         |      |      |         | 77           | 21           |           |      | 106.3        | 0.0        | 6+         | 52.0        |
| Nov 22       |               |        | 5          | 1          | 19         | 0        |         |      |      |         | 71           | 22           |           |      | 94.1         | 0.0        | 6+         | 52.0        |
| Nov 23       |               |        | 11         | 2          | 9          | 0        |         |      |      |         | 66           | 25           |           |      | 98.3         | 0.0        | 6+         | 51.0        |
| Nov 24       |               |        | 11         | 0          | 17         | 1        |         |      |      |         | 75           | 26           |           |      | 102.4        | 0.0        | 6+         | 51.0        |
| Nov 25       |               |        | 16         | 0          | 29         | 3        |         |      |      |         | 106          | 35           |           |      | 123.1        | 0.0        | 6+         | 51.0        |
| Nov 26       |               |        | 15         | 0          | 27         | 0        |         |      |      |         | 104          | 36           |           |      | 139.6        | 0.0        | 6+         | 50.0        |
| Nov 27       |               |        | 5          | 0          | 6          | 0        |         |      |      |         | 106          | 45           |           |      | 142.2        | 0.0        | 6.0        | 50.0        |
| Nov 28       |               |        | 6          | 0          | 5          | 0        |         |      |      |         | 90           | 34           |           |      | 121.0        | 0.0        | 6.0        | 49.0        |
| Nov 29       |               |        | 1          | 3          | 1          | 0        |         |      |      |         | 66           | 22           |           |      | 126.1        | 0.0        | 6+         | 50.0        |
| Nov 30       |               |        | 6          | 3          | 10         | 0        |         |      |      |         | 86           | 32           |           |      | 139.8        | 0.0        | 6.0        | 49.0        |
| <b>TOTAL</b> |               |        | <b>904</b> | <b>402</b> | <b>542</b> | <b>8</b> |         |      |      |         | <b>4,931</b> | <b>1,116</b> |           |      |              |            |            |             |
| <b>AVG.</b>  |               |        | <b>30</b>  | <b>13</b>  | <b>18</b>  | <b>0</b> |         |      |      |         | <b>164</b>   | <b>37</b>    |           |      | <b>118.9</b> | <b>0.0</b> | <b>5.6</b> | <b>53.2</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|----------------|----------------|---------------|------------|-----------|---------|-----------------|---------------------|---------|---------|
| TOTALS TO DATE |                |               |            |           |         |                 |                     |         |         |
| SPRING         | 102,763        | 4,787         | 16,776     | 1,425     | 364,147 | 146,753         | 49,850              | 675,421 | 970     |
| SUMMER         | 64,428         | 5,104         |            |           |         |                 |                     |         |         |
| FALL           | 173,472        | 53,255        |            |           |         |                 |                     |         |         |
| <b>TOTAL</b>   | <b>340,663</b> | <b>63,146</b> |            |           |         |                 |                     |         |         |

Note: November counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.  
Official Fall Chinook run ended October 31. November and December chinook counts were not added to fall totals.

TABLE 68  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT. PORTLAND

MCNARY PROJECT - FISH COUNTS

DECEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | TOTAL | unclipped |         | PINK | SHAD | LAMPREY | DISCH     | SPILL     | TURBIDITY |      |        |
|--------------|---------------|--------|---------|------|-------|-------|-----------|---------|------|------|---------|-----------|-----------|-----------|------|--------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT |       | JACK      | SOCKEYE |      |      |         | STEELHEAD | STEELHEAD | KCFS      | KCFS | SECCHI |
| Dec 1        |               |        | 7       | 1    | 9     |       |           | 35      | 16   |      |         | 131.9     | 0.0       | 6+        | 49.0 |        |
| Dec 2        |               |        | 5       | 0    | 7     |       |           | 60      | 20   |      |         | 140.9     | 0.0       | 6+        | 48.0 |        |
| Dec 3        |               |        | 14      | 0    | 6     |       |           | 60      | 17   |      |         | 150.6     | 0.0       | 6+        | 48.0 |        |
| Dec 4        |               |        | 6       | 0    | 2     |       |           | 87      | 32   |      |         | 146.6     | 0.0       | 6+        | 49.0 |        |
| Dec 5        |               |        | 5       | 0    | 0     |       |           | 139     | 49   |      |         | 142.4     | 0.0       | 6+        | 49.0 |        |
| Dec 6        |               |        | 7       | 1    | 3     |       |           | 93      | 30   |      |         | 175.8     | 19.9      | 6+        | 49.0 |        |
| Dec 7        |               |        | 10      | 0    | 1     |       |           | 139     | 46   |      |         | 187.3     | 36.7      | 6.0       | 49.0 |        |
| Dec 8        |               |        | 3       | 0    | 4     |       |           | 266     | 93   |      |         | 196.9     | 40.0      | 6.0       | 48.0 |        |
| Dec 9        |               |        | 7       | 0    | 1     |       |           | 158     | 38   |      |         | 198.1     | 40.0      | 6.0       | 48.0 |        |
| Dec 10       |               |        | 2       | 0    | 1     |       |           | 185     | 71   |      |         | 184.0     | 23.1      | 6.0       | 48.0 |        |
| Dec 11       |               |        | 1       | 0    | 0     |       |           | 139     | 51   |      |         | 182.1     | 15.8      | 6.0       | 48.0 |        |
| Dec 12       |               |        | 2       | 0    | 5     |       |           | 191     | 71   |      |         | 200.1     | 38.0      | 6+        | 47.0 |        |
| Dec 13       |               |        | 1       | 0    | 4     |       |           | 119     | 44   |      |         | 200.1     | 36.7      | 6+        | 47.0 |        |
| Dec 14       |               |        | 0       | 0    | 1     |       |           | 118     | 44   |      |         | 203.5     | 40.0      | 6+        | 47.0 |        |
| Dec 15       |               |        | 0       | 0    | 0     |       |           | 74      | 21   |      |         | 191.0     | 27.3      | 6+        | 46.0 |        |
| Dec 16       |               |        | 0       | 0    | 1     |       |           | 64      | 21   |      |         | 185.9     | 31.7      | 6+        | 46.0 |        |
| Dec 17       |               |        | 0       | 0    | 0     |       |           | 63      | 23   |      |         | 169.8     | 12.7      | 6+        | 46.0 |        |
| Dec 18       |               |        | 3       | 0    | 0     |       |           | 53      | 23   |      |         | 200.7     | 60.0      | 6.0       | 46.0 |        |
| Dec 19       |               |        | 2       | 0    | 0     |       |           | 39      | 17   |      |         | 174.3     | 37.1      | 6+        | 46.0 |        |
| Dec 20       |               |        | 2       | 0    | 2     |       |           | 36      | 16   |      |         | 170.1     | 24.8      | 6.0       | 46.0 |        |
| Dec 21       |               |        | 1       | 0    | 1     |       |           | 49      | 24   |      |         | 174.0     | 19.1      | 6+        | 44.0 |        |
| Dec 22       |               |        | 2       | 0    | 0     |       |           | 24      | 16   |      |         | 174.2     | 12.1      | 6.0       | 44.0 |        |
| Dec 23       |               |        | 2       | 0    | 0     |       |           | 23      | 6    |      |         | 138.2     | 0.0       | 6.0       | 44.0 |        |
| Dec 24       |               |        | 1       | 0    | 0     |       |           | 22      | 8    |      |         | 133.2     | 0.0       | 6+        | 44.0 |        |
| Dec 25       |               |        | 0       | 0    | 1     |       |           | 32      | 10   |      |         | 134.4     | 0.0       | 6+        | 44.0 |        |
| Dec 26       |               |        | 0       | 0    | 0     |       |           | 19      | 11   |      |         | 149.8     | 0.0       | 6+        | 44.0 |        |
| Dec 27       |               |        | 2       | 0    | 0     |       |           | 13      | 6    |      |         | 157.6     | 7.2       | 6+        | 43.0 |        |
| Dec 28       |               |        | -1      | 0    | 0     |       |           | 7       | 4    |      |         | 166.7     | 5.1       | 6+        | 43.0 |        |
| Dec 29       |               |        | 0       | 0    | 0     |       |           | 9       | 2    |      |         | 166.8     | 2.3       | 6+        | 42.0 |        |
| Dec 30       |               |        | 1       | 0    | 1     |       |           | 5       | 4    |      |         | 184.0     | 10.0      | 6+        | 42.0 |        |
| Dec 31       |               |        | 0       | 0    | 0     |       |           | 4       | 2    |      |         | 177.4     | 3.0       | 6+        | 42.0 |        |
| <b>TOTAL</b> |               |        | 85      | 2    | 50    |       |           | 2,325   | 836  |      |         |           |           |           |      |        |
| <b>AVG.</b>  |               |        | 3       | 0    | 2     |       |           | 75      | 27   |      |         | 170.6     | 17.5      | 6+        | 46.0 |        |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|----------------|----------------|---------------|------------|-----------|---------|-----------------|---------------------|---------|---------|
| TOTALS TO DATE |                |               |            |           |         |                 |                     |         |         |
| SPRING         | 102,763        | 4,787         | 16,776     | 1,425     | 364,147 | 146,753         | 49,850              | 675,421 | 970     |
| SUMMER         | 64,428         | 5,104         |            |           |         |                 |                     |         |         |
| FALL           | 173,472        | 53,255        |            |           |         |                 |                     |         |         |
| <b>TOTAL</b>   | <b>340,663</b> | <b>63,146</b> |            |           |         |                 |                     |         |         |

Note: December counts were from video tape. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST.  
Official Fall Chinook run ended October 31. November and December chinook counts were not added to fall totals.

TABLE 69

YEARLY TOTALS OF SALMONIDS COUNTED OVER McNARY DAM  
1954 - 2012

| YEAR                   | CHINOOK*          | STEELHEAD        | SOCKEYE          | COHO*          | TOTALS*           |
|------------------------|-------------------|------------------|------------------|----------------|-------------------|
| 1954                   | 126,555           | 75,059           | 108,181          | 950            | 310,745           |
| 1955                   | 108,915           | 85,575           | 173,758          | 643            | 368,891           |
| 1956                   | 114,342           | 42,554           | 102,145          | 683            | 259,724           |
| 1957                   | 292,696           | 105,728          | 85,460           | 2,855          | 486,739           |
| 1958                   | 226,092           | 87,890           | 102,397          | 1,350          | 417,729           |
| 1959                   | 171,490           | 110,475          | 83,977           | 1,970          | 367,912           |
| 1960                   | 176,767           | 96,895           | 55,372           | 1,580          | 330,614           |
| 1961                   | 154,996           | 103,743          | 16,388           | 2,045          | 277,172           |
| 1962                   | 152,756           | 163,181          | 29,372           | 3,195          | 348,504           |
| 1963                   | 154,459           | 113,646          | 59,744           | 3,113          | 330,962           |
| 1964                   | 167,934           | 100,742          | 83,931           | 3,317          | 355,924           |
| 1965                   | 150,907           | 118,960          | 42,052           | 2,700          | 314,619           |
| 1966                   | 223,141           | 145,130          | 173,028          | 8,525          | 549,824           |
| 1967                   | 195,653           | 77,700           | 105,635          | 27,226         | 406,214           |
| 1968                   | 200,488           | 112,522          | 101,007          | 39,518         | 453,535           |
| 1969                   | 213,407           | 76,681           | 29,787           | 53,716         | 373,591           |
| 1970                   | 168,892           | 69,759           | 59,636           | 36,399         | 334,686           |
| 1971                   | 171,448           | 109,630          | 52,867           | 39,358         | 373,303           |
| 1972                   | 168,821           | 93,820           | 26,422           | 45,635         | 334,698           |
| 1973                   | 184,112           | 64,620           | 42,731           | 17,682         | 309,145           |
| 1974                   | 127,858           | 26,932           | 26,505           | 13,746         | 195,041           |
| 1975                   | 133,150           | 23,663           | 43,143           | 3,975          | 203,931           |
| 1976                   | 163,314           | 54,000           | 24,632           | 7,539          | 249,485           |
| 1977                   | 183,581           | 87,712           | 80,781           | 4,622          | 356,696           |
| 1978                   | 144,148           | 34,740           | 18,511           | 20,356         | 217,755           |
| 1979                   | 95,275            | 50,304           | 37,792           | 12,800         | 196,171           |
| 1980                   | 80,773            | 66,524           | 44,301           | 571            | 192,169           |
| 1981                   | 80,619            | 61,985           | 26,644           | 3,736          | 172,984           |
| 1982                   | 102,225           | 75,099           | 15,077           | 3,119          | 195,520           |
| 1983                   | 121,636           | 125,254          | 40,903           | 2,470          | 290,263           |
| 1984                   | 159,071           | 135,515          | 56,906           | 2,841          | 354,333           |
| 1985                   | 288,483           | 188,204          | 98,457           | 6,917          | 582,061           |
| 1986                   | 342,417           | 193,481          | 46,443           | 1,374          | 583,715           |
| 1987                   | 286,638           | 148,811          | 72,190           | 615            | 508,254           |
| 1988                   | 243,608           | 151,765          | 50,080           | 2,010          | 447,463           |
| 1989                   | 176,407           | 170,467          | 41,318           | 3,383          | 391,575           |
| 1990                   | 147,439           | 95,061           | 46,145           | 2,059          | 290,704           |
| 1991                   | 114,841           | 168,962          | 69,365           | 2,272          | 355,440           |
| 1992                   | 135,707           | 194,026          | 68,737           | 1,801          | 400,271           |
| 1993                   | 143,412           | 93,183           | 66,485           | 481            | 303,561           |
| 1994                   | 128,868           | 94,427           | 10,603           | 1,735          | 235,633           |
| 1995                   | 113,354           | 114,910          | 8,320            | 1,021          | 237,605           |
| 1996                   | 114,947           | 124,177          | 28,585           | 1,853          | 269,562           |
| 1997                   | 162,946           | 129,817          | 38,043           | 2,580          | 333,386           |
| 1998                   | 114,604           | 99,705           | 9,391            | 6,173          | 229,873           |
| 1999                   | 121,946           | 84,088           | 11,884           | 4,934          | 222,852           |
| 2000                   | 191,231           | 130,332          | 60,242           | 11,152         | 392,957           |
| 2001                   | 489,784           | 398,784          | 97,188           | 24,730         | 1,010,486         |
| 2002                   | 417,090           | 286,805          | 39,424           | 3,192          | 746,511           |
| 2003                   | 423,363           | 246,898          | 32,037           | 20,231         | 722,529           |
| 2004                   | 384,808           | 212,683          | 89,707           | 20,570         | 707,768           |
| 2005                   | 270,003           | 224,292          | 63,540           | 20,600         | 578,435           |
| 2006                   | 219,191           | 206,155          | 29,295           | 13,923         | 468,564           |
| 2007                   | 180,435           | 221,534          | 18,175           | 22,825         | 442,969           |
| 2008                   | 267,979           | 221,310          | 146,924          | 21,806         | 658,019           |
| 2009                   | 358,505           | 408,157          | 121,672          | 37,270         | 925,604           |
| 2010                   | 463,000           | 262,513          | 278,799          | 15,089         | 1,019,401         |
| 2011                   | 440,427           | 246,069          | 113,952          | 44,304         | 844,752           |
| 2012                   | 405,202           | 157,018          | 364,147          | 18,801         | 945,168           |
| <b>Totals</b>          | <b>12,062,156</b> | <b>7,969,672</b> | <b>4,070,233</b> | <b>681,936</b> | <b>24,783,997</b> |
| <b>10-Year Average</b> | <b>341,291</b>    | <b>240,663</b>   | <b>125,825</b>   | <b>23,542</b>  | <b>731,321</b>    |

\*Jacks included

TABLE 70

MONTHLY COUNT OF CHINOOK SALMON  
McNARY DAM: 1954 - 2012

| YEAR | JAN | FEB | MAR | APR    | MAY    | JUN    | JUL    | AUG    | SEP     | OCT    | NOV   | DEC | TOTAL*  | SPRING           | SUMMER          | FALL             |
|------|-----|-----|-----|--------|--------|--------|--------|--------|---------|--------|-------|-----|---------|------------------|-----------------|------------------|
|      |     |     |     |        |        |        |        |        |         |        |       |     |         | MAR 15-<br>JUN 8 | JUN 9-<br>AUG 8 | AUG 9-<br>OCT 31 |
| 1954 |     |     | 14  | 919    | 42,625 | 28,510 | 35,993 | 9,287  | 8,626   | 568    | 13    |     | 126,555 | 52,014           | 61,065          | 13,476           |
| 1955 |     |     |     | 86     | 12,778 | 26,125 | 46,021 | 14,773 | 7,220   | 1,648  | 264   |     | 108,915 | 21,309           | 71,180          | 16,426           |
| 1956 |     |     | 7   | 307    | 10,746 | 34,360 | 50,409 | 11,073 | 5,636   | 1,360  | 444   |     | 114,342 | 12,717           | 90,335          | 11,290           |
| 1957 |     |     | 6   | 14,489 | 67,939 | 91,473 | 41,485 | 25,621 | 48,685  | 2,998  |       |     | 292,696 | 99,511           | 122,578         | 70,607           |
| 1958 |     |     |     | 1,864  | 36,684 | 61,898 | 25,140 | 11,120 | 82,890  | 6,496  |       |     | 226,092 | 54,910           | 73,654          | 97,528           |
| 1959 |     |     |     | 3,914  | 31,923 | 23,461 | 51,478 | 14,929 | 42,756  | 3,029  |       |     | 171,490 | 40,775           | 74,985          | 55,730           |
| 1960 |     |     |     | 4,808  | 44,721 | 49,506 | 25,710 | 13,376 | 35,329  | 3,317  |       |     | 176,767 | 52,490           | 76,940          | 47,337           |
| 1961 |     |     |     | 21,669 | 44,260 | 19,722 | 23,192 | 10,661 | 31,447  | 4,045  |       |     | 154,996 | 68,539           | 45,257          | 41,200           |
| 1962 |     |     |     | 10,527 | 44,053 | 28,621 | 21,008 | 11,751 | 33,541  | 3,255  |       |     | 152,756 | 55,884           | 52,756          | 44,116           |
| 1963 |     |     |     | 7,765  | 42,804 | 22,454 | 18,659 | 13,757 | 43,731  | 5,289  |       |     | 154,459 | 52,336           | 44,760          | 57,363           |
| 1964 |     |     |     | 19,856 | 33,310 | 10,893 | 39,334 | 14,930 | 45,514  | 4,097  |       |     | 167,934 | 54,279           | 55,062          | 58,593           |
| 1965 |     |     |     | 6,114  | 20,559 | 14,094 | 28,599 | 12,856 | 60,185  | 8,500  |       |     | 150,907 | 29,206           | 45,375          | 76,326           |
| 1966 |     |     |     | 53,484 | 32,282 | 21,161 | 35,895 | 13,811 | 58,275  | 8,233  |       |     | 223,141 | 87,195           | 60,827          | 75,119           |
| 1967 |     |     |     | 32,790 | 28,174 | 13,244 | 44,612 | 10,788 | 54,314  | 11,731 |       |     | 195,653 | 62,591           | 59,975          | 73,087           |
| 1968 |     |     |     | 13,328 | 51,443 | 20,456 | 37,127 | 15,713 | 53,597  | 8,824  |       |     | 200,488 | 67,092           | 60,639          | 72,757           |
| 1969 |     |     |     | 809    | 60,241 | 39,074 | 30,556 | 12,200 | 59,889  | 10,638 |       |     | 213,407 | 70,079           | 63,953          | 79,375           |
| 1970 |     |     |     | 28,015 | 34,027 | 18,661 | 23,132 | 13,773 | 44,635  | 6,649  |       |     | 168,892 | 63,982           | 43,356          | 61,554           |
| 1971 |     |     |     | 5,642  | 32,688 | 24,007 | 35,152 | 9,680  | 55,297  | 8,982  |       |     | 171,448 | 42,601           | 59,129          | 69,718           |
| 1972 |     |     |     | 25,911 | 41,609 | 12,553 | 35,322 | 10,154 | 37,131  | 6,141  |       |     | 168,821 | 69,023           | 50,491          | 49,307           |
| 1973 |     |     |     | 44,878 | 31,727 | 16,836 | 14,520 | 10,400 | 57,716  | 8,035  |       |     | 184,112 | 79,047           | 31,812          | 73,253           |
| 1974 |     |     |     | 1,918  | 34,767 | 7,976  | 18,181 | 6,251  | 45,845  | 12,920 |       |     | 127,858 | 40,037           | 25,812          | 62,009           |
| 1975 |     |     |     | 4,694  | 24,752 | 11,590 | 20,497 | 12,485 | 53,125  | 6,007  |       |     | 133,150 | 32,718           | 31,713          | 68,719           |
| 1976 |     |     |     | 4,868  | 30,435 | 16,714 | 19,821 | 9,143  | 64,863  | 17,470 |       |     | 163,314 | 38,505           | 36,818          | 87,991           |
| 1977 |     |     |     | 40,692 | 23,895 | 16,768 | 16,256 | 7,348  | 64,785  | 13,837 |       |     | 183,581 | 66,934           | 32,277          | 84,370           |
| 1978 |     |     |     | 27,191 | 37,613 | 14,505 | 18,095 | 7,799  | 30,273  | 7,296  | 1,376 |     | 144,148 | 68,414           | 31,589          | 44,145           |
| 1979 |     |     | 6   | 5,424  | 13,696 | 9,763  | 14,601 | 8,030  | 34,702  | 8,171  | 882   |     | 95,275  | 21,153           | 24,161          | 49,961           |
| 1980 |     |     | 3   | 3,481  | 18,108 | 6,705  | 12,166 | 7,001  | 24,409  | 8,284  | 616   |     | 80,773  | 23,001           | 18,862          | 38,910           |
| 1981 |     |     | 3   | 12,923 | 16,904 | 8,288  | 8,243  | 5,584  | 23,323  | 4,926  | 425   |     | 80,619  | 32,330           | 15,141          | 33,148           |
| 1982 |     |     | 3   | 1,638  | 23,487 | 10,357 | 8,749  | 5,091  | 44,276  | 8,624  |       |     | 102,225 | 28,352           | 16,574          | 57,299           |
| 1983 |     |     |     | 4,481  | 25,074 | 9,202  | 7,882  | 5,217  | 54,339  | 15,441 |       |     | 121,636 | 31,636           | 16,199          | 73,801           |
| 1984 |     |     |     | 1,772  | 23,806 | 9,235  | 12,256 | 8,845  | 79,004  | 23,391 | 767   |     | 159,076 | 27,474           | 21,201          | 110,401          |
| 1985 |     |     | 18  | 18,267 | 41,962 | 14,117 | 9,912  | 17,222 | 140,034 | 46,951 |       |     | 288,483 | 63,265           | 22,029          | 203,189          |

TABLE 70

(Continued)

**MONTHLY COUNT OF CHINOOK SALMON  
McNARY DAM: 1954 - 2012**

| YEAR                       | JAN           | FEB            | MAR              | APR              | MAY              | JUN            | JUL              | AUG            | SEP           | OCT        | NOV   | DEC | TOTAL*            | SPRING           | SUMMER           | FALL             |
|----------------------------|---------------|----------------|------------------|------------------|------------------|----------------|------------------|----------------|---------------|------------|-------|-----|-------------------|------------------|------------------|------------------|
|                            |               |                |                  |                  |                  |                |                  |                |               |            |       |     |                   | MAR 15-<br>JUN 8 | JUN 9-<br>AUG 8  | AUG 9-<br>OCT 31 |
| 1986                       |               |                | 2                | 28,739           | 44,459           | 14,515         | 12,315           | 9,636          | 168,230       | 64,521     |       |     | 342,417           | 76,077           | 25,798           | 240,542          |
| 1987                       |               |                |                  | 26,258           | 32,171           | 12,889         | 11,219           | 19,123         | 151,410       | 33,568     |       |     | 286,638           | 60,396           | 25,353           | 200,889          |
| 1988                       |               |                |                  | 26,267           | 22,245           | 14,605         | 9,282            | 30,714         | 115,878       | 24,617     |       |     | 243,608           | 51,178           | 23,621           | 168,809          |
| 1989                       |               |                |                  | 9,625            | 24,281           | 12,484         | 11,112           | 23,034         | 80,089        | 15,782     |       |     | 176,407           | 35,954           | 24,708           | 115,745          |
| 1990                       |               |                |                  | 19,309           | 23,861           | 11,007         | 11,148           | 7,306          | 61,718        | 13,090     |       |     | 147,439           | 44,499           | 22,248           | 80,692           |
| 1991                       |               |                |                  | 4,942            | 15,838           | 9,289          | 9,409            | 4,328          | 56,251        | 13,674     | 1,074 | 36  | 114,841           | 22,631           | 17,588           | 74,622           |
| 1992                       |               |                |                  | 25,549           | 22,799           | 9,511          | 6,159            | 5,846          | 51,961        | 13,882     |       |     | 135,707           | 50,590           | 14,414           | 70,703           |
| 1993                       |               |                |                  | 18,649           | 37,255           | 14,880         | 8,119            | 8,414          | 48,093        | 8,002      |       |     | 143,412           | 59,556           | 20,374           | 63,482           |
| 1994                       |               |                |                  | 2,940            | 5,513            | 5,486          | 8,242            | 11,085         | 80,693        | 14,909     |       |     | 128,868           | 8,987            | 14,313           | 105,568          |
| 1995                       |               |                |                  | 1,392            | 3,871            | 4,343          | 8,270            | 13,224         | 61,633        | 20,621     |       |     | 113,354           | 5,930            | 13,219           | 94,205           |
| 1996                       |               |                |                  | 426              | 15,212           | 8,242          | 8,206            | 13,964         | 56,847        | 12,050     |       |     | 114,947           | 17,832           | 15,102           | 82,013           |
| 1997                       |               |                |                  | 6,529            | 44,264           | 18,384         | 10,584           | 6,892          | 63,484        | 12,809     |       |     | 162,946           | 56,826           | 23,649           | 82,471           |
| 1998                       |               |                |                  | 6,645            | 11,964           | 9,965          | 8,249            | 5,652          | 50,987        | 21,142     |       |     | 114,604           | 19,752           | 17,634           | 77,218           |
| 1999                       |               |                |                  | 1,193            | 10,841           | 7,570          | 13,475           | 15,402         | 59,360        | 14,105     |       |     | 121,946           | 13,232           | 21,618           | 87,096           |
| 2000                       |               |                |                  | 25,136           | 46,396           | 16,096         | 13,641           | 27,931         | 50,138        | 11,893     |       |     | 191,231           | 75,644           | 27,696           | 87,891           |
| 2001                       |               |                |                  | 164,846          | 86,605           | 50,064         | 36,562           | 16,605         | 111,369       | 23,733     |       |     | 489,784           | 265,372          | 77,514           | 146,898          |
| 2002                       |               |                |                  | 14,867           | 108,862          | 65,935         | 56,149           | 26,798         | 123,089       | 21,390     |       |     | 417,090           | 133,229          | 116,747          | 167,114          |
| 2003                       |               |                | 853              | 53,947           | 46,116           | 57,732         | 50,157           | 13,667         | 166,635       | 32,349     | 1,750 | 157 | 423,363           | 107,522          | 104,948          | 208,982          |
| 2004                       |               |                | 72               | 53,405           | 53,267           | 47,903         | 32,067           | 12,212         | 149,297       | 34,795     | 1,659 | 131 | 384,808           | 115,251          | 74,217           | 193,550          |
| 2005                       |               |                | 4                | 6,750            | 38,439           | 45,654         | 28,928           | 11,655         | 111,701       | 25,976     | 825   | 71  | 270,003           | 55,056           | 66,858           | 147,189          |
| 2006                       |               |                | 1                | 121              | 43,778           | 40,077         | 27,708           | 10,210         | 71,105        | 24,186     | 1,810 | 195 | 219,191           | 48,363           | 65,960           | 102,863          |
| 2007                       |               |                | 3                | 7,073            | 38,622           | 27,760         | 18,036           | 8,565          | 60,291        | 18,455     | 1,538 | 92  | 180,435           | 51,104           | 42,436           | 85,262           |
| 2008                       |               |                |                  | 7,133            | 64,596           | 48,906         | 24,035           | 13,094         | 94,986        | 15,229     |       |     | 267,979           | 80,213           | 65,974           | 121,792          |
| 2009                       |               |                |                  | 1,821            | 98,882           | 63,510         | 26,828           | 30,161         | 117,844       | 19,459     |       |     | 358,505           | 113,741          | 78,319           | 166,445          |
| 2010                       |               |                |                  | 48,451           | 98,345           | 58,192         | 30,587           | 18,708         | 166,173       | 42,544     |       |     | 463,000           | 191,921          | 74,589           | 225,154          |
| 2011                       |               |                |                  | 683              | 118,537          | 64,599         | 46,170           | 21,482         | 144,223       | 44,733     |       |     | 440,427           | 132,995          | 102,786          | 204,646          |
| 2012                       |               |                |                  | 1,877            | 94,385           | 45,725         | 31,612           | 19,396         | 174,650       | 36,164     | 1,306 | 87  | 405,202           | 107,550          | 69,532           | 226,727          |
| <b>Total</b>               | <b>995</b>    | <b>989,097</b> | <b>2,310,496</b> | <b>1,497,652</b> | <b>1,388,272</b> | <b>765,773</b> | <b>4,173,527</b> | <b>920,831</b> | <b>14,749</b> | <b>769</b> |       |     | <b>12,062,161</b> | <b>3,610,800</b> | <b>2,783,720</b> | <b>5,686,673</b> |
| <b>10-Year<br/>Average</b> | <b>18,126</b> | <b>69,497</b>  | <b>50,006</b>    | <b>31,613</b>    | <b>15,915</b>    | <b>125,691</b> | <b>29,389</b>    |                |               |            |       |     | <b>341,291</b>    | <b>100,372</b>   | <b>74,562</b>    | <b>168,261</b>   |

\*Jacks included

TABLE 71  
MONTHLY COUNT OF SOCKEYE SALMON  
McNARY DAM: 1954 - 2012

| YEAR | JAN | FEB | MAR | APR | MAY | JUN    | JUL     | AUG    | SEP   | OCT   | NOV | DEC | TOTAL   |
|------|-----|-----|-----|-----|-----|--------|---------|--------|-------|-------|-----|-----|---------|
| 1954 |     |     |     |     | 1   | 1,107  | 93,452  | 11,382 | 2,214 | 25    |     |     | 108,181 |
| 1955 |     |     |     |     | 43  | 287    | 163,902 | 9,402  | 121   | 3     |     |     | 173,758 |
| 1956 |     |     |     |     | 1   | 639    | 94,352  | 6,882  | 262   | 7     | 2   |     | 102,145 |
| 1957 |     |     |     |     | 13  | 6,318  | 74,874  | 4,233  | 22    |       |     |     | 85,460  |
| 1958 |     |     |     |     |     | 12,542 | 82,547  | 5,474  | 1,819 | 15    |     |     | 102,397 |
| 1959 |     |     |     |     | 21  | 2,031  | 73,735  | 7,981  | 209   |       |     |     | 83,977  |
| 1960 |     |     |     |     |     | 9,374  | 43,749  | 2,241  | 8     |       |     |     | 55,372  |
| 1961 |     |     |     |     |     | 1,088  | 14,149  | 1,138  | 11    | 2     |     |     | 16,388  |
| 1962 |     |     |     |     |     | 1,721  | 27,134  | 511    | 6     |       |     |     | 29,372  |
| 1963 |     |     |     |     | 78  | 8,712  | 50,415  | 535    | 4     |       |     |     | 59,744  |
| 1964 |     |     |     |     |     | 770    | 81,536  | 1,617  | 8     |       |     |     | 83,931  |
| 1965 |     |     |     |     |     | 328    | 40,790  | 923    | 10    | 1     |     |     | 42,052  |
| 1966 |     |     |     |     |     | 6,202  | 162,267 | 4,548  | 11    |       |     |     | 173,028 |
| 1967 |     |     |     |     |     | 1,935  | 101,044 | 2,647  | 9     |       |     |     | 105,635 |
| 1968 |     |     |     |     |     | 28,928 | 70,413  | 1,666  |       |       |     |     | 101,007 |
| 1969 |     |     |     |     |     | 5,787  | 23,353  | 647    |       |       |     |     | 29,787  |
| 1970 |     |     |     |     |     | 7,152  | 47,339  | 5,134  | 11    |       |     |     | 59,636  |
| 1971 |     |     |     |     |     | 317    | 50,568  | 1,982  |       |       |     |     | 52,867  |
| 1972 |     |     |     |     |     | 366    | 24,452  | 1,604  |       |       |     |     | 26,422  |
| 1973 |     |     |     |     |     | 9,011  | 32,301  | 999    | 420   |       |     |     | 42,731  |
| 1974 |     |     |     |     |     | 188    | 25,816  | 486    | 15    |       |     |     | 26,505  |
| 1975 |     |     |     |     |     | 1,517  | 41,011  | 615    |       |       |     |     | 43,143  |
| 1976 |     |     |     |     |     | 4,461  | 19,319  | 415    | 437   |       |     |     | 24,632  |
| 1977 |     |     |     |     | 8   | 36,708 | 43,077  | 739    | 207   | 42    |     |     | 80,781  |
| 1978 |     |     |     |     |     | 3,211  | 10,376  | 714    | 1,583 | 2,627 |     |     | 18,511  |
| 1979 |     |     |     |     |     | 6,317  | 29,571  | 1,547  | 321   | 36    |     |     | 37,792  |
| 1980 |     |     |     |     |     | 3,400  | 40,469  | 432    |       |       |     |     | 44,301  |
| 1981 |     |     |     |     |     | 4,419  | 22,042  | 180    | 1     | 2     |     |     | 26,644  |
| 1982 |     |     |     |     |     | 812    | 13,489  | 281    | 292   | 203   |     |     | 15,077  |
| 1983 |     |     |     |     |     | 5,897  | 33,851  | 997    | 142   | 16    |     |     | 40,903  |
| 1984 |     |     |     |     |     | 18,762 | 37,409  | 637    | 85    | 11    | 2   |     | 56,906  |
| 1985 |     |     |     | 1   |     | 60,067 | 36,567  | 522    | 593   | 707   |     |     | 98,457  |

TABLE 71

(Continued)

**MONTHLY COUNT OF SOCKEYE SALMON  
McNARY DAM; 1954 - 2012**

| YEAR                       | JAN | FEB | MAR | APR      | MAY        | JUN              | JUL              | AUG           | SEP          | OCT          | NOV      | DEC      | TOTAL            |
|----------------------------|-----|-----|-----|----------|------------|------------------|------------------|---------------|--------------|--------------|----------|----------|------------------|
| 1986                       |     |     |     |          |            | 8,362            | 36,863           | 819           | 348          | 51           |          |          | 46,443           |
| 1987                       |     |     |     |          | 4          | 28,742           | 42,464           | 889           | 85           | 6            |          |          | 72,190           |
| 1988                       |     |     |     |          |            | 23,466           | 25,984           | 599           | 14           | 17           |          |          | 50,080           |
| 1989                       |     |     |     |          | 1          | 14,721           | 26,239           | 334           | 21           | 2            |          |          | 41,318           |
| 1990                       |     |     |     |          | 1          | 8,922            | 36,791           | 427           | 0            | 4            |          |          | 46,145           |
| 1991                       |     |     |     |          | 1          | 6,509            | 61,780           | 1,024         | 38           | 11           | 1        | 1        | 69,365           |
| 1992                       |     |     |     |          | 7          | 30,339           | 37,915           | 448           | 28           |              |          |          | 68,737           |
| 1993                       |     |     |     |          |            | 26,492           | 39,607           | 377           | 9            |              |          |          | 66,485           |
| 1994                       |     |     |     |          | 1          | 5,910            | 4,672            | 20            |              |              |          |          | 10,603           |
| 1995                       |     |     |     |          | 1          | 3,001            | 5,259            | 58            |              | 1            |          |          | 8,320            |
| 1996                       |     |     |     |          |            | 11,594           | 16,927           | 64            |              |              |          |          | 28,585           |
| 1997                       |     |     |     |          |            | 7,706            | 29,645           | 688           | 4            |              |          |          | 38,043           |
| 1998                       |     |     |     |          |            | 3,585            | 5,754            | 45            | 7            |              |          |          | 9,391            |
| 1999                       |     |     |     |          |            | 2,842            | 8,940            | 99            | 1            | 2            |          |          | 11,884           |
| 2000                       |     |     |     |          | 4          | 44,379           | 15,752           | 106           | 1            |              |          |          | 60,242           |
| 2001                       |     |     |     |          | 4          | 70,327           | 26,610           | 225           | 17           | 5            |          |          | 97,188           |
| 2002                       |     |     |     |          | 1          | 12,518           | 26,745           | 156           | 2            | 2            |          |          | 39,424           |
| 2003                       |     |     |     |          | 4          | 13,277           | 18,728           | 28            | 0            |              |          |          | 32,037           |
| 2004                       |     |     |     |          | 10         | 61,547           | 28,107           | 38            | 5            |              |          |          | 89,707           |
| 2005                       |     |     |     |          | 0          | 27,341           | 36,009           | 182           | 8            |              |          |          | 63,540           |
| 2006                       |     |     |     |          | 0          | 14,675           | 14,473           | 142           | 5            |              |          |          | 29,295           |
| 2007                       |     |     |     |          | 1          | 11,087           | 6,974            | 105           | 6            | 2            |          |          | 18,175           |
| 2008                       |     |     |     |          | 1          | 96,655           | 50,196           | 70            | 2            |              |          |          | 146,924          |
| 2009                       |     |     |     |          | 5          | 62,066           | 59,564           | 31            | 9            | -3           |          |          | 121,672          |
| 2010                       |     |     |     |          | 7          | 166,127          | 112,474          | 194           | -4           | 1            |          |          | 278,799          |
| 2011                       |     |     |     |          |            | 20,773           | 92,461           | 703           | 15           | 0            |          |          | 113,952          |
| 2012                       |     |     |     |          | 1          | 165,803          | 198,037          | 292           | 14           | 0            |          |          | 364,147          |
| <b>Total</b>               |     |     |     | <b>1</b> | <b>219</b> | <b>1,199,140</b> | <b>2,770,339</b> | <b>87,274</b> | <b>9,456</b> | <b>3,798</b> | <b>5</b> | <b>1</b> | <b>4,070,233</b> |
| <b>10-Year<br/>Average</b> |     |     |     |          | <b>3</b>   | <b>63,935</b>    | <b>61,702</b>    | <b>179</b>    | <b>6</b>     |              |          |          | <b>125,825</b>   |

TABLE 72

**MONTHLY COUNT OF COHO SALMON  
McNARY DAM: 1954 - 2012**

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG   | SEP    | OCT   | NOV   | DEC | TOTALS* |
|------|-----|-----|-----|-----|-----|-----|-----|-------|--------|-------|-------|-----|---------|
| 1954 |     |     |     |     |     |     |     | 4     | 751    | 180   | 14    | 1   | 950     |
| 1955 |     |     |     |     |     |     |     |       | 350    | 260   | 33    |     | 643     |
| 1956 |     |     |     |     |     |     |     | 16    | 462    | 157   | 48    |     | 683     |
| 1957 |     |     |     |     |     |     | 18  | 208   | 2,364  | 265   |       |     | 2,855   |
| 1958 |     |     |     |     |     |     |     | 29    | 1,091  | 230   |       |     | 1,350   |
| 1959 |     |     |     |     |     |     |     | 32    | 1,892  | 46    |       |     | 1,970   |
| 1960 |     |     |     |     |     |     |     | 24    | 1,432  | 124   |       |     | 1,580   |
| 1961 |     |     |     |     |     |     |     | 22    | 1,731  | 292   |       |     | 2,045   |
| 1962 |     |     |     |     |     |     | 5   | 106   | 2,884  | 200   |       |     | 3,195   |
| 1963 |     |     |     |     |     |     | 5   | 437   | 2,259  | 412   |       |     | 3,113   |
| 1964 |     |     |     |     |     |     | 3   | 307   | 2,734  | 273   |       |     | 3,317   |
| 1965 |     |     |     |     |     |     | 22  | 105   | 2,264  | 309   |       |     | 2,700   |
| 1966 |     |     |     |     |     |     |     | 811   | 7,195  | 519   |       |     | 8,525   |
| 1967 |     |     |     |     |     |     | 11  | 11    | 22,492 | 4,712 |       |     | 27,226  |
| 1968 |     |     |     |     |     |     |     | 1,010 | 36,260 | 2,248 |       |     | 39,518  |
| 1969 |     |     |     |     |     |     |     | 1,643 | 45,497 | 6,576 |       |     | 53,716  |
| 1970 |     |     |     |     |     |     |     | 3,576 | 31,161 | 1,662 |       |     | 36,399  |
| 1971 |     |     |     |     |     |     |     | 927   | 33,828 | 4,603 |       |     | 39,358  |
| 1972 |     |     |     |     |     |     |     | 2,433 | 38,747 | 4,455 |       |     | 45,635  |
| 1973 |     |     |     |     |     |     | 66  | 1,768 | 14,452 | 1,396 |       |     | 17,682  |
| 1974 |     |     |     |     |     |     |     | 1,160 | 10,052 | 2,534 |       |     | 13,746  |
| 1975 |     |     |     |     |     |     | 1   | 268   | 3,675  | 31    |       |     | 3,975   |
| 1976 |     |     |     |     |     |     |     | 373   | 5,201  | 1,965 |       |     | 7,539   |
| 1977 |     |     |     |     |     | 2   |     | 274   | 2,698  | 1,648 |       |     | 4,622   |
| 1978 |     |     |     |     |     | 1   |     | 138   | 10,445 | 7,459 | 2,313 |     | 20,356  |
| 1979 |     |     |     | 1   |     | 4   | 194 | 652   | 9,058  | 2,431 | 460   |     | 12,800  |
| 1980 |     |     |     |     |     |     |     | 2     | 180    | 203   | 186   |     | 571     |
| 1981 |     |     |     |     |     |     |     | 421   | 2,840  | 435   | 40    |     | 3,736   |
| 1982 |     |     |     |     |     |     | 141 | 235   | 2,148  | 595   |       |     | 3,119   |
| 1983 |     |     |     |     |     |     |     | 229   | 1,536  | 705   |       |     | 2,470   |
| 1984 |     |     |     |     |     | 6   |     | 147   | 2,506  | 154   | 28    |     | 2,841   |
| 1985 |     |     |     |     | 14  | 37  | 44  | 2,040 | 4,493  | 289   |       |     | 6,917   |



TABLE 72

(Continued)

MONTHLY COUNT OF COHO SALMON  
McNARY DAM; 1954 - 2012

| YEAR                       | JAN | FEB | MAR | APR      | MAY       | JUN       | JUL        | AUG           | SEP            | OCT            | NOV          | DEC       | TOTALS*        |
|----------------------------|-----|-----|-----|----------|-----------|-----------|------------|---------------|----------------|----------------|--------------|-----------|----------------|
| 1986                       |     |     |     |          |           |           |            | 1             | 851            | 522            |              |           | 1,374          |
| 1987                       |     |     |     |          |           |           | 3          | 24            | 377            | 211            |              |           | 615            |
| 1988                       |     |     |     |          |           |           |            | 17            | 1,210          | 783            |              |           | 2,010          |
| 1989                       |     |     |     |          |           |           |            | 35            | 2,043          | 1,305          |              |           | 3,383          |
| 1990                       |     |     |     |          |           |           |            | 1             | 1,007          | 1,051          |              |           | 2,059          |
| 1991                       |     |     |     |          |           |           |            |               | 1,105          | 937            | 211          | 19        | 2,272          |
| 1992                       |     |     |     |          |           |           |            | 1             | 1,130          | 670            |              |           | 1,801          |
| 1993                       |     |     |     |          |           |           |            | 2             | 254            | 225            |              |           | 481            |
| 1994                       |     |     |     |          |           |           |            | 9             | 978            | 748            |              |           | 1,735          |
| 1995                       |     |     |     |          |           |           |            | 8             | 344            | 669            |              |           | 1,021          |
| 1996                       |     |     |     |          |           |           | 2          | 1             | 1,212          | 638            |              |           | 1,853          |
| 1997                       |     |     |     |          |           |           |            | 29            | 1,577          | 974            |              |           | 2,580          |
| 1998                       |     |     |     |          |           |           |            | 6             | 687            | 5,480          |              |           | 6,173          |
| 1999                       |     |     |     |          |           |           |            | 6             | 2,931          | 1,997          |              |           | 4,934          |
| 2000                       |     |     |     |          |           |           |            | 309           | 6,947          | 3,896          |              |           | 11,152         |
| 2001                       |     |     |     |          |           |           |            | 59            | 11,631         | 13,040         |              |           | 24,730         |
| 2002                       |     |     |     |          |           |           |            | 10            | 1,765          | 1,417          |              |           | 3,192          |
| 2003                       |     |     |     |          |           |           |            | 25            | 11,788         | 8,017          | 401          |           | 20,231         |
| 2004                       |     |     |     |          |           |           |            | 17            | 13,954         | 6,161          | 427          | 11        | 20,570         |
| 2005                       |     |     |     |          |           |           |            | 59            | 11,327         | 8,390          | 819          | 5         | 20,600         |
| 2006                       |     |     |     |          |           |           |            | 90            | 7,893          | 5,350          | 588          | 2         | 13,923         |
| 2007                       |     |     |     |          |           |           |            | 9             | 11,263         | 11,315         | 238          |           | 22,825         |
| 2008                       |     |     |     |          |           |           |            | 63            | 14,588         | 7,155          |              |           | 21,806         |
| 2009                       |     |     |     |          |           |           |            | 1,193         | 16,626         | 19,451         |              |           | 37,270         |
| 2010                       |     |     |     |          |           |           |            | 54            | 9,555          | 5,480          |              |           | 15,089         |
| 2011                       |     |     |     |          |           |           |            | 917           | 24,682         | 18,705         |              |           | 44,304         |
| 2012                       |     |     |     |          |           |           |            | 424           | 14,779         | 2,998          | 550          | 50        | 18,801         |
| <b>TOTAL</b>               |     |     |     | <b>1</b> | <b>14</b> | <b>50</b> | <b>515</b> | <b>22,777</b> | <b>477,182</b> | <b>174,953</b> | <b>6,356</b> | <b>88</b> | <b>681,936</b> |
| <b>10-Year<br/>Average</b> |     |     |     |          |           |           |            | <b>285</b>    | <b>13,646</b>  | <b>9,302</b>   |              |           | <b>23,542</b>  |

\*Jacks included

TABLE 73

**MONTHLY COUNT OF STEELHEAD  
McNARY DAM: 1954-2012**

| YEAR | JAN | FEB | MAR   | APR   | MAY   | JUN   | JUL    | AUG    | SEP    | OCT    | NOV   | DEC   | TOTAL   |
|------|-----|-----|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|---------|
| 1954 |     |     | 376   | 5,569 | 2,307 | 128   | 2,628  | 20,939 | 26,944 | 11,627 | 2,937 | 1,604 | 75,059  |
| 1955 | 931 | 35  | 70    | 3,279 | 1,791 | 162   | 5,257  | 36,035 | 17,463 | 16,941 | 2,874 | 737   | 85,575  |
| 1956 | 66  | 753 | 563   | 2,365 | 1,218 | 276   | 5,440  | 14,492 | 8,245  | 6,787  | 2,349 |       | 42,554  |
| 1957 |     |     | 840   | 2,084 | 147   | 334   | 18,100 | 28,926 | 34,478 | 20,775 | 8     | 36    | 105,728 |
| 1958 | 62  | 137 | 1,069 | 877   | 334   | 1,265 | 9,967  | 6,535  | 50,229 | 17,415 |       |       | 87,890  |
| 1959 |     |     |       | 1,317 | 685   | 748   | 10,508 | 32,872 | 49,542 | 14,803 |       |       | 110,475 |
| 1960 |     |     |       | 1,579 | 1,236 | 908   | 8,475  | 22,443 | 51,749 | 10,505 |       |       | 96,895  |
| 1961 |     |     |       | 896   | 580   | 1,281 | 7,469  | 11,428 | 64,521 | 17,568 |       |       | 103,743 |
| 1962 |     |     |       | 1,650 | 762   | 1,108 | 11,321 | 28,288 | 98,042 | 22,010 |       |       | 163,181 |
| 1963 |     |     |       | 813   | 1,751 | 2,639 | 8,252  | 26,282 | 47,982 | 25,927 |       |       | 113,646 |
| 1964 |     |     |       | 1,789 | 805   | 486   | 7,602  | 25,918 | 53,180 | 10,962 |       |       | 100,742 |
| 1965 |     |     |       | 1,361 | 363   | 231   | 11,749 | 31,155 | 54,450 | 19,651 |       |       | 118,960 |
| 1966 |     |     |       | 2,279 | 954   | 1,476 | 18,241 | 26,062 | 71,180 | 24,938 |       |       | 145,130 |
| 1967 |     |     |       | 1,434 | 1,130 | 152   | 5,771  | 14,894 | 32,310 | 22,009 |       |       | 77,700  |
| 1968 |     |     |       | 5,451 | 3,361 | 247   | 4,058  | 22,268 | 61,167 | 15,970 |       |       | 112,522 |
| 1969 |     |     |       | 2,304 | 1,792 | 711   | 7,668  | 13,641 | 35,836 | 14,729 |       |       | 76,681  |
| 1970 |     |     |       | 1,347 | 1,001 | 340   | 5,183  | 15,236 | 39,150 | 7,502  |       |       | 69,759  |
| 1971 |     |     |       | 813   | 374   | 271   | 8,931  | 21,324 | 62,083 | 15,834 |       |       | 109,630 |
| 1972 |     |     |       | 1,614 | 393   | 130   | 8,155  | 20,548 | 46,393 | 16,587 |       |       | 93,820  |
| 1973 |     |     |       | 3,178 | 846   | 270   | 6,898  | 11,121 | 32,701 | 9,606  |       |       | 64,620  |
| 1974 |     |     |       | 847   | 715   | 681   | 4,093  | 5,242  | 8,648  | 6,706  |       |       | 26,932  |
| 1975 |     |     |       | 612   | 209   | 254   | 3,623  | 6,708  | 9,329  | 2,928  |       |       | 23,663  |
| 1976 |     |     |       | 936   | 1,372 | 1,949 | 5,772  | 16,145 | 22,423 | 5,403  |       |       | 54,000  |
| 1977 |     |     |       | 1,730 | 987   | 2,916 | 13,132 | 7,833  | 43,792 | 17,322 |       |       | 87,712  |
| 1978 |     |     |       | 1,266 | 701   | 1,832 | 3,444  | 4,863  | 15,627 | 5,708  | 1,299 |       | 34,740  |
| 1979 |     |     | 970   | 681   | 156   | 93    | 4,955  | 9,970  | 14,648 | 15,580 | 3,251 |       | 50,304  |
| 1980 |     |     | 1,753 | 3,355 | 608   | 381   | 2,740  | 14,431 | 27,706 | 12,776 | 2,774 |       | 66,524  |
| 1981 |     |     | 861   | 1,479 | 809   | 878   | 7,212  | 12,839 | 19,961 | 15,652 | 2,294 |       | 61,985  |
| 1982 |     |     | 1,530 | 1,764 | 825   | 321   | 4,279  | 12,621 | 36,282 | 17,477 |       |       | 75,099  |
| 1983 |     |     |       | 1,051 | 215   | 137   | 7,746  | 25,821 | 70,369 | 19,915 |       |       | 125,254 |
| 1984 |     |     |       | 1,858 | 860   | 653   | 13,165 | 14,944 | 68,837 | 33,608 | 1,590 |       | 135,515 |
| 1985 |     |     | 1,583 | 6,483 | 1,383 | 2,949 | 13,818 | 46,632 | 87,026 | 28,330 |       |       | 188,204 |

TABLE 73

(Continued)

**MONTHLY COUNT OF STEELHEAD  
McNARY DAM: 1954 - 2012**

| YEAR            | JAN   | FEB | MAR    | APR     | MAY    | JUN    | JUL     | AUG       | SEP       | OCT       | NOV    | DEC    | TOTALS*   |
|-----------------|-------|-----|--------|---------|--------|--------|---------|-----------|-----------|-----------|--------|--------|-----------|
| 1986            |       |     | 1,282  | 1,184   | 414    | 1,193  | 27,563  | 32,339    | 74,769    | 54,737    |        |        | 193,481   |
| 1987            |       |     |        | 2,082   | 413    | 885    | 16,658  | 35,661    | 59,326    | 33,786    |        |        | 148,811   |
| 1988            |       |     |        | 4,176   | 1,095  | 2,117  | 11,609  | 25,875    | 69,259    | 37,634    |        |        | 151,765   |
| 1989            |       |     |        | 3,269   | 598    | 1,921  | 16,002  | 20,819    | 87,722    | 40,136    |        |        | 170,467   |
| 1990            |       |     |        | 2,754   | 660    | 1,489  | 9,105   | 10,368    | 33,452    | 37,233    |        |        | 95,061    |
| 1991            |       |     |        | 2,245   | 630    | 846    | 9,921   | 17,752    | 78,363    | 46,941    | 9,388  | 2,876  | 168,962   |
| 1992            |       |     |        | 1,427   | 642    | 1,921  | 10,989  | 15,504    | 127,626   | 35,917    |        |        | 194,026   |
| 1993            |       |     |        | 5,194   | 588    | 2,197  | 9,692   | 10,003    | 35,287    | 30,222    |        |        | 93,183    |
| 1994            |       |     |        | 2,622   | 336    | 1,169  | 7,436   | 5,468     | 40,871    | 36,525    |        |        | 94,427    |
| 1995            |       |     |        | 774     | 325    | 998    | 8,042   | 21,720    | 45,237    | 37,814    |        |        | 114,910   |
| 1996            |       |     |        | 701     | 301    | 950    | 8,726   | 34,385    | 50,723    | 28,391    |        |        | 124,177   |
| 1997            |       |     |        | 1,210   | 435    | 1,241  | 10,174  | 19,917    | 58,210    | 38,630    |        |        | 129,817   |
| 1998            |       |     |        | 1,236   | 364    | 1,391  | 6,372   | 4,040     | 38,324    | 47,978    |        |        | 99,705    |
| 1999            |       |     |        | 253     | 248    | 905    | 7,175   | 27,592    | 35,243    | 12,672    |        |        | 84,088    |
| 2000            |       |     |        | 588     | 238    | 1,901  | 16,311  | 23,148    | 59,803    | 28,343    |        |        | 130,332   |
| 2001            |       |     |        | 1,337   | 487    | 7,741  | 46,981  | 50,463    | 190,205   | 101,570   |        |        | 398,784   |
| 2002            |       |     |        | 4,650   | 271    | 2,957  | 29,979  | 48,226    | 120,936   | 79,786    |        |        | 286,805   |
| 2003            |       |     | 8,696  | 1,309   | 145    | 2,298  | 20,439  | 15,184    | 139,321   | 51,722    | 6,307  | 1,477  | 246,898   |
| 2004            |       |     | 4,316  | 1,133   | 480    | 3,901  | 14,376  | 10,863    | 132,387   | 37,931    | 4,348  | 2,948  | 212,683   |
| 2005            |       |     | 2,271  | 847     | 377    | 2,669  | 17,371  | 19,933    | 109,198   | 63,710    | 7,248  | 668    | 224,292   |
| 2006            |       |     | 1,388  | 2,009   | 175    | 1,272  | 9,214   | 14,519    | 104,009   | 52,826    | 17,808 | 2,935  | 206,155   |
| 2007            |       |     | 6,155  | 1,693   | 241    | 1,616  | 13,232  | 32,652    | 109,015   | 50,339    | 4,805  | 1,786  | 221,534   |
| 2008            |       |     |        | 2,066   | 362    | 2,342  | 27,375  | 26,588    | 122,078   | 40,499    |        |        | 221,310   |
| 2009            |       |     |        | 2,144   | 293    | 2,108  | 20,407  | 85,285    | 204,948   | 92,972    |        |        | 408,157   |
| 2010            |       |     |        | 1,974   | 397    | 3,668  | 51,028  | 39,689    | 122,146   | 43,611    |        |        | 262,513   |
| 2011            |       |     |        | 2,283   | 348    | 714    | 17,533  | 94,372    | 87,138    | 43,681    |        |        | 246,069   |
| 2012            |       |     | 3,009  | 1,521   | 234    | 1,744  | 18,373  | 33,983    | 62,318    | 28,580    | 4,931  | 2,325  | 157,018   |
| Total           | 1,059 | 925 | 36,732 | 116,742 | 41,767 | 80,361 | 717,735 | 1,384,804 | 3,760,207 | 1,737,737 | 74,211 | 17,392 | 7,969,672 |
| 10-Year<br>Avg. |       |     |        | 1,698   | 305    | 2,233  | 20,935  | 37,307    | 119,256   | 50,587    |        |        | 240,663   |

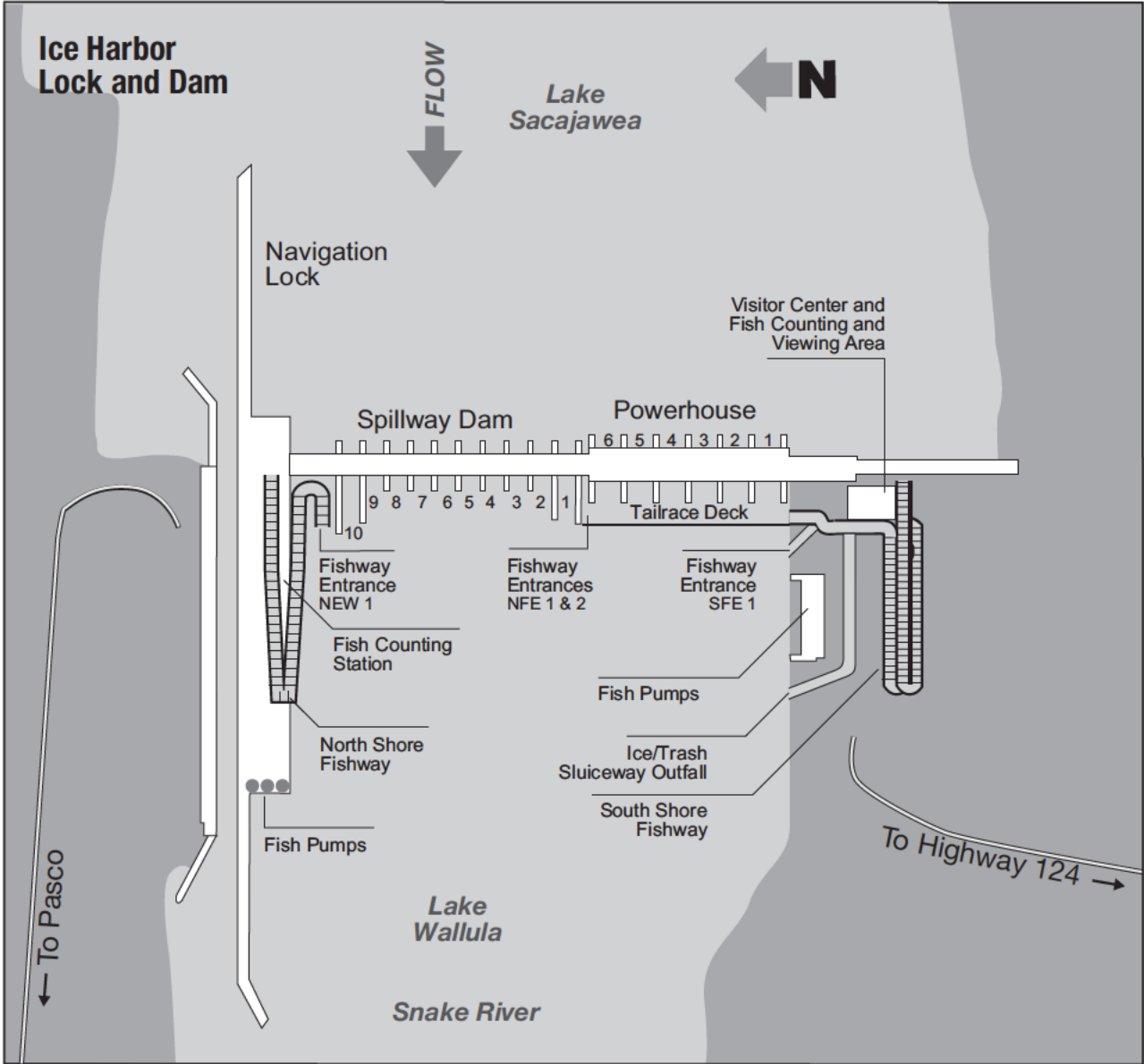
**TABLE 74**  
**NIGHT COUNTS OF LAMPREY AT McNARY DAM**

| 2009          |            |            |           | 2010          |           |            |           | 2011          |           |            |            | 2012          |            |            |            |
|---------------|------------|------------|-----------|---------------|-----------|------------|-----------|---------------|-----------|------------|------------|---------------|------------|------------|------------|
| Day           | JUL        | AUG        | SEP       | Day           | JUL       | AUG        | SEP       | Day           | JUL       | AUG        | SEP        | Day           | JUL        | AUG        | SEP        |
| 1             | 1          | 28         | 4         | 1             | 0         | 1          | 3         | 1             | 0         | 3          | 8          | 1             | 0          | 14         | 3          |
| 2             | 3          | 30         | 7         | 2             | 0         | 17         | 3         | 2             | 0         | 1          | 15         | 2             | 0          | 3          | 9          |
| 3             | 7          | 18         | 2         | 3             | 0         | 11         | 5         | 3             | 0         | 9          | 26         | 3             | 0          | 7          | 43         |
| 4             | 7          | 14         | 4         | 4             | 0         | 3          | 2         | 4             | 0         | 16         | 14         | 4             | 1          | 10         | 33         |
| 5             | 5          | 6          | 3         | 5             | 0         | 0          | 3         | 5             | 0         | 6          | 18         | 5             | 0          | 24         | 4          |
| 6             | 1          | 25         | 4         | 6             | 0         | 16         | 2         | 6             | 0         | 10         | 9          | 6             | 0          | 25         | 17         |
| 7             | 6          | 14         | 7         | 7             | 0         | 12         | 1         | 7             | 0         | 4          | 19         | 7             | 0          | 24         | 11         |
| 8             | 4          | 13         | 1         | 8             | 0         | 19         | 1         | 8             | 0         | 10         | 16         | 8             | 0          | 28         | 9          |
| 9             | 3          | 12         | 5         | 9             | 0         | 9          | 1         | 9             | 0         | 1          | 11         | 9             | 0          | 21         | 9          |
| 10            | 2          | 13         | 2         | 10            | 0         | 12         | 1         | 10            | 0         | 10         | 19         | 10            | 0          | 15         | 14         |
| 11            | 3          | 25         | 2         | 11            | 0         | 8          | 5         | 11            | 0         | 3          | 7          | 11            | 0          | 21         | 8          |
| 12            | 6          | 11         | 2         | 12            | 1         | 17         | 3         | 12            | 0         | 9          | 9          | 12            | 0          | 27         | 12         |
| 13            | 13         | 18         | 2         | 13            | 1         | 12         | 6         | 13            | 0         | 9          | 8          | 13            | 0          | 8          | 7          |
| 14            | 9          | 23         | 0         | 14            | 0         | 8          | 3         | 14            | 0         | 15         | 8          | 14            | 1          | 8          | 6          |
| 15            | 1          | 12         | 3         | 15            | 2         | 12         | 2         | 15            | 0         | 12         | 9          | 15            | 2          | 7          | 3          |
| 16            | 9          | 7          | 1         | 16            | 0         | 12         | 1         | 16            | 0         | 10         | 8          | 16            | 3          | 18         | 1          |
| 17            | 11         | 23         | 4         | 17            | 0         | 10         | 0         | 17            | 1         | 6          | 3          | 17            | 3          | 25         | 3          |
| 18            | 14         | 14         | 3         | 18            | 0         | 7          | 1         | 18            | 0         | 8          | 2          | 18            | 5          | 39         | 1          |
| 19            | 8          | 6          | 5         | 19            | 1         | 10         | 2         | 19            | 0         | 9          | 9          | 19            | 4          | 38         | 2          |
| 20            | 2          | 11         | 2         | 20            | 0         | 2          | 0         | 20            | 0         | 10         | 2          | 20            | 8          | 13         | 1          |
| 21            | 16         | 15         | 1         | 21            | 2         | 9          | 0         | 21            | 2         | 7          | 3          | 21            | 6          | 12         | 3          |
| 22            | 16         | 21         | 2         | 22            | 1         | 4          | 1         | 22            | 0         | 7          | 4          | 22            | 7          | 12         | 3          |
| 23            | 18         | 28         | 2         | 23            | 3         | 3          | 0         | 23            | 3         | 2          | 3          | 23            | 3          | 11         | 3          |
| 24            | 15         | 22         | 2         | 24            | 0         | 7          | 1         | 24            | 0         | 2          | 8          | 24            | 3          | 15         | 2          |
| 25            | 24         | 11         | 0         | 25            | 2         | 10         | 0         | 25            | 3         | 1          | 9          | 25            | 7          | 8          | 1          |
| 26            | 19         | 8          | 0         | 26            | 2         | 6          | 0         | 26            | 1         | 14         | 5          | 26            | 9          | 13         | 3          |
| 27            | 22         | 10         | 1         | 27            | 6         | 8          | 0         | 27            | 1         | 11         | 0          | 27            | 10         | 7          | 1          |
| 28            | 28         | 9          | 2         | 28            | 14        | 3          | 0         | 28            | 1         | 13         | 1          | 28            | 10         | 6          | 0          |
| 29            | 8          | 4          | 0         | 29            | 5         | 1          | 1         | 29            | 0         | 8          | 1          | 29            | 7          | 5          | 0          |
| 30            | 20         | 2          | 1         | 30            | 2         | 2          | 0         | 30            | 2         | 7          | 1          | 30            | 5          | 4          | 1          |
| 31            | 24         | 8          |           | 31            | 0         | 4          |           | 31            | 7         | 9          |            | 31            | 11         | 1          |            |
| <b>TOTALS</b> | <b>325</b> | <b>461</b> | <b>74</b> | <b>TOTALS</b> | <b>42</b> | <b>255</b> | <b>48</b> | <b>TOTALS</b> | <b>21</b> | <b>242</b> | <b>255</b> | <b>TOTALS</b> | <b>105</b> | <b>469</b> | <b>213</b> |

Note: video counting for night lamprey passage at McNaryDam (July 1 - September 30)  
Not included in daytime count totals for lamprey.

# Plate 6 Ice Harbor Lock and Dam

0 200 400  
approximate scale in feet



## ICE HARBOR DAM

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### FISH COUNTING SCHEDULE

|                          |  |
|--------------------------|--|
| 1 January – 31 March     | No counting                                    |
| 1 April – 31 October     | Visual counting daily from 0400-2000 hours PST |
| 1 November – 31 December | No counting                                    |

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### FISH LADDER OPERATING SCHEDULE

#### *North Ladder*

|                           |   |
|---------------------------|---|
| 1 January – 27 January    | Ladder in service                       |
| 28 January – 22 February  | Ladder dewatered for annual maintenance |
| 23 February – 31 December | Ladder in service                       |

#### *South Ladder*

|                          |   |
|--------------------------|---|
| 1 January – 2 January    | Ladder in service                       |
| 3 January – 26 January   | Ladder dewatered for annual maintenance |
| 27 January – 31 December | Ladder in service                       |

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### FISHWAY ACTIVITIES

Water temperatures were recorded hourly from both fish ladder exit pools and the downstream end of the juvenile collection channel. Hourly readings were taken June to October.

The RSW operated 1 April until the end of the spill season 31 August.

The juvenile fish facility was operated for juvenile fish bypass and adult fallbacks from 1 April to 18 December. Juvenile fish were sampled April 2 – June 28.

Modifications to aid lamprey passage were made at both the north and south shore adult fish ladders.

The University of Idaho and the University of California at Davis monitored lamprey passage by video in the adult fish ladders.

Pacific Northwest National Laboratory conducted pressure effects on fish tagging methods.

Pacific Northwest National Laboratory conducted noise testing in the tailrace for hydro acoustic tagging research.

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TABLE 75

MONTHLY TOTALS OF SALMONIDS, SHAD, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER ICE HARBOR DAM  
2012

| SPECIES      | JAN | FEB | MAR | APR          | MAY           | JUN           | JUL          | AUG           | SEP            | OCT           | NOV | DEC | TOTAL          |
|--------------|-----|-----|-----|--------------|---------------|---------------|--------------|---------------|----------------|---------------|-----|-----|----------------|
| CHINOOK*     |     |     |     | 488          | 63,407        | 22,704        | 3,337        | 4,531         | 51,132         | 5,026         |     |     | 150,625        |
| STEELHEAD    |     |     |     | 2,111        | 266           | 816           | 2,875        | 5,820         | 64,613         | 28,768        |     |     | 105,269        |
| SOCKEYE      |     |     |     |              |               | 61            | 381          | 11            | 0              |               |     |     | 453            |
| COHO*        |     |     |     |              |               |               |              | 2             | 2,447          | 536           |     |     | 2,985          |
| PINK         |     |     |     |              |               |               |              |               | 1              | 2             |     |     | 3              |
| <b>TOTAL</b> |     |     |     | <b>2,599</b> | <b>63,673</b> | <b>23,581</b> | <b>6,593</b> | <b>10,364</b> | <b>118,193</b> | <b>34,332</b> |     |     | <b>259,335</b> |
| SHAD         |     |     |     |              | 0             | 66,547        | 107,608      | 1,781         |                |               |     |     | 175,936        |
| LAMPREY      |     |     |     |              |               | 1             | 93           | 264           | 105            | 21            |     |     | 484            |
| STURGEON     |     |     |     |              |               |               |              |               |                |               |     |     | 0              |
| BULL TROUT   |     |     |     |              |               |               |              |               |                |               |     |     | 0              |

\*Jacks included

TABLE 76

DISCHARGE AND WATER QUALITY DATA

ICE HARBOR PROJECT 2012

JANUARY

| DATE   | DISCH | SPILL | TURBIDITY |       |
|--------|-------|-------|-----------|-------|
|        | KCFS  | KCFS  | SECCHI    | DEG F |
| Jan 1  | 30.6  | 0.0   | 6.8       | 40.0  |
| Jan 2  | 30.2  | 0.0   | 6.8       | 40.0  |
| Jan 3  | 33.5  | 0.0   | 6.8       | 40.0  |
| Jan 4  | 37.7  | 0.0   | 8.2       | 40.0  |
| Jan 5  | 27.0  | 0.0   | 8.4       | 40.0  |
| Jan 6  | 25.0  | 0.0   | 8.4       | 40.0  |
| Jan 7  | 22.4  | 0.0   | 8.4       | 40.0  |
| Jan 8  | 22.8  | 0.0   | 7.0       | 39.0  |
| Jan 9  | 26.8  | 0.0   | 7.0       | 39.0  |
| Jan 10 | 26.0  | 0.0   | 7.0       | 39.0  |
| Jan 11 | 26.4  | 0.0   | 7.0       | 39.0  |
| Jan 12 | 31.0  | 0.0   | 8.2       | 39.0  |
| Jan 13 | 24.7  | 0.0   | 8.4       | 39.0  |
| Jan 14 | 18.1  | 0.0   | 8.4       | 39.0  |
| Jan 15 | 19.9  | 0.0   | 8.4       | 39.0  |
| Jan 16 | 21.2  | 0.0   | 8.4       | 38.0  |
| Jan 17 | 21.5  | 0.0   | 7.6       | 38.0  |
| Jan 18 | 34.4  | 0.0   | 7.6       | 38.0  |
| Jan 19 | 31.7  | 0.0   | 7.6       | 38.0  |
| Jan 20 | 29.3  | 0.0   | 7.6       | 38.0  |
| Jan 21 | 31.6  | 0.0   | 7.6       | 38.0  |
| Jan 22 | 30.9  | 0.0   | 7.6       | 37.0  |
| Jan 23 | 35.2  | 0.0   | 7.6       | 37.0  |
| Jan 24 | 33.9  | 0.0   | 7.6       | 37.0  |
| Jan 25 | 28.2  | 0.0   | 7.4       | 37.0  |
| Jan 26 | 31.7  | 0.0   | 7.4       | 37.0  |
| Jan 27 | 33.2  | 0.0   | 7.7       | 37.0  |
| Jan 28 | 38.7  | 0.0   | 7.7       | 37.0  |
| Jan 29 | 33.6  | 0.0   | 7.7       | 37.0  |
| Jan 30 | 34.2  | 0.0   | 6.7       | 37.0  |
| Jan 31 | 32.6  | 0.0   | 6.7       | 37.0  |

AVG. 29.2 0.0 7.6 38.4

FEBRUARY

| DATE   | DISCH | SPILL | TURBIDITY |       |
|--------|-------|-------|-----------|-------|
|        | KCFS  | KCFS  | SECCHI    | DEG F |
| Feb 1  | 28.0  | 0.0   | 7.7       | 38.0  |
| Feb 2  | 36.1  | 0.0   | 7.7       | 38.0  |
| Feb 3  | 44.1  | 0.0   | 7.7       | 38.0  |
| Feb 4  | 33.2  | 0.0   | 7.7       | 38.0  |
| Feb 5  | 30.5  | 0.0   | 7.7       | 38.0  |
| Feb 6  | 27.2  | 0.0   | 7.7       | 38.0  |
| Feb 7  | 30.8  | 0.0   | 7.7       | 38.0  |
| Feb 8  | 36.5  | 0.0   | 7.7       | 38.0  |
| Feb 9  | 30.9  | 0.0   | 7.7       | 38.0  |
| Feb 10 | 21.8  | 0.0   | 7.7       | 38.0  |
| Feb 11 | 29.9  | 0.0   | 7.7       | 38.0  |
| Feb 12 | 22.1  | 0.0   | 7.7       | 38.0  |
| Feb 13 | 36.4  | 0.0   | 2.7       | 38.0  |
| Feb 14 | 30.2  | 0.0   | 2.7       | 37.0  |
| Feb 15 | 32.3  | 0.0   | 4.6       | 37.0  |
| Feb 16 | 34.1  | 0.0   | 4.6       | 37.0  |
| Feb 17 | 27.3  | 0.0   | 4.6       | 37.0  |
| Feb 18 | 27.4  | 0.0   | 4.6       | 37.0  |
| Feb 19 | 32.4  | 0.0   | 4.6       | 37.0  |
| Feb 20 | 33.5  | 0.0   | 4.6       | 37.0  |
| Feb 21 | 31.6  | 0.0   | 4.6       | 38.0  |
| Feb 22 | 35.5  | 0.0   | 4.5       | 38.0  |
| Feb 23 | 71.7  | 28.6  | 4.5       | 38.0  |
| Feb 24 | 59.8  | 18.0  | 4.5       | 38.0  |
| Feb 25 | 36.4  | 1.7   | 4.5       | 38.0  |
| Feb 26 | 40.7  | 0.0   | 4.5       | 38.0  |
| Feb 27 | 40.9  | 0.0   | 4.6       | 39.0  |
| Feb 28 | 41.3  | 0.0   | 4.6       | 39.0  |
| Feb 29 | 41.3  | 0.0   | 6.0       | 40.0  |

AVG. 35.3 1.7 5.8 37.9

MARCH

| DATE   | DISCH | SPILL | TURBIDITY |       |
|--------|-------|-------|-----------|-------|
|        | KCFS  | KCFS  | SECCHI    | DEG F |
| Mar 1  | 41.4  | 0.0   | 6.2       | 40.0  |
| Mar 2  | 35.6  | 0.0   | 6.2       | 40.0  |
| Mar 3  | 38.4  | 0.0   | 5.8       | 39.0  |
| Mar 4  | 38.0  | 0.0   | 5.4       | 39.0  |
| Mar 5  | 39.9  | 0.0   | 5.4       | 39.0  |
| Mar 6  | 40.7  | 0.0   | 5.4       | 39.0  |
| Mar 7  | 40.9  | 0.0   | 5.4       | 39.0  |
| Mar 8  | 32.2  | 0.0   | 5.4       | 39.0  |
| Mar 9  | 38.6  | 0.0   | 5.6       | 40.0  |
| Mar 10 | 45.0  | 0.0   | 5.6       | 40.0  |
| Mar 11 | 35.5  | 0.0   | 5.6       | 40.0  |
| Mar 12 | 48.7  | 0.0   | 5.7       | 40.0  |
| Mar 13 | 58.1  | 0.0   | 5.7       | 41.0  |
| Mar 14 | 58.9  | 0.0   | 5.7       | 41.0  |
| Mar 15 | 56.3  | 0.0   | 4.5       | 41.0  |
| Mar 16 | 68.5  | 0.0   | 4.5       | 41.0  |
| Mar 17 | 67.3  | 0.0   | 4.5       | 41.0  |
| Mar 18 | 69.4  | 0.0   | 4.5       | 41.0  |
| Mar 19 | 68.3  | 0.0   | 4.3       | 42.0  |
| Mar 20 | 68.5  | 6.6   | 4.3       | 42.0  |
| Mar 21 | 81.2  | 17.5  | 4.1       | 42.0  |
| Mar 22 | 82.0  | 10.9  | 4.1       | 42.0  |
| Mar 23 | 77.5  | 1.4   | 4.1       | 42.0  |
| Mar 24 | 79.6  | 5.9   | 4.1       | 42.0  |
| Mar 25 | 76.5  | 1.2   | 3.6       | 42.0  |
| Mar 26 | 79.4  | 12.9  | 4.6       | 44.0  |
| Mar 27 | 107.7 | 44.0  | 4.6       | 44.0  |
| Mar 28 | 100.1 | 38.0  | 4.6       | 44.0  |
| Mar 29 | 104.0 | 28.9  | 4.6       | 44.0  |
| Mar 30 | 99.6  | 27.9  | 4.6       | 44.0  |
| Mar 31 | 129.6 | 52.3  | 3.2       | 44.0  |

AVG. 64.8 8.0 4.9 41.2



TABLE 77  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL unclipped |            | PINK | SHAD | LAMPREY | STURGEON | DISCH KCFS   | SPILL KCFS  | TURBIDITY  |             |
|--------------|---------------|--------|--------------|------------|-----------|---------|-----------------|------------|------|------|---------|----------|--------------|-------------|------------|-------------|
|              | SPRING        | SUMMER |              |            |           |         | FALL            | STEELHEAD  |      |      |         |          |              |             | STEELHEAD  | SECCHI      |
| Apr 1        | 1             |        | 0            |            |           |         | 134             | 69         |      |      |         |          | 143.1        | 79.6        | 2.2        | 44.0        |
| Apr 2        | 0             |        | 0            |            |           |         | 33              | 9          |      |      |         |          | 137.5        | 71.6        | 2.2        | 44.0        |
| Apr 3        | 2             |        | 0            |            |           |         | 40              | 4          |      |      |         |          | 118.3        | 74.4        | 1.1        | 44.0        |
| Apr 4        | 0             |        | 0            |            |           |         | 14              | -1         |      |      |         |          | 112.0        | 67.6        | 1.1        | 44.0        |
| Apr 5        | 2             |        | 0            |            |           |         | 65              | 8          |      |      |         |          | 116.0        | 65.1        | 1.1        | 44.0        |
| Apr 6        | 1             |        | 0            |            |           |         | 87              | 27         |      |      |         |          | 111.2        | 65.6        | 1.1        | 44.0        |
| Apr 7        | 0             |        | 0            |            |           |         | 81              | 29         |      |      |         |          | 105.3        | 64.8        | 1.1        | 44.0        |
| Apr 8        | -1            |        | 0            |            |           |         | 43              | 11         |      |      |         |          | 99.0         | 66.2        | 1.1        | 44.0        |
| Apr 9        | 1             |        | 0            |            |           |         | 50              | 13         |      |      |         |          | 96.1         | 66.4        | 1.1        | 44.0        |
| Apr 10       | 0             |        | 0            |            |           |         | 87              | 32         |      |      |         |          | 94.8         | 66.5        | 1.1        | 45.0        |
| Apr 11       | 0             |        | 0            |            |           |         | 97              | 57         |      |      |         |          | 99.0         | 67.3        | 1.1        | 46.0        |
| Apr 12       | 1             |        | 0            |            |           |         | 91              | 57         |      |      |         |          | 104.9        | 66.6        | 1.1        | 46.0        |
| Apr 13       | 1             |        | 0            |            |           |         | 95              | 54         |      |      |         |          | 116.0        | 75.8        | 2.4        | 46.0        |
| Apr 14       | 1             |        | 0            |            |           |         | 109             | 58         |      |      |         |          | 114.7        | 77.5        | 2.4        | 47.0        |
| Apr 15       | -1            |        | 0            |            |           |         | 104             | 56         |      |      |         |          | 107.6        | 72.9        | 2.4        | 47.0        |
| Apr 16       | 1             |        | 0            |            |           |         | 80              | 39         |      |      |         |          | 101.1        | 66.5        | 2.4        | 48.0        |
| Apr 17       | 0             |        | 0            |            |           |         | 131             | 59         |      |      |         |          | 103.3        | 68.9        | 2.4        | 48.0        |
| Apr 18       | 4             |        | 0            |            |           |         | 122             | 54         |      |      |         |          | 103.5        | 67.5        | 2.8        | 48.0        |
| Apr 19       | 6             |        | 0            |            |           |         | 117             | 50         |      |      |         |          | 106.7        | 67.6        | 2.8        | 48.0        |
| Apr 20       | 0             |        | 0            |            |           |         | 59              | 36         |      |      |         |          | 105.2        | 67.6        | 3.1        | 48.0        |
| Apr 21       | 2             |        | 0            |            |           |         | 58              | 37         |      |      |         |          | 109.3        | 71.8        | 3.1        | 49.0        |
| Apr 22       | 6             |        | 0            |            |           |         | 67              | 47         |      |      |         |          | 117.6        | 78.3        | 3.1        | 49.0        |
| Apr 23       | 9             |        | 0            |            |           |         | 65              | 37         |      |      |         |          | 129.4        | 81.1        | 3.1        | 49.0        |
| Apr 24       | 9             |        | 0            |            |           |         | 59              | 30         |      |      |         |          | 144.7        | 99.8        | 3.1        | 50.0        |
| Apr 25       | 28            |        | 0            |            |           |         | 53              | 26         |      |      |         |          | 172.8        | 119.2       | 3.8        | 50.0        |
| Apr 26       | 50            |        | 2            |            |           |         | 60              | 38         |      |      |         |          | 170.2        | 102.9       | 3.8        | 50.0        |
| Apr 27       | 38            |        | 0            |            |           |         | 46              | 20         |      |      |         |          | 192.2        | 123.5       | 3.8        | 52.0        |
| Apr 28       | 46            |        | 0            |            |           |         | 30              | 18         |      |      |         |          | 184.3        | 116.8       | 2.0        | 52.0        |
| Apr 29       | 95            |        | 1            |            |           |         | 20              | 6          |      |      |         |          | 156.3        | 88.6        | 2.0        | 52.0        |
| Apr 30       | 182           |        | 1            |            |           |         | 14              | 6          |      |      |         |          | 134.9        | 78.0        | 2.0        | 52.0        |
| <b>TOTAL</b> | <b>484</b>    |        | <b>4</b>     |            |           |         | <b>2,111</b>    | <b>986</b> |      |      |         |          | <b>123.6</b> | <b>78.2</b> | <b>2.2</b> | <b>47.3</b> |
| AVG.         | 16            |        | 0            |            |           |         | 70              | 33         |      |      |         |          |              |             |            |             |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV. Official Spring Chinook run started April 1.

TABLE 78

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

MAY 2012

| DATE           | CHINOOK ADULT |               |              | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL      |                     | PINK | SHAD | LAMPREY | STURGEON | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|----------------|---------------|---------------|--------------|--------------|------------|-----------|---------|------------|---------------------|------|------|---------|----------|------------|------------|-----------|-------|
|                | SPRING        | SUMMER        | FALL         |              |            |           |         | STEELHEAD  | unclipped STEELHEAD |      |      |         |          |            |            | SECCHI    | DEG F |
| May 1          | 316           |               |              | 8            |            |           |         | 25         | 11                  |      |      |         |          | 141.8      | 76.8       | 2.0       | 52.0  |
| May 2          | 482           |               |              | 11           |            |           |         | 4          | 2                   |      |      |         |          | 132.6      | 73.3       | 1.9       | 51.0  |
| May 3          | 422           |               |              | 5            |            |           |         | 9          | 2                   |      |      |         |          | 123.4      | 71.5       | 1.8       | 51.0  |
| May 4          | 403           |               |              | 19           |            |           |         | 9          | 5                   |      |      |         |          | 117.9      | 74.4       | 1.8       | 49.0  |
| May 5          | 438           |               |              | 2            |            |           |         | 11         | 5                   |      |      |         |          | 104.1      | 62.7       | 1.8       | 49.0  |
| May 6          | 690           |               |              | 25           |            |           |         | 10         | 5                   |      |      |         |          | 98.5       | 58.7       | 1.8       | 49.0  |
| May 7          | 910           |               |              | 19           |            |           |         | 9          | 4                   |      |      |         |          | 100.0      | 64.7       | 1.8       | 49.0  |
| May 8          | 548           |               |              | 12           |            |           |         | 14         | 8                   |      |      |         |          | 95.4       | 55.7       | 1.8       | 49.0  |
| May 9          | 240           |               |              | 3            |            |           |         | 16         | 7                   |      |      |         |          | 93.4       | 66.7       | 2.8       | 50.0  |
| May 10         | 835           |               |              | 13           |            |           |         | 6          | 5                   |      |      |         |          | 97.6       | 36.6       | 2.4       | 50.0  |
| May 11         | 922           |               |              | 20           |            |           |         | 3          | 0                   |      |      |         |          | 103.3      | 30.8       | 2.4       | 50.0  |
| May 12         | 1,582         |               |              | 22           |            |           |         | 9          | 7                   |      |      |         |          | 96.4       | 49.9       | 2.4       | 51.0  |
| May 13         | 2,830         |               |              | 62           |            |           |         | 11         | 9                   |      |      |         |          | 97.8       | 65.5       | 2.4       | 52.0  |
| May 14         | 4,587         |               |              | 64           |            |           |         | 11         | 5                   |      |      |         |          | 98.7       | 42.0       | 2.4       | 53.0  |
| May 15         | 7,867         |               |              | 167          |            |           |         | 18         | 7                   |      |      |         |          | 106.5      | 32.0       | 3.7       | 53.0  |
| May 16         | 6,322         |               |              | 161          |            |           |         | 29         | 3                   |      |      |         |          | 119.4      | 54.0       | 3.7       | 54.0  |
| May 17         | 4,640         |               |              | 154          |            |           |         | 16         | 2                   |      |      |         |          | 132.9      | 74.5       | 3.9       | 53.0  |
| May 18         | 2,269         |               |              | 69           |            |           |         | 3          | 0                   |      |      |         |          | 131.6      | 81.9       | 3.9       | 53.0  |
| May 19         | 4,438         |               |              | 208          |            |           |         | 1          | 0                   |      |      |         |          | 110.3      | 69.0       | 3.9       | 54.0  |
| May 20         | 4,977         |               |              | 162          |            |           |         | 7          | 1                   |      |      |         |          | 110.7      | 45.5       | 3.9       | 54.0  |
| May 21         | 3,124         |               |              | 176          |            |           |         | 4          | 0                   |      |      |         |          | 105.4      | 33.6       | 3.9       | 54.0  |
| May 22         | 2,413         |               |              | 205          |            |           |         | 5          | 0                   |      |      |         |          | 114.8      | 64.9       | 3.9       | 54.0  |
| May 23         | 1,286         |               |              | 86           |            |           |         | 5          | 0                   |      |      |         |          | 139.4      | 84.3       | 3.8       | 54.0  |
| May 24         | 964           |               |              | 81           |            |           |         | 4          | 0                   |      |      |         |          | 125.8      | 56.7       | 3.8       | 54.0  |
| May 25         | 1,367         |               |              | 91           |            |           |         | 6          | 2                   |      |      |         |          | 106.9      | 32.2       | 3.8       | 54.0  |
| May 26         | 978           |               |              | 88           |            |           |         | 5          | 0                   |      |      |         |          | 95.6       | 30.4       | 3.8       | 54.0  |
| May 27         | 1,718         |               |              | 132          |            |           |         | 6          | 1                   |      |      |         |          | 80.4       | 24.0       | 4.0       | 54.0  |
| May 28         | 1,113         |               |              | 61           |            |           |         | -3         | -3                  |      |      |         |          | 78.6       | 48.3       | 4.0       | 54.0  |
| May 29         | 918           |               |              | 84           |            |           |         | 4          | 0                   |      |      |         |          | 81.5       | 55.8       | 4.0       | 54.0  |
| May 30         | 666           |               |              | 44           |            |           |         | 6          | 0                   |      |      |         |          | 82.7       | 58.2       | 3.4       | 54.0  |
| May 31         | 824           |               |              | 64           |            |           |         | 3          | 2                   |      |      |         |          | 79.8       | 53.4       | 3.4       | 55.0  |
| <b>TOTAL</b>   | <b>61,089</b> |               |              | <b>2,318</b> |            |           |         | <b>266</b> | <b>90</b>           |      |      |         |          |            |            |           |       |
| AVG.           | 1971          |               |              | 75           |            |           |         | 9          | 3                   |      |      |         |          | 106.6      | 55.7       | 3.0       | 52.3  |
| RUN YEAR       |               | CHINOOK ADULT | CHINOOK JACK |              |            |           |         | STEELHEAD  | unclipped STEELHEAD |      |      |         |          |            |            |           |       |
| TOTALS TO DATE |               | 61,573        | 2,322        |              |            |           |         | 2,377      | 1,076               |      |      |         |          |            |            |           |       |

TABLE 79  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK JACK | COHO ADULT | COHO JACK | TOTAL unclipped |            |            |  | SHAD          | LAMPREY  | STURGEON | DISCH KCFS | SPILL KCFS | TURBIDITY SECCHI | TURBIDITY DEG F |
|--------------|---------------|---------------|------|--------------|------------|-----------|-----------------|------------|------------|--|---------------|----------|----------|------------|------------|------------------|-----------------|
|              | SPRING        | SUMMER        | FALL |              |            |           | STEELHEAD       | STEELHEAD  | PINK       |  |               |          |          |            |            |                  |                 |
| Jun 1        | 838           |               |      | 58           |            |           | 0               | 8          | 2          |  | 0             | 0        |          | 79.7       | 31.8       | 3.4              | 55.0            |
| Jun 2        | 1,172         |               |      | 105          |            |           | 0               | 7          | 1          |  | 0             | 0        |          | 91.6       | 27.4       | 3.4              | 55.0            |
| Jun 3        | 840           |               |      | 36           |            |           | 0               | 3          | 1          |  | 0             | 0        |          | 101.6      | 52.3       | 3.4              | 55.0            |
| Jun 4        | 937           |               |      | 74           |            |           | 0               | 11         | 3          |  | 1             | 0        |          | 107.1      | 65.8       | 3.4              | 55.0            |
| Jun 5        | 841           |               |      | 40           |            |           | 0               | 9          | 2          |  | 1             | 0        |          | 117.1      | 67.6       | 3.4              | 55.0            |
| Jun 6        | 940           |               |      | 34           |            |           | 0               | 10         | 4          |  | 0             | 0        |          | 132.6      | 86.2       | 3.4              | 55.0            |
| Jun 7        | 911           |               |      | 42           |            |           | 0               | 14         | 5          |  | 0             | 0        |          | 112.2      | 61.1       | 3.4              | 56.0            |
| Jun 8        | 716           |               |      | 45           |            |           | 1               | 17         | -1         |  | 0             | 0        |          | 101.7      | 80.1       | 3.4              | 56.0            |
| Jun 9        | 1,452         |               |      | 53           |            |           | 1               | -2         | -4         |  | 1             | 0        |          | 92.7       | 81.7       | 3.9              | 56.0            |
| Jun 10       | 1,134         |               |      | 57           |            |           | 0               | 13         | 1          |  | 1             | 0        |          | 93.2       | 70.4       | 3.9              | 56.0            |
| Jun 11       | 603           |               |      | 39           |            |           | 0               | 7          | 0          |  | 11            | 0        |          | 92.7       | 61.2       | 3.9              | 56.0            |
| Jun 12       |               | 799           |      | 49           |            |           | 0               | 21         | 5          |  | 48            | 0        |          | 81.3       | 61.0       | 3.9              | 56.0            |
| Jun 13       |               | 981           |      | 48           |            |           | 0               | 13         | 1          |  | 31            | 0        |          | 85.0       | 74.4       | 3.9              | 56.0            |
| Jun 14       |               | 607           |      | 55           |            |           | 0               | 7          | 0          |  | 70            | 0        |          | 96.7       | 49.1       | 3.9              | 56.0            |
| Jun 15       |               | 736           |      | 49           |            |           | 0               | 16         | -1         |  | 74            | 0        |          | 91.0       | 60.6       | 3.9              | 56.0            |
| Jun 16       |               | 528           |      | 62           |            |           | 0               | 11         | 3          |  | 66            | 0        |          | 85.9       | 65.0       | 3.9              | 56.0            |
| Jun 17       |               | 589           |      | 43           |            |           | 0               | 35         | 9          |  | 444           | 0        |          | 85.1       | 74.3       | 3.9              | 56.0            |
| Jun 18       |               | 747           |      | 53           |            |           | 0               | 53         | 8          |  | 974           | 0        |          | 82.8       | 71.9       | 3.9              | 56.0            |
| Jun 19       |               | 600           |      | 51           |            |           | 0               | 30         | 3          |  | 634           | 0        |          | 101.5      | 74.1       | 3.9              | 56.0            |
| Jun 20       |               | 550           |      | 53           |            |           | 2               | 19         | 2          |  | 517           | 0        |          | 83.3       | 55.1       | 4.3              | 57.0            |
| Jun 21       |               | 614           |      | 58           |            |           | 0               | 24         | 0          |  | 3,860         | 0        |          | 82.6       | 35.9       | 4.3              | 57.0            |
| Jun 22       |               | 513           |      | 64           |            |           | 2               | 31         | 8          |  | 6,958         | 0        |          | 80.1       | 48.5       | 4.3              | 57.0            |
| Jun 23       |               | 626           |      | 57           |            |           | 0               | 31         | 4          |  | 4,947         | 0        |          | 85.7       | 67.7       | 4.3              | 59.0            |
| Jun 24       |               | 690           |      | 61           |            |           | 2               | 41         | 9          |  | 6,210         | 0        |          | 87.0       | 65.0       | 4.3              | 59.0            |
| Jun 25       |               | 513           |      | 58           |            |           | 9               | 59         | 14         |  | 9,405         | 1        |          | 84.6       | 36.1       | 4.3              | 59.0            |
| Jun 26       |               | 420           |      | 45           |            |           | 11              | 92         | 13         |  | 8,929         | 0        |          | 85.0       | 62.6       | 4.3              | 59.0            |
| Jun 27       |               | 521           |      | 36           |            |           | 6               | 67         | 13         |  | 3,993         | 0        |          | 86.0       | 56.6       | 4.3              | 59.0            |
| Jun 28       |               | 211           |      | 42           |            |           | 7               | 67         | 15         |  | 4,482         | 0        |          | 74.8       | 55.5       | 4.3              | 59.0            |
| Jun 29       |               | 306           |      | 36           |            |           | 9               | 47         | 8          |  | 5,465         | 0        |          | 68.0       | 27.6       | 4.3              | 59.0            |
| Jun 30       |               | 231           |      | 35           |            |           | 11              | 55         | 8          |  | 9,425         | 0        |          | 63.5       | 34.4       | 4.3              | 59.0            |
| <b>TOTAL</b> | <b>10,384</b> | <b>10,782</b> |      | <b>1,538</b> |            |           | <b>61</b>       | <b>816</b> | <b>136</b> |  | <b>66,547</b> | <b>1</b> |          |            |            |                  |                 |
| AVG.         | 944           | 567           |      | 51           |            |           | 2               | 27         | 5          |  | 2,218         | 0        |          | 90.4       | 58.7       | 3.9              | 56.7            |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 71,957        | 2,905        |
| SUMMER         | 10,782        | 955          |
| <b>TOTAL</b>   | <b>82,739</b> | <b>3,860</b> |

|         |           | unclipped |        |         |
|---------|-----------|-----------|--------|---------|
| SOCKEYE | STEELHEAD | STEELHEAD | SHAD   | LAMPREY |
| 61      | 3,193     | 1,212     | 66,547 | 1       |

TABLE 80

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT. PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |              | CHINOOK | COHO       | COHO  | TOTAL unclipped |            |              |            |      | SHAD           | LAMPREY   | STURGEON | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | TURBIDITY<br>DEG F |
|--------------|---------------|--------------|---------|------------|-------|-----------------|------------|--------------|------------|------|----------------|-----------|----------|---------------|---------------|---------------------|--------------------|
|              | SPRING        | SUMMER       | FALL    | JACK       | ADULT | JACK            | SOCKEYE    | STEELHEAD    | STEELHEAD  | PINK |                |           |          |               |               |                     |                    |
| Jul 1        |               | 165          |         | 23         |       |                 | 8          | 53           | 9          |      | 3,869          | 0         |          | 65.2          | 52.8          | 4.3                 | 60.0               |
| Jul 2        |               | 166          |         | 26         |       |                 | 8          | 46           | 9          |      | 3,484          | 0         |          | 66.2          | 51.1          | 4.3                 | 61.0               |
| Jul 3        |               | 246          |         | 45         |       |                 | 16         | 72           | 22         |      | 5,687          | 0         |          | 57.5          | 30.3          | 5.0                 | 61.0               |
| Jul 4        |               | 246          |         | 38         |       |                 | 36         | 78           | 26         |      | 10,517         | 0         |          | 62.0          | 21.9          | 5.0                 | 61.0               |
| Jul 5        |               | 197          |         | 27         |       |                 | 25         | 154          | 51         |      | 6,575          | 0         |          | 50.9          | 39.1          | 5.0                 | 63.0               |
| Jul 6        |               | 98           |         | 15         |       |                 | 7          | 100          | 21         |      | 9,444          | 0         |          | 52.2          | 41.9          | 5.0                 | 63.0               |
| Jul 7        |               | 118          |         | 11         |       |                 | 13         | 98           | 25         |      | 10,512         | 0         |          | 52.0          | 20.5          | 5.0                 | 64.0               |
| Jul 8        |               | 110          |         | 12         |       |                 | 8          | 103          | 25         |      | 9,751          | 0         |          | 49.2          | 14.7          | 5.0                 | 64.0               |
| Jul 9        |               | 61           |         | 4          |       |                 | 20         | 93           | 22         |      | 6,555          | 0         |          | 45.6          | 31.0          | 5.0                 | 64.0               |
| Jul 10       |               | 93           |         | 14         |       |                 | 23         | 117          | 21         |      | 4,936          | 0         |          | 54.3          | 41.7          | 4.4                 | 65.0               |
| Jul 11       |               | 115          |         | 13         |       |                 | 18         | 111          | 19         |      | 7,475          | 0         |          | 55.2          | 23.4          | 4.4                 | 65.0               |
| Jul 12       |               | 118          |         | 26         |       |                 | 9          | 103          | 33         |      | 5,127          | 2         |          | 52.7          | 16.1          | 4.4                 | 66.0               |
| Jul 13       |               | 100          |         | 27         |       |                 | 27         | 139          | 45         |      | 4,553          | 0         |          | 48.8          | 32.5          | 4.4                 | 66.0               |
| Jul 14       |               | 127          |         | 9          |       |                 | 20         | 159          | 44         |      | 3,015          | 0         |          | 42.8          | 32.3          | 4.4                 | 66.0               |
| Jul 15       |               | 124          |         | 16         |       |                 | 16         | 199          | 58         |      | 2,600          | 2         |          | 43.1          | 32.3          | 4.4                 | 66.0               |
| Jul 16       |               | 91           |         | 11         |       |                 | 18         | 131          | 46         |      | 3,939          | 1         |          | 49.6          | 39.1          | 4.4                 | 67.0               |
| Jul 17       |               | 85           |         | 18         |       |                 | 19         | 141          | 35         |      | 2,492          | 0         |          | 48.8          | 38.4          | 4.6                 | 68.0               |
| Jul 18       |               | 85           |         | 12         |       |                 | 12         | 98           | 32         |      | 1,174          | 5         |          | 46.8          | 35.8          | 4.6                 | 68.0               |
| Jul 19       |               | 68           |         | 9          |       |                 | 11         | 91           | 19         |      | 648            | 6         |          | 45.9          | 34.9          | 4.6                 | 68.0               |
| Jul 20       |               | 51           |         | 8          |       |                 | 13         | 127          | 43         |      | 571            | 14        |          | 40.8          | 30.3          | 4.6                 | 68.0               |
| Jul 21       |               | 57           |         | 5          |       |                 | 7          | 69           | 19         |      | 425            | 3         |          | 49.3          | 39.6          | 4.6                 | 68.0               |
| Jul 22       |               | 39           |         | 5          |       |                 | 10         | 96           | 24         |      | 579            | 2         |          | 41.7          | 31.5          | 4.6                 | 68.0               |
| Jul 23       |               | 52           |         | 4          |       |                 | 5          | 55           | 6          |      | 395            | 8         |          | 37.1          | 27.3          | 4.6                 | 69.0               |
| Jul 24       |               | 44           |         | 5          |       |                 | 7          | 89           | 37         |      | 536            | 3         |          | 38.2          | 28.4          | 4.6                 | 69.0               |
| Jul 25       |               | 53           |         | 8          |       |                 | 2          | 46           | 28         |      | 619            | 4         |          | 39.1          | 29.3          | 4.8                 | 69.0               |
| Jul 26       |               | 21           |         | 8          |       |                 | 5          | 30           | 10         |      | 672            | 12        |          | 42.2          | 31.7          | 4.9                 | 69.0               |
| Jul 27       |               | 19           |         | 5          |       |                 | 4          | 38           | 16         |      | 355            | 2         |          | 43.0          | 32.8          | 4.9                 | 70.0               |
| Jul 28       |               | 55           |         | 4          |       |                 | 2          | 67           | 13         |      | 171            | 2         |          | 37.5          | 27.2          | 4.9                 | 70.0               |
| Jul 29       |               | 22           |         | 1          |       |                 | 6          | 66           | 23         |      | 243            | 12        |          | 33.3          | 23.3          | 4.9                 | 70.0               |
| Jul 30       |               | 54           |         | 10         |       |                 | 4          | 48           | 18         |      | 503            | 9         |          | 34.3          | 24.3          | 4.8                 | 70.0               |
| Jul 31       |               | 37           |         | 1          |       |                 | 2          | 58           | 12         |      | 186            | 6         |          | 44.5          | 34.3          | 4.8                 | 70.0               |
| <b>TOTAL</b> |               | <b>2,917</b> |         | <b>420</b> |       |                 | <b>381</b> | <b>2,875</b> | <b>811</b> |      | <b>107,608</b> | <b>93</b> |          |               |               |                     |                    |
| AVG.         |               | 94           |         | 14         |       |                 | 12         | 93           | 26         |      | 3,471          | 3         |          | 47.4          | 31.9          | 4.7                 | 66.3               |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 71,957        | 2,905        |
| SUMMER         | 13,699        | 1,375        |
| TOTAL          | 85,656        | 4,280        |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|---------|-----------|---------------------|---------|---------|
| 442     | 6,068     | 2,023               | 174,155 | 94      |

TABLE 81  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | TOTAL |         | unclipped |           | SHAD | LAMPREY | STURGEON | DISCH | SPILL | TURBIDITY | DEG F |
|--------------|---------------|--------|---------|------|-------|-------|---------|-----------|-----------|------|---------|----------|-------|-------|-----------|-------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT | JACK  | SOCKEYE | STEELHEAD | STEELHEAD |      |         |          | PINK  | KCFS  | KCFS      |       |
| Aug 1        |               | 34     |         | 2    | 0     |       | 5       | 118       | 31        |      | 234     | 4        | 33.1  | 23.2  | 4.8       | 70.0  |
| Aug 2        |               | 28     |         | 1    | 0     |       | 2       | 158       | 50        |      | 170     | 7        | 36.6  | 26.1  | 5.1       | 70.0  |
| Aug 3        |               | 33     |         | 9    | 0     |       | 1       | 162       | 53        |      | 129     | 7        | 36.3  | 26.0  | 5.3       | 70.0  |
| Aug 4        |               | 50     |         | 6    | 0     |       | 0       | 124       | 38        |      | 93      | 14       | 35.5  | 25.0  | 5.3       | 70.0  |
| Aug 5        |               | 45     |         | 9    | 0     |       | 0       | 132       | 64        |      | 64      | 16       | 27.5  | 17.3  | 5.3       | 70.0  |
| Aug 6        |               | 35     |         | 9    | 0     |       | 1       | 181       | 72        |      | 165     | 16       | 31.2  | 21.0  | 5.3       | 70.0  |
| Aug 7        |               | 20     |         | 8    | 0     |       | 0       | 132       | 50        |      | 111     | 7        | 34.6  | 24.4  | 5.3       | 70.0  |
| Aug 8        |               | 75     |         | 22   | 0     |       | 0       | 373       | 129       |      | 135     | 19       | 30.0  | 19.7  | 5.3       | 70.0  |
| Aug 9        |               | 57     |         | 20   | 0     |       | 1       | 362       | 126       |      | 82      | 18       | 27.3  | 17.1  | 5.3       | 70.0  |
| Aug 10       |               | 60     |         | 11   | 0     |       | 1       | 374       | 128       |      | 109     | 14       | 32.2  | 22.1  | 5.3       | 70.0  |
| Aug 11       |               | 46     |         | 9    | 0     |       | 0       | 183       | 68        |      | 108     | 22       | 30.9  | 20.7  | 5.3       | 70.0  |
| Aug 12       |               |        | 61      | 10   | 0     |       | 0       | 169       | 59        |      | 77      | 17       | 29.9  | 19.7  | 5.0       | 70.0  |
| Aug 13       |               |        | 83      | 23   | 0     |       | 0       | 113       | 37        |      | 22      | 13       | 26.7  | 16.7  | 5.0       | 70.0  |
| Aug 14       |               |        | 66      | 17   | 0     |       | 0       | 164       | 47        |      | 20      | 7        | 28.0  | 17.8  | 5.0       | 70.0  |
| Aug 15       |               |        | 70      | 2    | 0     |       | 0       | 130       | 49        |      | 13      | 12       | 28.7  | 18.5  | 5.0       | 70.0  |
| Aug 16       |               |        | 99      | 21   | 0     |       | 0       | 179       | 65        |      | 125     | 7        | 28.4  | 18.0  | 5.0       | 71.0  |
| Aug 17       |               |        | 64      | 15   | 0     |       | 0       | 74        | 12        |      | 18      | 3        | 26.2  | 15.3  | 5.0       | 71.0  |
| Aug 18       |               |        | 110     | 20   | 0     |       | 0       | 90        | 21        |      | 12      | 2        | 27.7  | 17.3  | 5.0       | 70.0  |
| Aug 19       |               |        | 102     | 18   | 0     |       | 0       | 80        | 18        |      | 21      | 5        | 25.1  | 14.5  | 5.0       | 70.0  |
| Aug 20       |               |        | 85      | 10   | 0     |       | 0       | 111       | 29        |      | 34      | 4        | 24.6  | 14.1  | 6.1       | 70.0  |
| Aug 21       |               |        | 87      | 21   | 0     |       | 0       | 144       | 30        |      | 7       | 4        | 28.1  | 17.8  | 6.1       | 70.0  |
| Aug 22       |               |        | 101     | 23   | 0     |       | 0       | 114       | 29        |      | 6       | 4        | 28.0  | 17.7  | 7.2       | 70.0  |
| Aug 23       |               |        | 140     | 31   | 0     |       | 0       | 128       | 24        |      | 5       | 2        | 25.6  | 15.3  | 7.2       | 70.0  |
| Aug 24       |               |        | 114     | 45   | 0     |       | 0       | 103       | 29        |      | 7       | 7        | 25.4  | 15.3  | 7.2       | 70.0  |
| Aug 25       |               |        | 88      | 22   | 0     |       | 0       | 113       | 27        |      | 7       | 8        | 26.4  | 16.2  | 7.2       | 70.0  |
| Aug 26       |               |        | 126     | 42   | 0     |       | 0       | 86        | 24        |      | 2       | 8        | 26.4  | 15.9  | 7.2       | 70.0  |
| Aug 27       |               |        | 188     | 63   | 0     |       | 0       | 114       | 22        |      | 0       | 6        | 25.3  | 15.1  | 7.2       | 69.0  |
| Aug 28       |               |        | 312     | 90   | 0     |       | 0       | 241       | 52        |      | 4       | 2        | 23.9  | 13.8  | 6.2       | 68.0  |
| Aug 29       |               |        | 438     | 127  | 0     |       | 0       | 359       | 78        |      | 0       | 3        | 24.2  | 14.0  | 6.2       | 68.0  |
| Aug 30       |               |        | 428     | 119  | 2     |       | 0       | 505       | 117       |      | 1       | 4        | 28.7  | 18.3  | 6.2       | 68.0  |
| Aug 31       |               |        | 370     | 91   | 0     |       | 0       | 504       | 102       |      | 0       | 2        | 28.5  | 18.3  | 6.2       | 68.0  |
| <b>TOTAL</b> |               | 483    | 3,132   | 916  | 2     |       | 11      | 5,820     | 1,680     |      | 1,781   | 264      |       |       |           |       |
| AVG.         |               | 44     | 157     | 30   | 0     |       | 0       | 188       | 54        |      | 57      | 9        | 28.7  | 18.5  | 5.7       | 69.8  |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 71,957        | 2,905        |
| SUMMER         | 14,182        | 1,481        |
| FALL           | 3,132         | 810          |
| <b>TOTAL</b>   | <b>89,271</b> | <b>5,196</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD    | LAMPREY |
|------------|-----------|---------|-----------|---------------------|---------|---------|
| 2          | 0         | 453     | 11,888    | 3,703               | 175,936 | 358     |

TABLE 82

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        |               | CHINOOK       | COHO         | COHO       | TOTAL unclipped |               |               |          |      | DISCH      | SPILL | TURBIDITY |          |      |      |
|--------------|---------------|--------|---------------|---------------|--------------|------------|-----------------|---------------|---------------|----------|------|------------|-------|-----------|----------|------|------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT        | JACK       | SOCKEYE         | STEELHEAD     | STEELHEAD     | PINK     | SHAD |            |       | LAMPREY   | STURGEON | KCFS | KCFS |
| Sep 1        |               |        | 645           | 242           | 2            | 1          |                 | 867           | 171           | 0        |      | 3          |       | 14.2      | 0.1      | 6.2  | 68.0 |
| Sep 2        |               |        | 625           | 207           | 4            | 0          |                 | 568           | 127           | 0        |      | 3          |       | 16.4      | 0.0      | 6.2  | 68.0 |
| Sep 3        |               |        | 1,065         | 264           | 6            | 0          |                 | 582           | 162           | 0        |      | 2          |       | 12.5      | 0.0      | 6.2  | 68.0 |
| Sep 4        |               |        | 1,322         | 321           | 6            | 0          |                 | 887           | 272           | 0        |      | 3          |       | 17.1      | 0.0      | 6.2  | 68.0 |
| Sep 5        |               |        | 1,723         | 472           | 10           | 1          |                 | 1,485         | 463           | 0        |      | 5          |       | 24.5      | 0.0      | 5.7  | 68.0 |
| Sep 6        |               |        | 1,489         | 501           | 19           | 0          |                 | 2,423         | 652           | 0        |      | 4          |       | 36.5      | 0.0      | 5.7  | 68.0 |
| Sep 7        |               |        | 1,469         | 559           | 17           | 5          |                 | 2,227         | 549           | 0        |      | 3          |       | 31.0      | 0.0      | 5.7  | 69.0 |
| Sep 8        |               |        | 1,426         | 594           | 14           | 2          |                 | 1,995         | 504           | 0        |      | 2          |       | 23.3      | 0.0      | 6.3  | 69.0 |
| Sep 9        |               |        | 1,288         | 598           | 38           | 2          |                 | 3,004         | 734           | 0        |      | 2          |       | 27.6      | 0.0      | 5.8  | 68.0 |
| Sep 10       |               |        | 1,318         | 675           | 71           | 2          |                 | 3,909         | 984           | 0        |      | 1          |       | 31.4      | 0.0      | 5.8  | 68.0 |
| Sep 11       |               |        | 1,399         | 758           | 71           | 6          |                 | 3,276         | 830           | 0        |      | 6          |       | 27.7      | 0.0      | 5.8  | 68.0 |
| Sep 12       |               |        | 1,342         | 616           | 80           | 4          |                 | 1,895         | 496           | 0        |      | 7          |       | 25.0      | 0.0      | 7.2  | 68.0 |
| Sep 13       |               |        | 1,522         | 676           | 99           | 9          |                 | 2,128         | 543           | 0        |      | 6          |       | 26.5      | 0.0      | 7.2  | 68.0 |
| Sep 14       |               |        | 1,364         | 742           | 112          | 25         |                 | 1,661         | 403           | 0        |      | 5          |       | 23.0      | 0.0      | 7.2  | 67.0 |
| Sep 15       |               |        | 1,302         | 841           | 102          | 20         |                 | 2,077         | 471           | 0        |      | 4          |       | 17.1      | 0.0      | 7.2  | 67.0 |
| Sep 16       |               |        | 1,084         | 681           | 128          | 22         |                 | 1,992         | 504           | 0        |      | 3          |       | 22.9      | 0.0      | 7.2  | 67.0 |
| Sep 17       |               |        | 1,129         | 862           | 104          | 14         |                 | 2,193         | 561           | 0        |      | 5          |       | 29.3      | 0.0      | 7.2  | 66.0 |
| Sep 18       |               |        | 1,130         | 762           | 111          | 23         |                 | 2,406         | 641           | 0        |      | 5          |       | 22.2      | 0.0      | 7.2  | 66.0 |
| Sep 19       |               |        | 1,302         | 840           | 97           | 20         |                 | 2,233         | 562           | 0        |      | 7          |       | 23.7      | 0.0      | 7.2  | 66.0 |
| Sep 20       |               |        | 1,862         | 1,155         | 135          | 20         |                 | 2,795         | 753           | 0        |      | 9          |       | 20.9      | 0.0      | 7.4  | 66.0 |
| Sep 21       |               |        | 1,137         | 775           | 107          | 26         |                 | 2,082         | 474           | 0        |      | 11         |       | 14.5      | 0.0      | 7.4  | 66.0 |
| Sep 22       |               |        | 1,029         | 825           | 117          | 12         |                 | 2,691         | 644           | 0        |      | 1          |       | 11.9      | 0.0      | 7.0  | 65.0 |
| Sep 23       |               |        | 752           | 762           | 106          | 4          |                 | 2,229         | 563           | 1        |      | 5          |       | 23.2      | 0.0      | 7.0  | 65.0 |
| Sep 24       |               |        | 1,094         | 943           | 104          | 4          |                 | 2,499         | 636           | 0        |      | -1         |       | 15.8      | 0.0      | 7.0  | 65.0 |
| Sep 25       |               |        | 761           | 905           | 170          | 16         |                 | 2,909         | 720           | 0        |      | 1          |       | 19.4      | 0.0      | 7.0  | 65.0 |
| Sep 26       |               |        | 502           | 437           | 126          | 5          |                 | 2,189         | 531           | 0        |      | 1          |       | 14.7      | 0.0      | 7.0  | 65.0 |
| Sep 27       |               |        | 622           | 583           | 85           | 6          |                 | 2,515         | 620           | 0        |      | 1          |       | 10.0      | 0.0      | 6.8  | 64.0 |
| Sep 28       |               |        | 408           | 276           | 43           | 4          |                 | 2,224         | 577           | 0        |      | 1          |       | 11.4      | 0.0      | 6.8  | 64.0 |
| Sep 29       |               |        | 376           | 322           | 59           | 3          |                 | 2,679         | 617           | 0        |      | 0          |       | 16.0      | 0.0      | 6.8  | 64.0 |
| Sep 30       |               |        | 220           | 231           | 43           | 5          |                 | 1,993         | 462           | 0        |      | 0          |       | 26.6      | 0.0      | 6.8  | 64.0 |
| <b>TOTAL</b> |               |        | <b>32,707</b> | <b>18,425</b> | <b>2,186</b> | <b>261</b> |                 | <b>64,613</b> | <b>16,226</b> | <b>1</b> |      | <b>105</b> |       |           |          |      |      |
| AVG.         |               |        | 1090          | 614           | 73           | 9          |                 | 2,154         | 541           |          |      | 4          |       | 21.2      | 0.0      | 6.7  | 66.6 |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 71,957         | 2,905         |
| SUMMER         | 14,182         | 1,481         |
| FALL           | 35,839         | 19,235        |
| <b>TOTAL</b>   | <b>121,978</b> | <b>23,621</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | PINK | SHAD    | LAMPREY |
|------------|-----------|---------|-----------|---------------------|------|---------|---------|
| 2,188      | 261       | 453     | 76,501    | 19,929              | 1    | 175,936 | 463     |

TABLE 83

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ICE HARBOR PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        |              | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL         |                     | PINK     | SHAD | LAMPREY   | STURGEON | DISCH KCFS  | SPILL KCFS | TURBIDITY  |             |
|--------------|---------------|--------|--------------|--------------|------------|-----------|---------|---------------|---------------------|----------|------|-----------|----------|-------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL         |              |            |           |         | STEELHEAD     | unclipped STEELHEAD |          |      |           |          |             |            | SECCHI     | DEG F*      |
| Oct 1        |               |        | 289          | 229          | 38         | 4         |         | 1,945         | 464                 | 0        |      | 0         |          | 26.2        | 0.0        | 6.8        | 64.0        |
| Oct 2        |               |        | 356          | 295          | 34         | 16        |         | 1,711         | 395                 | 0        |      | 0         |          | 12.5        | 0.0        | 6.8        | 64.0        |
| Oct 3        |               |        | 134          | 91           | 19         | 2         |         | 853           | 220                 | 1        |      | 1         |          | 22.5        | 0.0        | 6.4        | 64.0        |
| Oct 4        |               |        | 209          | 90           | 25         | 4         |         | 1,137         | 283                 | 0        |      | 0         |          | 20.7        | 0.0        | 6.4        | 64.0        |
| Oct 5        |               |        | 177          | 199          | 22         | 0         |         | 1,258         | 336                 | 0        |      | 5         |          | 18.0        | 0.0        | 6.4        | 64.0        |
| Oct 6        |               |        | 133          | 161          | 20         | 2         |         | 1,179         | 313                 | 0        |      | 2         |          | 16.7        | 0.0        | 6.4        | 64.0        |
| Oct 7        |               |        | 189          | 187          | 11         | 5         |         | 891           | 227                 | 0        |      | 1         |          | 16.2        | 0.0        | 6.0        | 64.0        |
| Oct 8        |               |        | 135          | 137          | 9          | 4         |         | 753           | 176                 | 0        |      | 0         |          | 16.3        | 0.0        | 6.0        | 63.0        |
| Oct 9        |               |        | 83           | 95           | 14         | 1         |         | 760           | 176                 | 0        |      | 0         |          | 13.5        | 0.0        | 6.0        | 63.0        |
| Oct 10       |               |        | 124          | 107          | 14         | 1         |         | 1,101         | 263                 | 0        |      | 0         |          | 19.5        | 0.0        | 6.1        | 63.0        |
| Oct 11       |               |        | 89           | 104          | 15         | 0         |         | 911           | 256                 | 0        |      | 1         |          | 20.8        | 0.0        | 6.1        | 63.0        |
| Oct 12       |               |        | 68           | 80           | 11         | 6         |         | 1,047         | 249                 | 0        |      | 1         |          | 13.6        | 0.0        | 6.1        | 62.0        |
| Oct 13       |               |        | 60           | 46           | 12         | 8         |         | 1,217         | 266                 | 0        |      | 0         |          | 11.9        | 0.0        | 6.1        | 62.0        |
| Oct 14       |               |        | 80           | 60           | 18         | 0         |         | 1,250         | 324                 | 0        |      | 0         |          | 13.2        | 0.0        | 6.1        | 61.0        |
| Oct 15       |               |        | 64           | 61           | 21         | 2         |         | 1,208         | 281                 | 0        |      | 4         |          | 16.6        | 0.0        | 6.1        | 61.0        |
| Oct 16       |               |        | 60           | 54           | 23         | 4         |         | 1,322         | 382                 | 0        |      | 6         |          | 11.8        | 0.0        | 6.1        | 61.0        |
| Oct 17       |               |        | 63           | 38           | 18         | 1         |         | 960           | 291                 | 0        |      | 0         |          | 25.9        | 0.0        | 7.0        | 61.0        |
| Oct 18       |               |        | 28           | 29           | 17         | 0         |         | 612           | 169                 | 0        |      | 1         |          | 20.7        | 0.0        | 7.0        | 61.0        |
| Oct 19       |               |        | 36           | 43           | 12         | 2         |         | 947           | 251                 | 0        |      | 0         |          | 18.3        | 0.0        | 7.0        | 61.0        |
| Oct 20       |               |        | 32           | 36           | 6          | 0         |         | 891           | 248                 | 0        |      | -1        |          | 13.5        | 0.0        | 7.0        | 60.0        |
| Oct 21       |               |        | 59           | 32           | 17         | 2         |         | 921           | 275                 | 0        |      | 0         |          | 17.2        | 0.0        | 7.0        | 60.0        |
| Oct 22       |               |        | 46           | 20           | 18         | 2         |         | 643           | 168                 | 0        |      | 0         |          | 22.9        | 0.0        | 7.2        | 60.0        |
| Oct 23       |               |        | 34           | 19           | 11         | 1         |         | 804           | 228                 | 0        |      | 1         |          | 15.2        | 0.0        | 7.2        | 60.0        |
| Oct 24       |               |        | 38           | 15           | 12         | 2         |         | 858           | 258                 | 0        |      | -1        |          | 23.8        | 0.0        | 7.2        | 60.0        |
| Oct 25       |               |        | 20           | 16           | 8          | 1         |         | 709           | 197                 | 1        |      | 0         |          | 16.0        | 0.0        | 7.2        | 60.0        |
| Oct 26       |               |        | 18           | 10           | 5          | 0         |         | 559           | 155                 | 0        |      | 0         |          | 18.8        | 0.0        | 7.2        | 59.0        |
| Oct 27       |               |        | 16           | 11           | 6          | 0         |         | 494           | 184                 | 0        |      | 0         |          | 15.6        | 0.0        | 7.2        | 59.0        |
| Oct 28       |               |        | 21           | 23           | 4          | 0         |         | 480           | 177                 | 0        |      | 0         |          | 22.6        | 0.0        | 7.2        | 58.0        |
| Oct 29       |               |        | 11           | 15           | 5          | 0         |         | 363           | 117                 | 0        |      | 0         |          | 22.7        | 1.3        | 7.2        | 58.0        |
| Oct 30       |               |        | 19           | 8            | 7          | 0         |         | 386           | 111                 | 0        |      | 0         |          | 32.2        | 0.0        | 7.2        | 58.0        |
| Oct 31       |               |        | 16           | 8            | 13         | 1         |         | 598           | 161                 | 0        |      | 0         |          | 29.3        | 0.0        | 6.8        | 58.0        |
| <b>TOTAL</b> |               |        | <b>2,707</b> | <b>2,319</b> | <b>465</b> | <b>71</b> |         | <b>28,768</b> | <b>7,601</b>        | <b>2</b> |      | <b>21</b> |          |             |            |            |             |
| <b>AVG.</b>  |               |        | <b>87</b>    | <b>75</b>    | <b>15</b>  | <b>2</b>  |         | <b>928</b>    | <b>245</b>          | <b>0</b> |      | <b>1</b>  |          | <b>18.9</b> | <b>0.0</b> | <b>6.7</b> | <b>61.3</b> |

| RUN YEAR     | CHINOOK        |                | COHO          |       | unclipped |         |           |           |         |        |         |         |     |
|--------------|----------------|----------------|---------------|-------|-----------|---------|-----------|-----------|---------|--------|---------|---------|-----|
|              | TOTALS TO DATE | ADULT          | JACK          | ADULT | JACK      | SOCKEYE | STEELHEAD | STEELHEAD | PINK    | SHAD   | LAMPREY |         |     |
| SPRING       |                | 71,957         | 2,905         |       |           | 2,653   | 332       | 453       | 105,269 | 27,530 | 3       | 175,936 | 484 |
| SUMMER       |                | 14,182         | 1,481         |       |           |         |           |           |         |        |         |         |     |
| FALL         |                | 38,546         | 21,554        |       |           |         |           |           |         |        |         |         |     |
| <b>TOTAL</b> |                | <b>124,685</b> | <b>25,940</b> |       |           |         |           |           |         |        |         |         |     |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between the hours of 0400-2000 PST. South shore ladder was counted by direct observation while the north shore ladder was by closed circuit TV.

TABLE 84  
DISCHARGE AND WATER QUALITY DATA  
ICE HARBOR PROJECT - 2012

| DATE   | NOVEMBER      |               |           |       | DATE   | DECEMBER      |               |           |      |
|--------|---------------|---------------|-----------|-------|--------|---------------|---------------|-----------|------|
|        | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY |       |        | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY |      |
|        |               |               | SECCHI    | DEG F |        |               | SECCHI        | DEG F     |      |
| Nov 1  | 25.5          | 0.0           | 6.4       | 64.0  | Dec 1  | 25.5          | 0.0           | 6.6       | 50.0 |
| Nov 2  | 20.5          | 0.0           | 6.4       | 64.0  | Dec 2  | 28.8          | 0.0           | 6.6       | 48.0 |
| Nov 3  | 25.0          | 0.0           | 6.4       | 59.0  | Dec 3  | 37.6          | 0.0           | 6.6       | 48.0 |
| Nov 4  | 24.8          | 0.0           | 6.4       | 59.0  | Dec 4  | 42.9          | 0.0           | 6.4       | 48.0 |
| Nov 5  | 16.2          | 1.3           | 6.4       | 59.0  | Dec 5  | 39.7          | 0.0           | 6.4       | 48.0 |
| Nov 6  | 24.9          | 1.3           | 6.7       | 59.0  | Dec 6  | 39.1          | 0.0           | 6.8       | 48.0 |
| Nov 7  | 21.6          | 1.5           | 6.7       | 59.0  | Dec 7  | 42.9          | 0.0           | 6.8       | 48.0 |
| Nov 8  | 24.1          | 0.0           | 6.7       | 58.0  | Dec 8  | 45.2          | 0.0           | 6.8       | 48.0 |
| Nov 9  | 24.9          | 0.0           | 7.0       | 58.0  | Dec 9  | 37.2          | 0.0           | 6.8       | 47.0 |
| Nov 10 | 14.7          | 0.0           | 7.0       | 56.0  | Dec 10 | 28.6          | 0.0           | 6.8       | 47.0 |
| Nov 11 | 15.4          | 0.0           | 7.0       | 56.0  | Dec 11 | 36.7          | 0.0           | 6.8       | 47.0 |
| Nov 12 | 21.1          | 0.0           | 7.0       | 56.0  | Dec 12 | 31.6          | 0.0           | 7.0       | 47.0 |
| Nov 13 | 20.0          | 0.0           | 7.0       | 56.0  | Dec 13 | 34.4          | 0.0           | 7.0       | 47.0 |
| Nov 14 | 24.2          | 0.0           | 7.3       | 56.0  | Dec 14 | 38.7          | 0.0           | 7.1       | 47.0 |
| Nov 15 | 26.8          | 0.0           | 7.3       | 56.0  | Dec 15 | 19.5          | 0.0           | 7.1       | 45.0 |
| Nov 16 | 24.8          | 0.0           | 7.3       | 56.0  | Dec 16 | 26.4          | 0.0           | 7.0       | 45.0 |
| Nov 17 | 16.4          | 0.0           | 7.3       | 56.0  | Dec 17 | 29.2          | 0.0           | 7.0       | 45.0 |
| Nov 18 | 15.5          | 0.0           | 7.3       | 52.0  | Dec 18 | 26.5          | 0.0           | 7.0       | 45.0 |
| Nov 19 | 24.9          | 0.0           | 7.3       | 52.0  | Dec 19 | 22.4          | 0.0           | 7.0       | 44.0 |
| Nov 20 | 23.3          | 0.0           | 7.0       | 52.0  | Dec 20 | 23.6          | 0.0           | 7.0       | 44.0 |
| Nov 21 | 14.4          | 0.0           | 7.0       | 52.0  | Dec 21 | 29.1          | 0.0           | 7.0       | 44.0 |
| Nov 22 | 24.9          | 0.0           | 7.0       | 52.0  | Dec 22 | 31.1          | 0.0           | 7.0       | 44.0 |
| Nov 23 | 25.6          | 0.0           | 7.0       | 52.0  | Dec 23 | 23.3          | 0.0           | 7.0       | 43.0 |
| Nov 24 | 20.0          | 0.0           | 7.0       | 52.0  | Dec 24 | 30.9          | 0.0           | 7.0       | 43.0 |
| Nov 25 | 24.1          | 0.0           | 7.0       | 51.0  | Dec 25 | 19.1          | 0.0           | 7.0       | 43.0 |
| Nov 26 | 25.6          | 0.0           | 7.0       | 51.0  | Dec 26 | 27.3          | 0.0           | 7.0       | 42.0 |
| Nov 27 | 26.5          | 0.0           | 6.8       | 50.0  | Dec 27 | 30.4          | 0.0           | 6.6       | 42.0 |
| Nov 28 | 25.6          | 0.0           | 6.8       | 50.0  | Dec 28 | 26.9          | 0.0           | 6.6       | 42.0 |
| Nov 29 | 23.0          | 0.0           | 6.8       | 50.0  | Dec 29 | 25.8          | 0.0           | 6.6       | 42.0 |
| Nov 30 | 19.3          | 0.0           | 6.6       | 50.0  | Dec 30 | 25.3          | 0.0           | 6.6       | 42.0 |
|        |               |               |           |       | Dec 31 | 30.5          | 0.0           | 6.6       | 42.0 |
| AVG.   | 22.1          | 0.1           | 6.9       | 55.1  | AVG.   | 31.2          | 0.0           | 6.8       | 45.6 |



TABLE 85  
YEARLY TOTALS OF SALMONIDS COUNTED OVER  
ICE HARBOR DAM  
1962 - 2012

| YEAR                   | CHINOOK*         | STEELHEAD        | SOCKEYE       | COHO*         | TOTALS*          |
|------------------------|------------------|------------------|---------------|---------------|------------------|
| 1962                   | 94,301           | 115,796          | 38            | 3,207         | 213,342          |
| 1963                   | 61,190           | 74,539           | 1,118         | 1,933         | 138,780          |
| 1964                   | 60,097           | 58,860           | 1,276         | 2,071         | 122,304          |
| 1965                   | 39,233           | 62,873           | 317           | 320           | 102,743          |
| 1966                   | 75,882           | 65,798           | 278           | 878           | 142,836          |
| 1967                   | 84,930           | 44,205           | 717           | 3,770         | 133,622          |
| 1968                   | 98,681           | 82,383           | 1,165         | 6,227         | 188,456          |
| 1969                   | 100,514          | 63,889           | 745           | 5,316         | 170,464          |
| 1970                   | 77,698           | 53,870           | 797           | 3,636         | 136,001          |
| 1971                   | 70,248           | 67,029           | 532           | 2,969         | 140,778          |
| 1972                   | 82,632           | 63,593           | 363           | 2,522         | 149,110          |
| 1973                   | 81,821           | 38,311           | 233           | 2,443         | 122,808          |
| 1974                   | 32,444           | 12,528           | 204           | 1,334         | 46,510           |
| 1975                   | 31,686           | 16,218           | 243           | 1,559         | 49,706           |
| 1976                   | 36,556           | 23,885           | 771           | 1,991         | 63,203           |
| 1977                   | 56,514           | 54,820           | 582           | 1,561         | 113,477          |
| 1978                   | 61,352           | 27,142           | 86            | 652           | 89,232           |
| 1979                   | 13,929           | 23,117           | 30            | 398           | 37,474           |
| 1980                   | 14,717           | 50,221           | 36            | 58            | 65,032           |
| 1981                   | 22,092           | 41,290           | 142           | 82            | 63,606           |
| 1982                   | 22,646           | 73,405           | 174           | 348           | 96,573           |
| 1983                   | 20,259           | 88,475           | 216           | 465           | 109,415          |
| 1984                   | 17,757           | 94,030           | 105           | 22            | 111,914          |
| 1985                   | 47,981           | 128,481          | 24            | 10            | 176,496          |
| 1986                   | 52,615           | 144,292          | 20            | 0             | 196,927          |
| 1987                   | 47,477           | 74,491           | 13            | 0             | 121,981          |
| 1988                   | 48,066           | 99,714           | 22            | 0             | 147,802          |
| 1989                   | 27,234           | 151,101          | 4             | 0             | 178,339          |
| 1990                   | 31,841           | 54,758           | 1             | 1             | 86,601           |
| 1991                   | 23,175           | 123,762          | 9             | 1             | 146,947          |
| 1992                   | 36,021           | 160,614          | 33            | 0             | 196,668          |
| 1993                   | 34,991           | 73,107           | 17            | 0             | 108,115          |
| 1994                   | 7,577            | 51,704           | 0             | 1             | 59,282           |
| 1995                   | 7,990            | 92,026           | 5             | 4             | 100,025          |
| 1996                   | 16,419           | 100,805          | 1             | 0             | 117,225          |
| 1997                   | 55,412           | 103,830          | 15            | 128           | 159,385          |
| 1998                   | 26,117           | 85,122           | 3             | 15            | 111,257          |
| 1999                   | 23,331           | 84,163           | 8             | 144           | 107,646          |
| 2000                   | 72,154           | 126,424          | 215           | 1,224         | 200,017          |
| 2001                   | 215,697          | 283,694          | 38            | 1,595         | 501,024          |
| 2002                   | 137,507          | 211,762          | 61            | 289           | 349,619          |
| 2003                   | 143,329          | 191,675          | 37            | 1,431         | 336,472          |
| 2004                   | 130,218          | 171,380          | 91            | 3,519         | 305,208          |
| 2005                   | 58,361           | 156,920          | 18            | 1,621         | 216,920          |
| 2006                   | 52,501           | 124,812          | 48            | 971           | 178,332          |
| 2007                   | 69,106           | 157,620          | 55            | 2,147         | 228,928          |
| 2008                   | 123,007          | 172,453          | 539           | 3,003         | 299,002          |
| 2009                   | 180,349          | 328,105          | 867           | 5,436         | 514,757          |
| 2010                   | 199,092          | 206,959          | 1,302         | 1,735         | 409,088          |
| 2011                   | 177,586          | 198,805          | 1,141         | 6,727         | 384,259          |
| 2012                   | 150,625          | 105,269          | 453           | 2,985         | 259,332          |
| <b>Totals</b>          | <b>3,452,958</b> | <b>5,260,125</b> | <b>15,208</b> | <b>76,749</b> | <b>8,805,040</b> |
| <b>10-Year Average</b> | <b>128,417</b>   | <b>181,400</b>   | <b>455</b>    | <b>2,958</b>  | <b>313,230</b>   |

\*Jacks included

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in November and December for the count seasons, 1996-2002.

TABLE 86  
MONTHLY COUNT OF CHINOOK SALMON  
ICE HARBOR DAM  
1962 - 2012

| YEAR            | JAN | FEB | MAR | APR     | MAY       | JUN     | JUL     | AUG    | SEP     | OCT     | NOV   | DEC | TOTAL*    | SPRING           | SUMMER            | FALL              |
|-----------------|-----|-----|-----|---------|-----------|---------|---------|--------|---------|---------|-------|-----|-----------|------------------|-------------------|-------------------|
|                 |     |     |     |         |           |         |         |        |         |         |       |     |           | 1 APR-<br>11 JUN | 12 JUN-<br>11 AUG | 12 AUG-<br>31 OCT |
| 1962            |     |     |     | 2,579   | 28,951    | 23,250  | 8,315   | 3,547  | 20,578  | 7,081   |       |     | 94,301    | 33,613           | 30,639            | 30,049            |
| 1963            |     |     |     | 3,434   | 21,790    | 14,001  | 7,591   | 1,415  | 9,342   | 2,918   | 677   | 22  | 61,190    | 26,778           | 20,875            | 13,537            |
| 1964            |     | 1   | 2   | 4,048   | 19,611    | 5,409   | 18,832  | 2,161  | 8,159   | 1,701   | 156   | 17  | 60,097    | 24,304           | 24,696            | 11,097            |
| 1965            |     |     | 4   | 1,677   | 9,649     | 5,072   | 10,209  | 803    | 9,318   | 2,152   | 349   |     | 39,233    | 12,178           | 14,701            | 12,354            |
| 1966            |     |     |     | 23,382  | 19,294    | 10,611  | 7,166   | 1,933  | 10,756  | 2,740   |       |     | 75,882    | 43,881           | 16,983            | 15,018            |
| 1967            |     |     |     | 15,973  | 18,137    | 9,020   | 22,218  | 820    | 11,947  | 6,815   |       |     | 84,930    | 35,593           | 30,315            | 19,022            |
| 1968            |     |     |     | 1,595   | 41,398    | 12,119  | 17,751  | 3,433  | 16,588  | 5,275   | 493   | 29  | 98,681    | 44,773           | 29,531            | 24,377            |
| 1969            |     |     | 195 | 697     | 43,181    | 24,918  | 12,861  | 2,369  | 12,027  | 3,555   | 708   | 3   | 100,514   | 52,090           | 30,917            | 17,507            |
| 1970            |     |     |     | 12,167  | 33,881    | 12,338  | 8,185   | 1,747  | 7,702   | 1,456   | 219   | 3   | 77,698    | 47,931           | 19,382            | 10,385            |
| 1971            |     |     |     | 1,104   | 25,089    | 19,265  | 13,364  | 873    | 8,960   | 1,593   |       |     | 70,248    | 32,638           | 26,606            | 11,004            |
| 1972            |     |     |     | 14,535  | 34,734    | 7,544   | 15,177  | 1,869  | 6,089   | 2,684   |       |     | 82,632    | 50,350           | 22,846            | 9,436             |
| 1973            |     |     |     | 34,277  | 23,627    | 10,925  | 4,254   | 840    | 6,657   | 1,241   |       |     | 81,821    | 60,639           | 12,829            | 8,353             |
| 1974            |     |     |     | 842     | 16,670    | 5,315   | 6,494   | 483    | 2,066   | 574     |       |     | 32,444    | 19,361           | 10,269            | 2,814             |
| 1975            |     |     |     | 1,314   | 17,796    | 5,817   | 3,972   | 506    | 1,875   | 406     |       |     | 31,686    | 21,401           | 7,727             | 2,558             |
| 1976            |     |     |     | 3,146   | 19,269    | 8,544   | 3,921   | 349    | 1,123   | 204     |       |     | 36,556    | 25,056           | 10,026            | 1,474             |
| 1977            |     |     |     | 24,003  | 17,626    | 9,328   | 3,606   | 297    | 1,370   | 284     |       |     | 56,514    | 44,421           | 10,337            | 1,756             |
| 1978            |     |     |     | 14,891  | 29,333    | 9,999   | 4,888   | 892    | 1,064   | 269     | 16    |     | 61,352    | 49,303           | 10,440            | 1,609             |
| 1979            |     |     |     | 1,731   | 6,528     | 2,234   | 1,216   | 379    | 1,489   | 333     | 19    |     | 13,929    | 9,247            | 2,608             | 2,074             |
| 1980            |     |     |     | 1,678   | 7,321     | 2,285   | 1,569   | 301    | 1,034   | 504     | 25    |     | 14,717    | 9,668            | 3,305             | 1,744             |
| 1981            |     |     | 1   | 6,744   | 8,542     | 2,884   | 1,751   | 161    | 1,530   | 470     | 9     |     | 22,092    | 16,167           | 3,814             | 2,111             |
| 1982            |     |     | 3   | 656     | 11,543    | 4,522   | 2,347   | 283    | 2,601   | 691     |       |     | 22,646    | 14,600           | 4,527             | 3,519             |
| 1983            |     |     |     | 1,925   | 9,418     | 4,132   | 1,921   | 316    | 1,945   | 602     |       |     | 20,259    | 12,602           | 4,922             | 2,735             |
| 1984            |     |     |     | 823     | 7,292     | 5,353   | 1,943   | 223    | 1,762   | 361     |       |     | 17,757    | 9,183            | 6,307             | 2,267             |
| 1985            |     |     |     | 12,245  | 18,334    | 6,885   | 1,294   | 546    | 5,414   | 3,263   |       |     | 47,981    | 33,527           | 5,290             | 9,164             |
| 1986            |     |     | 1   | 14,764  | 22,025    | 8,299   | 1,672   | 169    | 3,664   | 2,021   |       |     | 52,615    | 39,087           | 7,745             | 5,783             |
| 1987            |     |     |     | 11,141  | 18,821    | 6,550   | 2,437   | 329    | 6,089   | 2,110   |       |     | 47,477    | 32,083           | 6,982             | 8,412             |
| 1988            |     |     |     | 14,274  | 17,196    | 8,609   | 1,904   | 702    | 3,621   | 1,760   |       |     | 48,066    | 34,394           | 7,790             | 5,882             |
| 1989            |     |     |     | 3,307   | 11,724    | 4,946   | 1,143   | 776    | 3,917   | 1,421   |       |     | 27,234    | 17,029           | 4,215             | 5,990             |
| 1990            |     |     |     | 7,578   | 12,166    | 5,353   | 1,337   | 320    | 3,314   | 1,773   |       |     | 31,841    | 20,730           | 5,794             | 5,317             |
| 1991            |     |     |     | 1,639   | 7,953     | 5,367   | 2,101   | 155    | 4,053   | 1,907   |       |     | 23,175    | 11,288           | 5,861             | 6,026             |
| 1992            |     |     |     | 11,462  | 12,001    | 5,791   | 1,189   | 228    | 3,716   | 1,634   |       |     | 36,021    | 26,114           | 4,377             | 5,530             |
| 1993            |     |     |     | 5,776   | 15,879    | 8,705   | 1,405   | 338    | 2,087   | 801     |       |     | 34,991    | 24,935           | 6,919             | 3,137             |
| 1994            |     |     |     | 717     | 2,268     | 1,183   | 289     | 170    | 1,693   | 1,257   |       |     | 7,577     | 3,472            | 1,003             | 3,102             |
| 1995            |     |     |     | 256     | 1,253     | 928     | 315     | 387    | 2,920   | 1,931   |       |     | 7,990     | 1,873            | 915               | 5,202             |
| 1996            |     |     |     | 97      | 6,254     | 3,954   | 1,367   | 792    | 2,983   | 928     | 44    | 0   | 16,419    | 7,671            | 4,086             | 4,662             |
| 1997            |     |     |     | 3,442   | 30,332    | 14,678  | 2,224   | 411    | 2,502   | 1,680   | 143   | 0   | 55,412    | 41,473           | 9,318             | 4,621             |
| 1998            |     |     |     | 3,850   | 7,285     | 6,001   | 1,165   | 421    | 4,324   | 3,006   | 64    | 1   | 26,117    | 12,564           | 5,777             | 7,776             |
| 1999            |     |     |     | 260     | 5,717     | 5,659   | 1,461   | 917    | 6,283   | 2,943   | 89    | 2   | 23,331    | 8,008            | 5,211             | 10,112            |
| 2000            |     |     |     | 13,749  | 29,916    | 9,877   | 2,076   | 1,928  | 9,763   | 4,738   | 105   | 2   | 72,154    | 48,278           | 7,420             | 16,456            |
| 2001            |     |     |     | 104,883 | 55,788    | 26,709  | 4,268   | 1,327  | 18,315  | 4,262   | 140   | 5   | 215,697   | 174,199          | 17,667            | 23,831            |
| 2002            |     |     |     | 5,016   | 71,511    | 33,555  | 5,750   | 2,752  | 15,874  | 2,946   | 100   | 3   | 137,507   | 87,033           | 29,044            | 21,327            |
| 2003            |     |     | 132 | 42,343  | 34,581    | 28,636  | 5,732   | 1,286  | 23,445  | 7,174   |       |     | 143,329   | 86,190           | 25,344            | 31,663            |
| 2004            |     |     | 5   | 36,168  | 37,934    | 19,580  | 4,094   | 908    | 26,998  | 4,531   |       |     | 130,218   | 81,752           | 16,185            | 32,276            |
| 2005            |     |     |     | 1,763   | 20,798    | 14,089  | 2,323   | 1,389  | 14,672  | 3,327   |       |     | 58,361    | 29,306           | 9,817             | 19,238            |
| 2006            |     |     |     | 29      | 21,660    | 11,042  | 2,438   | 1,534  | 11,976  | 3,822   |       |     | 52,501    | 26,309           | 9,085             | 17,107            |
| 2007            |     |     | 1   | 3,277   | 27,506    | 11,597  | 3,167   | 1,984  | 17,456  | 4,118   |       |     | 69,106    | 35,355           | 10,599            | 23,151            |
| 2008            |     |     |     | 4,447   | 45,174    | 34,258  | 5,381   | 3,461  | 26,145  | 4,141   |       |     | 123,007   | 60,899           | 28,657            | 33,451            |
| 2009            |     |     |     | 1,173   | 65,190    | 40,728  | 9,465   | 10,549 | 49,471  | 3,773   |       |     | 180,349   | 83,658           | 33,256            | 63,435            |
| 2010            |     |     |     | 32,517  | 66,010    | 34,208  | 6,921   | 5,381  | 45,279  | 8,776   |       |     | 199,092   | 107,235          | 33,086            | 58,771            |
| 2011            |     |     |     | 374     | 74,309    | 38,699  | 12,109  | 5,817  | 39,184  | 7,094   |       |     | 177,586   | 87,467           | 39,136            | 50,983            |
| 2012            |     |     |     | 488     | 63,407    | 22,704  | 3,337   | 4,531  | 51,132  | 5,026   |       |     | 150,625   | 74,862           | 15,663            | 60,100            |
| TOTAL           |     | 1   | 344 | 510,256 | 1,273,672 | 633,475 | 267,915 | 75,508 | 552,272 | 136,072 | 3,356 | 87  | 3,452,958 | 1,992,568        | 710,844           | 749,305           |
| 10-Year Average |     |     |     | 12,258  | 45,657    | 25,554  | 5,497   | 3,684  | 30,576  | 5,178   |       |     | 128,417   | 67,303           | 22,083            | 39,018            |

\*Jacks included

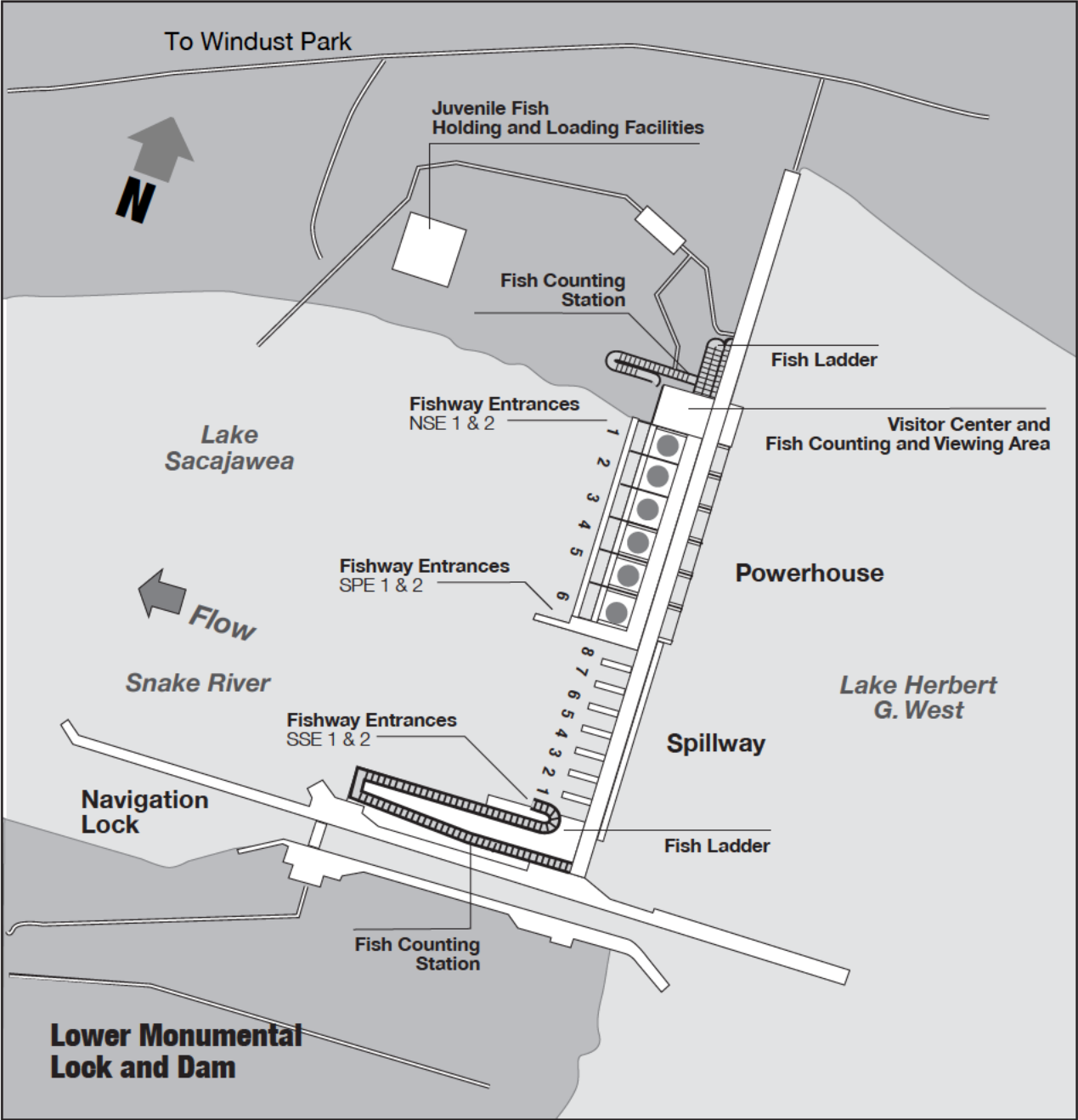
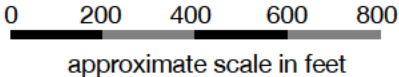
The 1996 through 2002 count seasons were extended to include video counts made between 0600 and 1600 hours daily from November 1 through December 15.

TABLE 87  
MONTHLY COUNT OF STEELHEAD  
ICE HARBOR DAM  
1962 -2012

| YEAR            | JAN | FEB | MAR    | APR     | MAY    | JUN    | JUL     | AUG     | SEP       | OCT       | NOV    | DEC    | TOTALS    |
|-----------------|-----|-----|--------|---------|--------|--------|---------|---------|-----------|-----------|--------|--------|-----------|
| 1962            |     |     |        | 8,758   | 716    | 261    | 2,384   | 7,450   | 75,924    | 20,303    |        |        | 115,796   |
| 1963            |     |     |        | 969     | 895    | 163    | 2,157   | 6,514   | 35,382    | 24,070    | 4,042  | 347    | 74,539    |
| 1964            | 105 | 136 | 796    | 2,269   | 807    | 153    | 1,596   | 9,462   | 34,435    | 7,357     | 1,347  | 397    | 58,860    |
| 1965            | 31  | 110 | 673    | 1,976   | 488    | 439    | 3,739   | 4,497   | 33,595    | 13,522    | 3,803  |        | 62,873    |
| 1966            |     |     |        | 2,161   | 810    | 413    | 1,383   | 2,517   | 40,185    | 18,329    |        |        | 65,798    |
| 1967            |     |     |        | 1,266   | 894    | 345    | 972     | 953     | 18,914    | 20,861    |        |        | 44,205    |
| 1968            |     |     |        | 2,558   | 2,933  | 357    | 952     | 8,107   | 45,552    | 17,270    | 3,692  | 962    | 82,383    |
| 1969            | 132 | 41  | 807    | 4,971   | 2,430  | 321    | 3,348   | 5,715   | 27,219    | 14,953    | 3,874  | 78     | 63,889    |
| 1970            |     |     |        | 1,597   | 1,067  | 389    | 2,620   | 7,611   | 30,101    | 8,290     | 1,891  | 304    | 53,870    |
| 1971            |     |     | 458    | 1,938   | 843    | 215    | 3,064   | 2,996   | 42,481    | 15,034    |        |        | 67,029    |
| 1972            |     |     |        | 1,853   | 553    | 152    | 3,062   | 6,503   | 34,134    | 17,336    |        |        | 63,593    |
| 1973            |     |     |        | 1,570   | 827    | 254    | 1,785   | 2,699   | 22,021    | 9,155     |        |        | 38,311    |
| 1974            |     |     |        | 972     | 359    | 104    | 1,482   | 2,202   | 3,661     | 3,748     |        |        | 12,528    |
| 1975            |     |     |        | 564     | 409    | 76     | 1,223   | 3,878   | 6,816     | 3,252     |        |        | 16,218    |
| 1976            |     |     |        | 508     | 142    | 165    | 1,714   | 5,138   | 11,141    | 5,077     |        |        | 23,885    |
| 1977            |     |     |        | 685     | 220    | 308    | 3,654   | 3,017   | 30,610    | 16,326    |        |        | 54,820    |
| 1978            |     |     |        | 908     | 88     | 43     | 1,308   | 2,907   | 15,094    | 6,092     | 702    |        | 27,142    |
| 1979            |     |     | 454    | 538     | 114    | 60     | 1,995   | 1,778   | 6,136     | 9,717     | 2,325  |        | 23,117    |
| 1980            |     |     | 1,420  | 2,796   | 563    | 39     | 1,303   | 4,333   | 22,064    | 15,424    | 2,279  |        | 50,221    |
| 1981            |     |     | 797    | 1,106   | 433    | 137    | 2,305   | 1,431   | 16,563    | 16,669    | 1,849  |        | 41,290    |
| 1982            |     |     | 1,471  | 1,931   | 918    | 45     | 2,564   | 8,895   | 30,574    | 27,007    |        |        | 73,405    |
| 1983            |     |     |        | 1,001   | 150    | 36     | 3,773   | 9,875   | 48,519    | 25,121    |        |        | 88,475    |
| 1984            |     |     |        | 2,218   | 488    | 49     | 4,103   | 4,554   | 50,638    | 31,980    |        |        | 94,030    |
| 1985            |     |     | 1,892  | 7,353   | 439    | 306    | 3,070   | 14,468  | 75,378    | 25,575    |        |        | 128,481   |
| 1986            |     |     | 2,561  | 1,642   | 187    | 174    | 6,600   | 8,679   | 63,598    | 60,851    |        |        | 144,292   |
| 1987            |     |     |        | 2,136   | 235    | 262    | 3,292   | 4,972   | 28,491    | 35,103    |        |        | 74,491    |
| 1988            |     |     |        | 4,865   | 580    | 671    | 3,251   | 5,955   | 46,838    | 37,554    |        |        | 99,714    |
| 1989            |     |     |        | 4,326   | 355    | 487    | 7,399   | 8,916   | 80,799    | 48,819    |        |        | 151,101   |
| 1990            |     |     |        | 2,793   | 148    | 252    | 2,631   | 2,000   | 18,728    | 28,206    |        |        | 54,758    |
| 1991            |     |     |        | 2,297   | 256    | 166    | 3,254   | 1,275   | 55,447    | 61,067    |        |        | 123,762   |
| 1992            |     |     |        | 1,433   | 232    | 742    | 4,190   | 8,137   | 89,281    | 56,599    |        |        | 160,614   |
| 1993            |     |     |        | 7,418   | 287    | 745    | 5,896   | 8,086   | 21,614    | 29,061    |        |        | 73,107    |
| 1994            |     |     |        | 3,040   | 126    | 394    | 3,295   | 3,162   | 16,702    | 24,985    |        |        | 51,704    |
| 1995            |     |     |        | 828     | 84     | 193    | 4,699   | 14,521  | 39,494    | 32,207    |        |        | 92,026    |
| 1996            |     |     |        | 743     | 81     | 229    | 3,427   | 15,391  | 48,722    | 28,657    | 2,303  | 1,252  | 100,805   |
| 1997            |     |     |        | 1,187   | 216    | 280    | 4,323   | 11,522  | 40,238    | 37,036    | 8,484  | 544    | 103,830   |
| 1998            |     |     |        | 1,719   | 74     | 259    | 3,226   | 3,114   | 25,408    | 43,844    | 5,400  | 2,078  | 85,122    |
| 1999            |     |     |        | 713     | 93     | 246    | 3,784   | 16,120  | 40,424    | 18,887    | 2,809  | 1,087  | 84,163    |
| 2000            |     |     |        | 805     | 91     | 870    | 7,202   | 11,684  | 65,713    | 33,899    | 5,510  | 650    | 126,424   |
| 2001            |     |     |        | 1,322   | 139    | 3,682  | 17,607  | 27,925  | 136,208   | 68,837    | 22,449 | 5,525  | 283,694   |
| 2002            |     |     |        | 4,507   | 134    | 943    | 12,760  | 30,321  | 87,357    | 66,151    | 8,770  | 819    | 211,762   |
| 2003            |     |     | 5,201  | 1,548   | 74     | 1,128  | 11,558  | 12,267  | 109,101   | 50,798    |        |        | 191,675   |
| 2004            |     |     | 2,483  | 1,690   | 118    | 1,467  | 9,875   | 6,593   | 111,826   | 37,328    |        |        | 171,380   |
| 2005            |     |     | 1,379  | 1,205   | 124    | 1,364  | 4,619   | 11,902  | 76,394    | 59,933    |        |        | 156,920   |
| 2006            |     |     | 1,181  | 2,628   | 78     | 490    | 2,797   | 7,265   | 67,556    | 42,817    |        |        | 124,812   |
| 2007            |     |     | 4,001  | 2,183   | 107    | 903    | 4,743   | 11,723  | 83,713    | 50,247    |        |        | 157,620   |
| 2008            |     |     |        | 2,942   | 241    | 702    | 14,056  | 20,872  | 97,545    | 36,095    |        |        | 172,453   |
| 2009            |     |     |        | 2,906   | 154    | 1,218  | 13,616  | 43,697  | 167,918   | 98,596    |        |        | 328,105   |
| 2010            |     |     |        | 2,773   | 289    | 1,431  | 29,670  | 25,794  | 106,546   | 40,456    |        |        | 206,959   |
| 2011            |     |     |        | 2,691   | 360    | 201    | 9,931   | 55,460  | 86,211    | 43,951    |        |        | 198,805   |
| 2012            |     |     |        | 2,111   | 266    | 816    | 2,875   | 5,820   | 64,613    | 28,768    |        |        | 105,269   |
| Totals          | 268 | 287 | 25,574 | 116,917 | 22,715 | 25,145 | 256,132 | 510,673 | 2,633,622 | 1,573,220 | 81,529 | 14,043 | 5,260,125 |
| 10-Year Average |     |     | 2,268  | 181     | 972    | 10,374 | 20,139  | 97,142  | 48,899    |           |        |        | 181,400   |

The 1996 through 2002 count seasons were extended to include video counts made between 0600 and 1600 hours daily, November 1 to December 15.

# Plate 7 Lower Monumental Lock and Dam



## LOWER MONUMENTAL DAM

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### FISH COUNTING SCHEDULE

1 Apr – 31 Oct      Visual counting daily 0400 – 2000 hours PST

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### FISH LADDER OPERATING SCHEDULE

#### *North Ladder*

1 Jan – 3 Jan      Ladder in service.  
3 Jan – 7 Feb      Ladder dewatered for annual maintenance.  
7 Feb– 31 Dec      Ladder in service.

#### *South Ladder*

1 Jan – 26 Jan      Ladder in service.  
26 Jan– 27 Feb      Ladder dewatered for annual maintenance.  
27 Feb– 31 Dec      Ladder in service.

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### FISHWAY ACTIVITIES

Water temperatures were recorded hourly from north and south fish ladder exit pools and the downstream end of the primary dewaterer. Hourly readings were taken from June 20 to October 18. The purpose is to determine if summer spill has any effects on exit pool temperatures.

All fish pumps were out of service from 1 January through 15 February. Additionally, fish pump 2 was out of service Feb 15 – Apr 18 (misaligned diffuser), Aug 25-27 (failed thrust pump cooling water flow meter), and Nov 21- present (shaft realignment and replacement of the bearing housing).

Lamprey passage improvements were constructed in the upper fish ladder weirs during the last winter outage. These improvements included ramping the downstream access to raised orifices as well as excavating approximately 1.5 inch high by 12 inch wide orifices at the floor / weir intersection. These improvements allow adult lamprey an easier attachment transition through this challenging ladder section.

The juvenile fish facility was operated for juvenile fish transport/bypass and adult fallbacks from 1 April to 17 December.

LoMo's RSW was in service as per requirements of 2012 operating year.

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TABLE 88

MONTHLY TOTALS OF SALMONIDS, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER LOWER MONUMENTAL DAM  
2012

| SPECIES      | JAN | FEB | MAR | APR          | MAY           | JUN           | JUL          | AUG          | SEP            | OCT           | NOV | DEC | TOTAL          |
|--------------|-----|-----|-----|--------------|---------------|---------------|--------------|--------------|----------------|---------------|-----|-----|----------------|
| CHINOOK*     |     |     |     | 203          | 59,645        | 23,507        | 4,218        | 4,103        | 47,126         | 5,859         |     |     | 144,661        |
| STEELHEAD    |     |     |     | 3,189        | 421           | 518           | 2,960        | 4,550        | 55,979         | 33,906        |     |     | 101,523        |
| SOCKEYE      |     |     |     |              |               | 35            | 436          | 15           | 0              |               |     |     | 486            |
| COHO*        |     |     |     |              |               |               |              | 0            | 1,707          | 794           |     |     | 2,501          |
| PINK         |     |     |     |              |               |               |              |              |                |               |     |     | 0              |
| <b>TOTAL</b> |     |     |     | <b>3,392</b> | <b>60,066</b> | <b>24,060</b> | <b>7,614</b> | <b>8,668</b> | <b>104,812</b> | <b>40,559</b> |     |     | <b>249,171</b> |
| LAMPREY      |     |     |     | 1            | 2             | 4             | 17           | 83           | 23             | 5             |     |     | 135            |
| STURGEON     |     |     |     |              |               |               |              |              |                |               |     |     | 0              |
| BULL TROUT   |     |     |     | 7            | 9             | 4             | 1            |              |                |               |     |     | 21             |

\*Jacks included

TABLE 89  
DISCHARGE AND WATER QUALITY DATA  
LOWER MONUMENTAL PROJECT 2012

| JANUARY |               |               |                     |       |
|---------|---------------|---------------|---------------------|-------|
| DATE    | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Jan 1   | 30.8          | 0.0           | 4.0                 | 39.0  |
| Jan 2   | 31.5          | 0.0           | 4.0                 | 39.0  |
| Jan 3   | 34.8          | 0.0           | 4.0                 | 39.0  |
| Jan 4   | 35.6          | 0.0           | 4.0                 | 39.0  |
| Jan 5   | 26.5          | 0.0           | 4.0                 | 39.0  |
| Jan 6   | 26.3          | 0.0           | 4.0                 | 38.0  |
| Jan 7   | 22.7          | 0.0           | 4.0                 | 38.0  |
| Jan 8   | 22.7          | 0.0           | 4.0                 | 38.0  |
| Jan 9   | 27.3          | 0.0           | 4.0                 | 38.0  |
| Jan 10  | 24.8          | 0.0           | 5.0                 | 38.0  |
| Jan 11  | 26.9          | 0.0           | 5.0                 | 38.0  |
| Jan 12  | 30.0          | 0.0           | 5.0                 | 38.0  |
| Jan 13  | 25.8          | 0.0           | 5.5                 | 38.0  |
| Jan 14  | 16.5          | 0.0           | 5.5                 | 38.0  |
| Jan 15  | 21.8          | 0.0           | 6.0                 | 37.0  |
| Jan 16  | 21.5          | 0.0           | 6.0                 | 37.0  |
| Jan 17  | 21.2          | 0.0           | 6.0                 | 37.0  |
| Jan 18  | 33.1          | 0.0           | 6.0                 | 37.0  |
| Jan 19  | 31.0          | 0.0           | 6.0                 | 37.0  |
| Jan 20  | 30.2          | 0.0           | 6.0                 | 37.0  |
| Jan 21  | 30.9          | 0.0           | 6.0                 | 37.0  |
| Jan 22  | 31.5          | 0.0           | 6.0                 | 37.0  |
| Jan 23  | 35.6          | 0.0           | 6.0                 | 37.0  |
| Jan 24  | 32.8          | 0.0           | 6.0                 | 37.0  |
| Jan 25  | 31.3          | 0.0           | 6.0                 | 37.0  |
| Jan 26  | 31.7          | 0.0           | 6.0                 | 37.0  |
| Jan 27  | 33.9          | 0.0           | 6.0                 | 37.0  |
| Jan 28  | 36.6          | 0.0           | 6.0                 | 37.0  |
| Jan 29  | 33.6          | 0.0           | 6.0                 | 37.0  |
| Jan 30  | 33.2          | 0.0           | 6.0                 | 37.0  |
| Jan 31  | 34.5          | 0.0           | 6.0                 | 37.0  |

AVG    29.2    0.0    5.3    37.6

| FEBRUARY |               |               |                     |       |
|----------|---------------|---------------|---------------------|-------|
| DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Feb 1    | 29.1          | 0.0           | 6.0                 | 37.0  |
| Feb 2    | 36.9          | 0.0           | 6.0                 | 37.0  |
| Feb 3    | 40.4          | 0.0           | 6.0                 | 37.0  |
| Feb 4    | 35.1          | 0.0           | 6.0                 | 37.0  |
| Feb 5    | 33.5          | 0.0           | 6.5                 | 37.0  |
| Feb 6    | 26.2          | 0.0           | 6.5                 | 37.0  |
| Feb 7    | 30.4          | 0.0           | 2.5                 | 37.0  |
| Feb 8    | 35.1          | 0.0           | 2.5                 | 37.0  |
| Feb 9    | 31.7          | 0.0           | 2.5                 | 37.0  |
| Feb 10   | 23.1          | 0.0           | 2.5                 | 37.0  |
| Feb 11   | 29.1          | 0.0           | 2.5                 | 37.0  |
| Feb 12   | 22.1          | 0.0           | 2.5                 | 37.0  |
| Feb 13   | 35.4          | 0.1           | 2.5                 | 37.0  |
| Feb 14   | 32.7          | 0.0           | 2.5                 | 37.0  |
| Feb 15   | 31.7          | 0.0           | 2.5                 | 38.0  |
| Feb 16   | 35.9          | 0.0           | 2.5                 | 38.0  |
| Feb 17   | 26.3          | 0.0           | 3.0                 | 38.0  |
| Feb 18   | 30.0          | 0.0           | 3.0                 | 38.0  |
| Feb 19   | 32.1          | 0.0           | 3.0                 | 38.0  |
| Feb 20   | 32.6          | 0.0           | 3.0                 | 38.0  |
| Feb 21   | 30.9          | 0.0           | 3.0                 | 39.0  |
| Feb 22   | 38.2          | 0.0           | 3.0                 | 39.0  |
| Feb 23   | 72.5          | 2.0           | 3.0                 | 39.0  |
| Feb 24   | 59.2          | 0.0           | 3.0                 | 40.0  |
| Feb 25   | 32.8          | 0.0           | 2.5                 | 40.0  |
| Feb 26   | 44.8          | 0.0           | 2.5                 | 40.0  |
| Feb 27   | 39.6          | 0.0           | 2.5                 | 40.0  |
| Feb 28   | 42.2          | 0.0           | 3.5                 | 40.0  |
| Feb 29   | 41.6          | 0.0           | 3.5                 | 40.0  |

AVG    35.6    0.1    3.5    38.0

| MARCH  |               |               |                     |       |
|--------|---------------|---------------|---------------------|-------|
| DATE   | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Mar 1  | 42.2          | 0.0           | 3.5                 | 40.0  |
| Mar 2  | 34.9          | 0.0           | 3.5                 | 40.0  |
| Mar 3  | 37.1          | 0.0           | 3.5                 | 40.0  |
| Mar 4  | 38.5          | 0.0           | 3.5                 | 40.0  |
| Mar 5  | 43.8          | 0.0           | 3.5                 | 40.0  |
| Mar 6  | 36.7          | 0.0           | 3.5                 | 40.0  |
| Mar 7  | 39.0          | 0.0           | 3.5                 | 40.0  |
| Mar 8  | 37.1          | 0.0           | 3.5                 | 41.0  |
| Mar 9  | 38.1          | 0.0           | 3.5                 | 41.0  |
| Mar 10 | 43.1          | 0.0           | 3.5                 | 40.0  |
| Mar 11 | 36.8          | 0.0           | 3.5                 | 40.0  |
| Mar 12 | 50.6          | 0.0           | 3.5                 | 41.0  |
| Mar 13 | 57.3          | 0.0           | 4.0                 | 41.0  |
| Mar 14 | 58.6          | 0.0           | 4.0                 | 41.0  |
| Mar 15 | 57.3          | 0.0           | 4.0                 | 41.0  |
| Mar 16 | 69.4          | 0.0           | 4.0                 | 41.0  |
| Mar 17 | 69.0          | 0.0           | 4.0                 | 41.0  |
| Mar 18 | 63.9          | 0.0           | 4.0                 | 41.0  |
| Mar 19 | 73.7          | 0.0           | 4.0                 | 41.0  |
| Mar 20 | 71.3          | 0.0           | 4.0                 | 42.0  |
| Mar 21 | 81.3          | 0.0           | 4.0                 | 42.0  |
| Mar 22 | 75.7          | 0.0           | 4.0                 | 42.5  |
| Mar 23 | 79.1          | 0.0           | 4.0                 | 42.5  |
| Mar 24 | 75.8          | 0.0           | 4.0                 | 42.5  |
| Mar 25 | 78.8          | 0.0           | 4.0                 | 43.0  |
| Mar 26 | 82.6          | 8.2           | 4.0                 | 43.0  |
| Mar 27 | 104.6         | 9.5           | 4.0                 | 43.0  |
| Mar 28 | 97.0          | 8.0           | 3.0                 | 43.0  |
| Mar 29 | 97.3          | 0.0           | 2.0                 | 43.0  |
| Mar 30 | 99.2          | 17.0          | 2.0                 | 43.0  |
| Mar 31 | 127.0         | 32.4          | 2.0                 | 44.0  |

AVG    64.4    2.4    3.6    41.4

TABLE 90

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| LOWER MONUMENTAL PROJECT - FISH COUNTS |               |        |      |          |       |      |         |              |              |      | APRIL 2012 |          |          |       |           |       |       |
|--|---------------|--------|------|----------|-------|------|---------|--------------|--------------|------|------------|----------|----------|-------|-----------|-------|-------|
| DATE                                   | CHINOOK ADULT |        |      | CHINOOK  | COHO  | COHO | TOTAL   |              | unclipped    |      | BULL       |          | DISCH    | SPILL | TURBIDITY |       |       |
|  | SPRING        | SUMMER | FALL | JACK     | ADULT | JACK | SOCKEYE | STEELHEAD    | STEELHEAD    | PINK | STURGEON   | TROUT    | LAMPREY  | KCFS  | KCFS      | SECCH | DEG F |
| Apr 1                                  | 0             |        |      | 0        |       |      |         | 33           | 4            |      |            | 0        | 0        | 140.5 | 43.7      | 2.0   | 44.0  |
| Apr 2                                  | 0             |        |      | 0        |       |      |         | 45           | 6            |      |            | 0        | 0        | 133.6 | 38.5      | 2.0   | 44.0  |
| Apr 3                                  | 0             |        |      | 0        |       |      |         | 161          | 36           |      |            | 0        | 0        | 116.9 | 31.0      | 2.0   | 45.0  |
| Apr 4                                  | 0             |        |      | 0        |       |      |         | 203          | 83           |      |            | 0        | 1        | 111.0 | 28.2      | 2.0   | 46.0  |
| Apr 5                                  | 0             |        |      | 0        |       |      |         | 184          | 66           |      |            | 0        | 0        | 109.4 | 27.6      | 2.0   | 46.0  |
| Apr 6                                  | 0             |        |      | 0        |       |      |         | 129          | 44           |      |            | 0        | 0        | 109.9 | 27.9      | 2.0   | 46.0  |
| Apr 7                                  | 0             |        |      | 0        |       |      |         | 222          | 121          |      |            | 0        | 0        | 101.4 | 28.0      | 2.0   | 46.0  |
| Apr 8                                  | 0             |        |      | 0        |       |      |         | 175          | 96           |      |            | 1        | 0        | 99.0  | 28.1      | 2.0   | 46.0  |
| Apr 9                                  | 1             |        |      | 0        |       |      |         | 141          | 80           |      |            | 0        | 0        | 94.7  | 28.0      | 2.0   | 46.0  |
| Apr 10                                 | 0             |        |      | 0        |       |      |         | 104          | 60           |      |            | 0        | 0        | 92.1  | 27.1      | 2.0   | 46.0  |
| Apr 11                                 | 0             |        |      | 0        |       |      |         | 111          | 55           |      |            | 0        | 0        | 97.2  | 26.4      | 2.0   | 46.5  |
| Apr 12                                 | -1            |        |      | 0        |       |      |         | 105          | 61           |      |            | 1        | 0        | 102.5 | 28.4      | 2.0   | 46.5  |
| Apr 13                                 | -1            |        |      | 0        |       |      |         | 100          | 57           |      |            | 0        | 0        | 113.1 | 30.0      | 2.0   | 46.5  |
| Apr 14                                 | 1             |        |      | 0        |       |      |         | 121          | 75           |      |            | 0        | 0        | 113.4 | 29.1      | 2.0   | 47.0  |
| Apr 15                                 | 0             |        |      | 0        |       |      |         | 124          | 77           |      |            | 0        | 0        | 105.3 | 26.1      | 2.0   | 47.0  |
| Apr 16                                 | 0             |        |      | 0        |       |      |         | 124          | 68           |      |            | 1        | 0        | 100.0 | 26.0      | 1.5   | 48.0  |
| Apr 17                                 | 0             |        |      | 0        |       |      |         | 125          | 83           |      |            | 0        | 0        | 101.9 | 25.9      | 1.5   | 49.0  |
| Apr 18                                 | 0             |        |      | 0        |       |      |         | 91           | 55           |      |            | 1        | 0        | 102.1 | 26.6      | 1.5   | 49.0  |
| Apr 19                                 | 1             |        |      | 0        |       |      |         | 121          | 91           |      |            | 0        | 0        | 106.6 | 25.9      | 1.5   | 49.0  |
| Apr 20                                 | 6             |        |      | 0        |       |      |         | 95           | 57           |      |            | 0        | 0        | 103.6 | 28.9      | 2.5   | 50.0  |
| Apr 21                                 | 6             |        |      | 0        |       |      |         | 81           | 55           |      |            | 0        | 0        | 107.6 | 25.9      | 2.5   | 50.0  |
| Apr 22                                 | 2             |        |      | 0        |       |      |         | 58           | 29           |      |            | 0        | 0        | 114.9 | 26.0      | 2.5   | 50.0  |
| Apr 23                                 | 5             |        |      | 0        |       |      |         | 78           | 64           |      |            | 0        | 0        | 127.2 | 25.3      | 2.5   | 50.0  |
| Apr 24                                 | 8             |        |      | 0        |       |      |         | 89           | 57           |      |            | 1        | 0        | 142.0 | 68.1      | 2.5   | 51.0  |
| Apr 25                                 | 5             |        |      | 0        |       |      |         | 69           | 45           |      |            | 1        | 0        | 171.3 | 76.5      | 2.5   | 51.0  |
| Apr 26                                 | 16            |        |      | 0        |       |      |         | 76           | 52           |      |            | 1        | 0        | 168.1 | 68.7      | 2.5   | 51.0  |
| Apr 27                                 | 19            |        |      | 0        |       |      |         | 75           | 57           |      |            | 0        | 0        | 192.6 | 90.4      | 2.5   | 52.0  |
| Apr 28                                 | 46            |        |      | 0        |       |      |         | 52           | 33           |      |            | 0        | 0        | 180.1 | 67.3      | 2.5   | 52.0  |
| Apr 29                                 | 36            |        |      | 0        |       |      |         | 66           | 47           |      |            | 0        | 0        | 153.6 | 42.7      | 2.0   | 51.0  |
| Apr 30                                 | 52            |        |      | 1        |       |      |         | 31           | 13           |      |            | 0        | 0        | 133.8 | 36.6      | 2.0   | 51.0  |
| <b>TOTAL</b>                           | <b>202</b>    |        |      | <b>1</b> |       |      |         | <b>3,189</b> | <b>1,727</b> |      |            | <b>7</b> | <b>1</b> |       |           |       |       |
| AVG.                                   | 7             |        |      | 0        |       |      |         | 106          | 58           |      |            | 0        | 0        | 121.5 | 37.0      | 2.1   | 48.1  |

Note: Official Spring Chinook run started April 1.



TABLE 91

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| LOWER MONUMENTAL PROJECT - FISH COUNTS |               |         |         |              |       |      |                 |            |           |      | MAY 2012 |               |               |                    |       |       |
|--|---------------|---------|---------|--------------|-------|------|-----------------|------------|-----------|------|----------|---------------|---------------|--------------------|-------|-------|
| DATE                                   | CHINOOK ADULT |         |         | CHINOOK      | COHO  | COHO | TOTAL unclipped |            |           | BULL |          | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCH | DEG F |       |
|  | SPRING        | SUMMER  | FALL    | JACK         | ADULT | JACK | SOCKEYE         | STEELHEAD  | STEELHEAD | PINK | STURGEON |               |               |                    |       | TROUT |
| May 1                                  | 103           |         |         | 0            |       |      | 32              | 11         |           |      | 0        | 0             | 136.3         | 43.2               | 2.0   | 50.0  |
| May 2                                  | 158           |         |         | 1            |       |      | 19              | 7          |           |      | 0        | 0             | 129.3         | 38.5               | 2.0   | 50.0  |
| May 3                                  | 225           |         |         | 7            |       |      | 19              | 4          |           |      | 0        | 0             | 119.7         | 35.4               | 1.0   | 49.0  |
| May 4                                  | 385           |         |         | 10           |       |      | 29              | 13         |           |      | 0        | 0             | 115.4         | 43.0               | 1.0   | 49.0  |
| May 5                                  | 532           |         |         | 31           |       |      | 39              | 13         |           |      | 0        | 0             | 102.4         | 32.4               | 1.0   | 49.0  |
| May 6                                  | 353           |         |         | 11           |       |      | 33              | 18         |           |      | 1        | 0             | 96.9          | 23.6               | 2.0   | 49.0  |
| May 7                                  | 579           |         |         | 18           |       |      | 27              | 11         |           |      | 1        | 0             | 100.2         | 27.6               | 2.0   | 51.0  |
| May 8                                  | 538           |         |         | 14           |       |      | 20              | 13         |           |      | 0        | 0             | 92.2          | 29.6               | 2.0   | 50.0  |
| May 9                                  | 567           |         |         | 19           |       |      | 20              | 15         |           |      | 0        | 0             | 92.7          | 34.5               | 2.0   | 51.0  |
| May 10                                 | 636           |         |         | 5            |       |      | 28              | 18         |           |      | 0        | 0             | 97.1          | 26.1               | 2.0   | 52.0  |
| May 11                                 | 721           |         |         | 26           |       |      | 17              | 12         |           |      | 0        | 0             | 102.0         | 26.0               | 2.0   | 52.0  |
| May 12                                 | 845           |         |         | 14           |       |      | 20              | 7          |           |      | 1        | 0             | 95.1          | 25.4               | 2.0   | 52.0  |
| May 13                                 | 1,411         |         |         | 17           |       |      | 10              | 5          |           |      | 0        | 0             | 96.0          | 25.2               | 2.0   | 53.0  |
| May 14                                 | 2,675         |         |         | 58           |       |      | 13              | 10         |           |      | 0        | 0             | 98.9          | 24.7               | 2.0   | 53.0  |
| May 15                                 | 4,204         |         |         | 68           |       |      | 13              | 9          |           |      | 0        | 2             | 105.4         | 24.5               | 2.5   | 54.0  |
| May 16                                 | 7,122         |         |         | 157          |       |      | 6               | 4          |           |      | 0        | 0             | 117.2         | 27.4               | 2.5   | 54.0  |
| May 17                                 | 6,066         |         |         | 167          |       |      | 11              | 5          |           |      | 0        | -1            | 131.5         | 43.7               | 2.5   | 54.0  |
| May 18                                 | 4,573         |         |         | 107          |       |      | 4               | 1          |           |      | 1        | 0             | 125.7         | 32.4               | 3.0   | 54.0  |
| May 19                                 | 3,005         |         |         | 93           |       |      | 9               | 2          |           |      | 1        | 0             | 108.9         | 28.6               | 3.0   | 55.0  |
| May 20                                 | 4,305         |         |         | 129          |       |      | 4               | 3          |           |      | 0        | 0             | 110.4         | 26.2               | 2.0   | 55.0  |
| May 21                                 | 3,852         |         |         | 173          |       |      | 9               | 4          |           |      | 0        | 1             | 102.1         | 24.9               | 2.0   | 56.0  |
| May 22                                 | 3,160         |         |         | 183          |       |      | 1               | 1          |           |      | 0        | 0             | 115.4         | 23.6               | 2.0   | 56.0  |
| May 23                                 | 2,331         |         |         | 144          |       |      | 2               | 0          |           |      | 0        | 0             | 135.4         | 35.1               | 2.0   | 56.0  |
| May 24                                 | 1,500         |         |         | 119          |       |      | 2               | 1          |           |      | 0        | 0             | 122.3         | 25.4               | 2.0   | 56.0  |
| May 25                                 | 1,314         |         |         | 89           |       |      | 7               | 1          |           |      | 1        | 0             | 108.8         | 25.3               | 2.0   | 54.0  |
| May 26                                 | 1,379         |         |         | 146          |       |      | 3               | 1          |           |      | 2        | 0             | 94.6          | 25.2               | 2.0   | 54.0  |
| May 27                                 | 746           |         |         | 82           |       |      | 7               | 2          |           |      | 0        | 0             | 80.3          | 26.2               | 2.0   | 54.0  |
| May 28                                 | 1,332         |         |         | 117          |       |      | 3               | 0          |           |      | 0        | 0             | 76.1          | 26.5               | 2.0   | 54.0  |
| May 29                                 | 1,123         |         |         | 107          |       |      | 7               | 1          |           |      | 1        | 0             | 82.5          | 27.4               | 2.0   | 54.0  |
| May 30                                 | 1,012         |         |         | 82           |       |      | 4               | 2          |           |      | 0        | 0             | 78.9          | 27.4               | 2.0   | 54.0  |
| May 31                                 | 629           |         |         | 70           |       |      | 3               | 0          |           |      | 0        | 0             | 78.9          | 28.0               | 2.0   | 54.0  |
| <b>TOTAL</b>                           | <b>57,381</b> |         |         | <b>2,264</b> |       |      | <b>421</b>      | <b>194</b> |           |      | <b>9</b> | <b>2</b>      |               |                    |       |       |
| AVG.                                   | 1,851         |         |         | 73           |       |      | 14              | 6          |           |      | 0        | 0             | 104.8         | 29.5               | 2.0   | 52.8  |
| RUN YEAR                               |               | CHINOOK | CHINOOK |              |       |      |                 | unclipped  |           |      | BULL     |               |               |                    |       |       |
| TOTALS TO DATE                         |               | ADULT   | JACK    |              |       |      | STEELHEAD       | STEELHEAD  |           |      | TROUT    | LAMPREY       |               |                    |       |       |
| SPRING                                 |               | 57,583  | 2,265   |              |       |      | 3,610           | 1,921      |           |      | 16       | 3             |               |                    |       |       |



TABLE 93

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT - FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | TOTAL SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK STURGEON | BULL TROUT |           | DISCH KCFS | SPILL KCFS | TURBIDITY SECCH | TURBIDITY DEG F |
|--------------|---------------|--------------|------|--------------|------------|-----------|---------------|-----------------|---------------------|---------------|------------|-----------|------------|------------|-----------------|-----------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |               |                 |                     |               | TROUT      | LAMPREY   |            |            |                 |                 |
| Jul 1        |               | 286          |      | 59           |            |           | 9             | 39              | 9                   |               | 0          | 0         | 61.9       | 21.4       | 3.0             | 63.0            |
| Jul 2        |               | 308          |      | 23           |            |           | 9             | 63              | 20                  |               | 0          | 0         | 63.8       | 21.6       | 3.0             | 64.0            |
| Jul 3        |               | 280          |      | 37           |            |           | 16            | 54              | 19                  |               | 0          | 0         | 58.1       | 19.2       | 3.0             | 64.0            |
| Jul 4        |               | 212          |      | 28           |            |           | 16            | 56              | 15                  |               | 0          | 0         | 59.7       | 17.0       | 3.0             | 64.0            |
| Jul 5        |               | 207          |      | 18           |            |           | 34            | 66              | 21                  |               | 0          | 0         | 50.3       | 18.7       | 3.2             | 64.5            |
| Jul 6        |               | 158          |      | 62           |            |           | 26            | 57              | 13                  |               | 0          | 0         | 49.8       | 17.0       | 3.4             | 64.5            |
| Jul 7        |               | 178          |      | 35           |            |           | 26            | 105             | 42                  |               | 0          | 0         | 51.2       | 16.6       | 3.5             | 65.0            |
| Jul 8        |               | 117          |      | 14           |            |           | 17            | 91              | 31                  |               | 0          | 0         | 48.2       | 16.9       | 3.5             | 65.5            |
| Jul 9        |               | 116          |      | 32           |            |           | 12            | 93              | 13                  |               | 0          | 0         | 43.3       | 16.7       | 3.5             | 66.0            |
| Jul 10       |               | 126          |      | 24           |            |           | 13            | 119             | 43                  |               | 0          | 0         | 51.3       | 17.0       | 3.5             | 66.0            |
| Jul 11       |               | 107          |      | 23           |            |           | 19            | 118             | 29                  |               | 0          | 0         | 54.7       | 18.2       | 3.5             | 67.0            |
| Jul 12       |               | 97           |      | 32           |            |           | 15            | 80              | 26                  |               | 0          | 0         | 50.7       | 17.0       | 3.5             | 67.0            |
| Jul 13       |               | 147          |      | 25           |            |           | 20            | 165             | 48                  |               | 0          | 0         | 47.9       | 17.4       | 4.0             | 68.0            |
| Jul 14       |               | 97           |      | 20           |            |           | 25            | 120             | 35                  |               | 1          | 0         | 39.0       | 17.3       | 4.0             | 68.0            |
| Jul 15       |               | 123          |      | 13           |            |           | 36            | 161             | 65                  |               | 0          | 0         | 42.0       | 18.7       | 4.0             | 68.0            |
| Jul 16       |               | 134          |      | 19           |            |           | 22            | 163             | 56                  |               | 0          | 1         | 47.3       | 19.2       | 4.0             | 69.0            |
| Jul 17       |               | 107          |      | 6            |            |           | 17            | 151             | 55                  |               | 0          | 0         | 45.7       | 16.6       | 4.0             | 69.0            |
| Jul 18       |               | 76           |      | 14           |            |           | 10            | 120             | 37                  |               | 0          | 1         | 44.4       | 17.0       | 4.0             | 70.0            |
| Jul 19       |               | 79           |      | 9            |            |           | 15            | 119             | 47                  |               | 0          | 0         | 44.5       | 16.7       | 4.0             | 70.0            |
| Jul 20       |               | 104          |      | 12           |            |           | 16            | 115             | 36                  |               | 0          | 0         | 38.7       | 18.4       | 4.0             | 70.0            |
| Jul 21       |               | 107          |      | 27           |            |           | 9             | 157             | 60                  |               | 0          | 0         | 45.9       | 19.6       | 4.0             | 70.0            |
| Jul 22       |               | 52           |      | 10           |            |           | 19            | 109             | 47                  |               | 0          | 0         | 39.5       | 20.6       | 4.0             | 70.0            |
| Jul 23       |               | 65           |      | 8            |            |           | 9             | 125             | 36                  |               | 0          | 1         | 37.5       | 16.4       | 4.0             | 70.5            |
| Jul 24       |               | 43           |      | 9            |            |           | 12            | 86              | 40                  |               | 0          | 1         | 35.0       | 17.0       | 4.0             | 70.0            |
| Jul 25       |               | 70           |      | 11           |            |           | 3             | 64              | 27                  |               | 0          | 2         | 37.7       | 16.9       | 4.0             | 70.0            |
| Jul 26       |               | 31           |      | 2            |            |           | 2             | 57              | 19                  |               | 0          | 1         | 39.9       | 17.0       | 4.0             | 70.0            |
| Jul 27       |               | 36           |      | 16           |            |           | 2             | 89              | 31                  |               | 0          | 1         | 40.5       | 18.0       | 4.0             | 70.0            |
| Jul 28       |               | 30           |      | 14           |            |           | 2             | 39              | 15                  |               | 0          | 2         | 35.7       | 19.0       | 4.0             | 70.0            |
| Jul 29       |               | 39           |      | 8            |            |           | 2             | 57              | 18                  |               | 0          | 0         | 32.0       | 16.6       | 4.0             | 70.0            |
| Jul 30       |               | 29           |      | 5            |            |           | 2             | 59              | 24                  |               | 0          | 2         | 33.6       | 22.5       | 4.5             | 70.0            |
| Jul 31       |               | 28           |      | 14           |            |           | 1             | 63              | 28                  |               | 0          | 5         | 41.5       | 17.0       | 4.5             | 70.0            |
| <b>TOTAL</b> |               | <b>3,589</b> |      | <b>629</b>   |            |           | <b>436</b>    | <b>2,960</b>    | <b>1,005</b>        |               | <b>1</b>   | <b>17</b> |            |            |                 |                 |
| AVG.         |               | 116          |      | 20           |            |           | 14            | 95              | 32                  |               | 0          | 1         | 45.5       | 18.0       | 3.8             | 67.8            |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,608        | 2,891        |
| SUMMER         | 14,591        | 1,483        |
| <b>TOTAL</b>   | <b>83,199</b> | <b>4,374</b> |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD |
|---------|-----------|---------------------|
| 471     | 7,088     | 3,038               |

| BULL TROUT | LAMPREY |
|------------|---------|
| 21         | 24      |

TABLE 94

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |            | CHINOOK      | COHO       | COHO | TOTAL     |                        | PINK         | STURGEON | BULL  |           | DISCH | SPILL | TURBIDITY | DEG F |
|--------------|---------------|------------|--------------|------------|------|-----------|------------------------|--------------|----------|-------|-----------|-------|-------|-----------|-------|
|              | SPRING        | SUMMER     | JACK         | ADULT      | JACK | STEELHEAD | unclipped<br>STEELHEAD |              |          | TROUT | LAMPREY   |       |       |           |       |
| Aug 1        |               | 39         |              | 8          |      | 1         | 68                     | 31           |          |       | 8         | 32.6  | 17.0  | 4.5       | 70.0  |
| Aug 2        |               | 56         |              | 12         |      | 1         | 49                     | 18           |          |       | 3         | 35.0  | 16.6  | 4.5       | 70.0  |
| Aug 3        |               | 43         |              | 5          |      | 1         | 94                     | 36           |          |       | 1         | 33.2  | 17.4  | 4.5       | 70.0  |
| Aug 4        |               | 26         |              | 6          |      | 1         | 115                    | 47           |          |       | 2         | 33.0  | 16.5  | 4.5       | 70.0  |
| Aug 5        |               | 23         |              | 5          |      | 0         | 112                    | 39           |          |       | 2         | 27.5  | 14.7  | 4.5       | 70.0  |
| Aug 6        |               | 39         |              | 12         |      | 0         | 86                     | 30           |          |       | 1         | 29.7  | 16.7  | 4.5       | 70.0  |
| Aug 7        |               | 18         |              | 3          |      | 0         | 117                    | 54           |          |       | 1         | 32.4  | 17.0  | 4.5       | 70.0  |
| Aug 8        |               | 58         |              | 13         |      | 1         | 146                    | 38           |          |       | 2         | 29.1  | 15.6  | 4.5       | 70.0  |
| Aug 9        |               | 47         |              | 10         |      | 3         | 134                    | 45           |          |       | 3         | 27.3  | 13.0  | 4.5       | 70.0  |
| Aug 10       |               | 65         |              | 18         |      | 1         | 147                    | 51           |          |       | 1         | 30.6  | 16.8  | 4.5       | 70.0  |
| Aug 11       |               | 71         |              | 23         |      | 0         | 308                    | 115          |          |       | 6         | 29.6  | 17.0  | 4.5       | 69.0  |
| Aug 12       |               | 40         |              | 7          |      | 0         | 261                    | 93           |          |       | 3         | 28.3  | 16.0  | 4.5       | 69.0  |
| Aug 13       |               | 34         |              | 6          |      | 0         | 244                    | 98           |          |       | 5         | 25.1  | 12.6  | 4.5       | 69.0  |
| Aug 14       |               |            | 76           | 21         |      | 5         | 219                    | 81           |          |       | 1         | 26.3  | 13.8  | 4.5       | 69.0  |
| Aug 15       |               |            | 59           | 14         |      | 0         | 142                    | 47           |          |       | 7         | 26.5  | 13.9  | 4.5       | 70.0  |
| Aug 16       |               |            | 81           | 20         |      | 0         | 147                    | 56           |          |       | 4         | 25.3  | 12.3  | 4.5       | 70.0  |
| Aug 17       |               |            | 45           | 4          |      | 0         | 125                    | 51           |          |       | 2         | 26.9  | 13.9  | 4.5       | 70.0  |
| Aug 18       |               |            | 53           | 18         |      | 0         | 113                    | 40           |          |       | 0         | 26.2  | 13.4  | 4.5       | 69.0  |
| Aug 19       |               |            | 85           | 39         |      | 0         | 153                    | 55           |          |       | 4         | 23.8  | 11.5  | 4.5       | 69.0  |
| Aug 20       |               |            | 130          | 42         |      | 0         | 95                     | 20           |          |       | 5         | 24.3  | 12.1  | 4.5       | 69.0  |
| Aug 21       |               |            | 97           | 21         |      | 1         | 92                     | 39           |          |       | 3         | 27.0  | 14.7  | 4.5       | 69.0  |
| Aug 22       |               |            | 103          | 20         |      | 0         | 151                    | 45           |          |       | 4         | 25.3  | 12.6  | 4.5       | 69.0  |
| Aug 23       |               |            | 119          | 30         |      | 0         | 115                    | 49           |          |       | 1         | 25.3  | 12.4  | 4.5       | 69.0  |
| Aug 24       |               |            | 160          | 24         |      | 0         | 123                    | 43           |          |       | 2         | 23.2  | 10.5  | 4.5       | 69.0  |
| Aug 25       |               |            | 125          | 31         |      | 0         | 141                    | 43           |          |       | 2         | 26.1  | 13.4  | 4.5       | 69.0  |
| Aug 26       |               |            | 130          | 29         |      | 0         | 133                    | 39           |          |       | 1         | 25.1  | 12.4  | 4.5       | 69.0  |
| Aug 27       |               |            | 133          | 41         |      | 0         | 128                    | 37           |          |       | 2         | 23.8  | 11.1  | 4.5       | 69.0  |
| Aug 28       |               |            | 176          | 54         |      | 0         | 146                    | 44           |          |       | 1         | 23.3  | 10.8  | 4.5       | 69.0  |
| Aug 29       |               |            | 295          | 114        |      | 0         | 155                    | 33           |          |       | 5         | 23.0  | 10.4  | 4.5       | 68.0  |
| Aug 30       |               |            | 358          | 114        |      | 0         | 186                    | 59           |          |       | 1         | 27.6  | 14.0  | 4.5       | 68.0  |
| Aug 31       |               |            | 425          | 130        |      | 0         | 305                    | 81           |          |       | 0         | 26.3  | 13.8  | 4.5       | 68.0  |
| <b>TOTAL</b> |               | <b>559</b> | <b>2,650</b> | <b>894</b> |      | <b>15</b> | <b>4,550</b>           | <b>1,557</b> |          |       | <b>83</b> |       |       |           |       |
| AVG.         |               | 43         | 147          | 29         |      | 0         | 147                    | 50           |          |       | 3         | 27.4  | 14.0  | 4.5       | 69.3  |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,608        | 2,891        |
| SUMMER         | 15,150        | 1,611        |
| FALL           | 2,650         | 766          |
| <b>TOTAL</b>   | <b>86,408</b> | <b>5,268</b> |

| SOCKEYE | STEELHEAD | unclipped<br>STEELHEAD |
|---------|-----------|------------------------|
| 486     | 11,638    | 4,595                  |

| BULL TROUT | LAMPREY |
|------------|---------|
| 21         | 107     |

TABLE 95

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| LOWER MONUMENTAL PROJECT - FISH COUNTS  |               |               |              |            |           |           |                     |                     |            |         | SEPTEMBER 2012 |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---------------|---------------|--------------|------------|-----------|-----------|---------------------|---------------------|------------|---------|----------------|-------|---------|-----------|------|-------|-------|--|--|--|--------|--------|-------|-------|-----|-----|--------|--------|----|-----|--------|--------|-------|--|--|--|--|--|--|--|------|--------|--------|--|--|--|--|--|--|--|-------|---------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE  | CHINOOK ADULT |               |              | CHINOOK    | COHO      | COHO      | TOTAL               |                     | unclipped  | BULL    |                | DISCH | SPILL   | TURBIDITY |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | SPRING        | SUMMER        | FALL         | JACK       | ADULT     | JACK      | SOCKEYE             | STEELHEAD           | STEELHEAD  | PINK    | STURGEON       | TROUT | LAMPREY | KCFS      | KCFS | SECCH | DEG F |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 1   |               |               | 492          | 229        | 0         | 0         |                     | 803                 | 229        |         |                |       | 3       | 18.3      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 2   |               |               | 539          | 202        | 0         | 0         |                     | 467                 | 126        |         |                |       | 1       | 18.5      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 3   |               |               | 623          | 168        | 2         | 0         |                     | 712                 | 175        |         |                |       | 0       | 12.8      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 4   |               |               | 711          | 243        | 2         | 0         |                     | 504                 | 144        |         |                |       | 0       | 20.1      | 0.0  | 4.5   | 67.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 5   |               |               | 1,203        | 408        | 2         | 1         |                     | 725                 | 205        |         |                |       | 0       | 24.3      | 0.0  | 4.5   | 67.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 6   |               |               | 1,226        | 407        | 9         | 3         |                     | 907                 | 257        |         |                |       | 0       | 37.1      | 0.0  | 4.5   | 67.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 7   |               |               | 1,204        | 531        | 9         | 0         |                     | 1,415               | 409        |         |                |       | 3       | 30.9      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 8   |               |               | 654          | 375        | 1         | 1         |                     | 1,526               | 471        |         |                |       | 0       | 22.2      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 9   |               |               | 2,072        | 992        | 32        | 7         |                     | 2,415               | 597        |         |                |       | 3       | 27.4      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 10  |               |               | 1,561        | 847        | 28        | 1         |                     | 2,776               | 684        |         |                |       | 1       | 28.4      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 11  |               |               | 732          | 785        | 39        | 10        |                     | 2,277               | 598        |         |                |       | 0       | 28.5      | 0.0  | 4.5   | 68.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 12  |               |               | 742          | 884        | 37        | 6         |                     | 2,581               | 730        |         |                |       | 4       | 25.2      | 0.0  | 4.5   | 67.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 13  |               |               | 1,014        | 1,477      | 51        | 6         |                     | 3,043               | 801        |         |                |       | 1       | 26.7      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 14  |               |               | 1,373        | 606        | 60        | 12        |                     | 2,611               | 721        |         |                |       | 1       | 23.2      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 15  |               |               | 1,519        | 749        | 59        | 11        |                     | 2,072               | 566        |         |                |       | 0       | 18.6      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 16  |               |               | 1,129        | 804        | 52        | 2         |                     | 1,748               | 434        |         |                |       | 2       | 23.3      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 17  |               |               | 967          | 653        | 69        | 4         |                     | 1,641               | 449        |         |                |       | 1       | 28.5      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 18  |               |               | 1,083        | 730        | 53        | 4         |                     | 2,240               | 524        |         |                |       | 0       | 22.5      | 0.0  | 4.5   | 66.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 19  |               |               | 800          | 621        | 53        | 1         |                     | 1,715               | 445        |         |                |       | 0       | 22.5      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 20  |               |               | 1,036        | 756        | 79        | 13        |                     | 2,018               | 519        |         |                |       | 0       | 21.3      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 21  |               |               | 1,459        | 1,207      | 78        | 21        |                     | 2,164               | 586        |         |                |       | 0       | 16.0      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 22  |               |               | 1,057        | 913        | 76        | 25        |                     | 2,057               | 517        |         |                |       | 0       | 14.7      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 23  |               |               | 839          | 796        | 77        | 17        |                     | 2,292               | 551        |         |                |       | 0       | 21.0      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 24  |               |               | 765          | 799        | 99        | 23        |                     | 2,287               | 600        |         |                |       | 4       | 17.2      | 0.0  | 4.5   | 64.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 25  |               |               | 817          | 739        | 140       | 23        |                     | 2,594               | 635        |         |                |       | 0       | 19.7      | 0.0  | 4.5   | 64.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 26  |               |               | 570          | 586        | 94        | 9         |                     | 2,245               | 567        |         |                |       | 0       | 16.3      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 27  |               |               | 467          | 403        | 73        | 6         |                     | 2,362               | 583        |         |                |       | -1      | 12.7      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 28  |               |               | 513          | 489        | 95        | 0         |                     | 1,965               | 486        |         |                |       | -1      | 12.8      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 29  |               |               | 413          | 434        | 66        | 2         |                     | 1,879               | 415        |         |                |       | 2       | 15.2      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sep 30  |               |               | 385          | 328        | 59        | 5         |                     | 1,938               | 488        |         |                |       | -1      | 23.2      | 0.0  | 4.5   | 65.0  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>TOTAL</b>  |               |               | 27,965       | 19,161     | 1,494     | 213       |                     | 55,979              | 14,512     |         |                |       | 23      |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AVG.  |               |               | 932          | 639        | 50        | 7         |                     | 1,866               | 484        |         |                |       | 1       | 21.6      | 0.0  | 4.5   | 66.2  |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <table border="1"> <thead> <tr> <th>RUN YEAR</th> <th>CHINOOK ADULT</th> <th>CHINOOK JACK</th> <th>COHO ADULT</th> <th>COHO JACK</th> <th>SOCKEYE</th> <th>STEELHEAD</th> <th>unclipped STEELHEAD</th> <th>BULL TROUT</th> <th>LAMPREY</th> </tr> </thead> <tbody> <tr> <td>TOTALS TO DATE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SPRING</td> <td>68,608</td> <td>2,891</td> <td>1,494</td> <td>213</td> <td>486</td> <td>67,617</td> <td>19,107</td> <td>21</td> <td>130</td> </tr> <tr> <td>SUMMER</td> <td>15,150</td> <td>1,611</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>FALL</td> <td>30,615</td> <td>19,927</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td>114,373</td> <td>24,429</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | RUN YEAR      | CHINOOK ADULT | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE   | STEELHEAD           | unclipped STEELHEAD | BULL TROUT | LAMPREY | TOTALS TO DATE |       |         |           |      |       |       |  |  |  | SPRING | 68,608 | 2,891 | 1,494 | 213 | 486 | 67,617 | 19,107 | 21 | 130 | SUMMER | 15,150 | 1,611 |  |  |  |  |  |  |  | FALL | 30,615 | 19,927 |  |  |  |  |  |  |  | TOTAL | 114,373 | 24,429 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RUN YEAR  | CHINOOK ADULT | CHINOOK JACK  | COHO ADULT   | COHO JACK  | SOCKEYE   | STEELHEAD | unclipped STEELHEAD | BULL TROUT          | LAMPREY    |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTALS TO DATE  |               |               |              |            |           |           |                     |                     |            |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SPRING  | 68,608        | 2,891         | 1,494        | 213        | 486       | 67,617    | 19,107              | 21                  | 130        |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SUMMER  | 15,150        | 1,611         |              |            |           |           |                     |                     |            |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FALL  | 30,615        | 19,927        |              |            |           |           |                     |                     |            |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTAL   | 114,373       | 24,429        |              |            |           |           |                     |                     |            |         |                |       |         |           |      |       |       |  |  |  |        |        |       |       |     |     |        |        |    |     |        |        |       |  |  |  |  |  |  |  |      |        |        |  |  |  |  |  |  |  |       |         |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE 96

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER MONUMENTAL PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK      | COHO         | COHO       | TOTAL     | unclipped     |              | BULL      |           | DISCH    | SPILL | TURBIDITY |          |       |         |
|--------------|---------------|--------|--------------|--------------|------------|-----------|---------------|--------------|-----------|-----------|----------|-------|-----------|----------|-------|---------|
|              | SPRING        | SUMMER | FALL         | JACK         | ADULT      |           | JACK          | SOCKEYE      | STEELHEAD | STEELHEAD |          |       | PINK      | STURGEON | TROUT | LAMPREY |
| Oct 1        |               |        | 231          | 302          | 45         | 6         | 2,648         | 662          |           |           | 0        | 25.8  | 0.0       | 4.0      | 65.0  |         |
| Oct 2        |               |        | 252          | 282          | 47         | 1         | 2,553         | 655          |           |           | 0        | 13.2  | 0.0       | 4.0      | 65.0  |         |
| Oct 3        |               |        | 338          | 300          | 54         | 2         | 2,197         | 587          |           |           | 0        | 22.3  | 0.0       | 4.0      | 64.5  |         |
| Oct 4        |               |        | 303          | 333          | 45         | 2         | 2,330         | 597          |           |           | -1       | 20.9  | 0.0       | 4.0      | 64.0  |         |
| Oct 5        |               |        | 233          | 200          | 50         | 4         | 1,546         | 434          |           |           | 2        | 19.2  | 0.0       | 4.0      | 64.0  |         |
| Oct 6        |               |        | 185          | 161          | 48         | 1         | 1,476         | 411          |           |           | 0        | 16.4  | 0.0       | 4.0      | 64.0  |         |
| Oct 7        |               |        | 138          | 146          | 24         | 1         | 957           | 298          |           |           | 1        | 15.9  | 0.0       | 4.0      | 63.0  |         |
| Oct 8        |               |        | 156          | 151          | 22         | 0         | 1,009         | 252          |           |           | 0        | 17.5  | 0.0       | 4.0      | 63.0  |         |
| Oct 9        |               |        | 127          | 126          | 18         | 4         | 875           | 234          |           |           | 0        | 16.5  | 0.0       | 4.0      | 63.0  |         |
| Oct 10       |               |        | 87           | 76           | 16         | 4         | 685           | 164          |           |           | 0        | 18.5  | 0.0       | 4.0      | 63.0  |         |
| Oct 11       |               |        | 107          | 102          | 24         | 1         | 936           | 218          |           |           | 1        | 20.4  | 0.0       | 4.0      | 62.0  |         |
| Oct 12       |               |        | 70           | 119          | 24         | 2         | 973           | 228          |           |           | 0        | 13.7  | 0.0       | 4.0      | 62.0  |         |
| Oct 13       |               |        | 81           | 121          | 26         | 6         | 1,280         | 331          |           |           | 0        | 12.7  | 0.0       | 4.0      | 62.0  |         |
| Oct 14       |               |        | 49           | 112          | 30         | 5         | 1,350         | 400          |           |           | 1        | 12.3  | 0.0       | 4.0      | 61.0  |         |
| Oct 15       |               |        | 56           | 52           | 16         | 4         | 982           | 249          |           |           | 0        | 17.6  | 0.0       | 4.0      | 61.0  |         |
| Oct 16       |               |        | 58           | 72           | 16         | 1         | 1,335         | 379          |           |           | 0        | 12.1  | 0.0       | 4.0      | 61.0  |         |
| Oct 17       |               |        | 54           | 43           | 32         | 4         | 1,319         | 335          |           |           | 0        | 23.2  | 0.0       | 4.0      | 61.0  |         |
| Oct 18       |               |        | 21           | 27           | 8          | 1         | 879           | 241          |           |           | 0        | 21.0  | 0.0       | 4.0      | 61.0  |         |
| Oct 19       |               |        | 57           | 22           | 28         | 1         | 1,106         | 319          |           |           | 0        | 19.2  | 0.0       | 4.0      | 61.0  |         |
| Oct 20       |               |        | 45           | 25           | 21         | 3         | 884           | 265          |           |           | 0        | 13.1  | 0.0       | 3.5      | 61.0  |         |
| Oct 21       |               |        | 39           | 29           | 22         | 0         | 1,004         | 292          |           |           | 0        | 17.7  | 0.0       | 3.5      | 60.0  |         |
| Oct 22       |               |        | 26           | 12           | 9          | 0         | 443           | 120          |           |           | 0        | 21.7  | 0.0       | 3.5      | 60.0  |         |
| Oct 23       |               |        | 35           | 17           | 15         | 1         | 604           | 188          |           |           | 0        | 17.9  | 0.0       | 3.5      | 59.0  |         |
| Oct 24       |               |        | 25           | 22           | 9          | 1         | 716           | 198          |           |           | 1        | 22.0  | 0.0       | 3.5      | 59.0  |         |
| Oct 25       |               |        | 27           | 19           | 9          | 0         | 758           | 263          |           |           | 0        | 16.2  | 0.0       | 3.5      | 58.0  |         |
| Oct 26       |               |        | 28           | 15           | 15         | 0         | 677           | 236          |           |           | 0        | 16.9  | 0.0       | 3.5      | 58.0  |         |
| Oct 27       |               |        | 7            | 13           | 9          | 1         | 532           | 169          |           |           | 0        | 16.8  | 0.0       | 3.5      | 58.0  |         |
| Oct 28       |               |        | 12           | 11           | 7          | 2         | 445           | 144          |           |           | 0        | 21.4  | 0.0       | 3.8      | 58.0  |         |
| Oct 29       |               |        | 19           | 20           | 12         | 5         | 514           | 162          |           |           | 0        | 22.0  | 0.0       | 3.5      | 58.0  |         |
| Oct 30       |               |        | 25           | 13           | 13         | 7         | 526           | 199          |           |           | 0        | 30.1  | 0.0       | 3.5      | 58.0  |         |
| Oct 31       |               |        | 12           | 13           | 8          | 2         | 367           | 151          |           |           | 0        | 28.3  | 0.0       | 3.5      | 58.0  |         |
| <b>TOTAL</b> |               |        | <b>2,903</b> | <b>2,956</b> | <b>722</b> | <b>72</b> | <b>33,906</b> | <b>9,381</b> |           |           | <b>5</b> |       |           |          |       |         |
| AVG.         |               |        | 94           | 95           | 23         | 2         | 1,094         | 303          |           |           | 0        | 18.8  | 0.0       | 3.8      | 61.1  |         |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,608        | 2,891        |
| SUMMER         | 15,150        | 1,611        |
| FALL           | 33,518        | 22,883       |
| TOTAL          | 117,276       | 27,385       |

| COHO ADULT     | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD |
|----------------|-----------|---------|-----------|---------------------|
| TOTALS TO DATE |           |         |           |                     |
| SPRING         | 2,216     | 285     | 486       | 101,523             |
| SUMMER         |           |         |           | 28,488              |

| BULL TROUT     | LAMPREY |
|----------------|---------|
| TOTALS TO DATE |         |
| SPRING         | 21      |
| SUMMER         | 135     |

TABLE 97

DISCHARGE AND WATER QUALITY DATA  
LOWER MONUMENTAL PROJECT 2012

| NOVEMBER |               |               |                     |       | DECEMBER |               |               |                     |       |
|----------|---------------|---------------|---------------------|-------|----------|---------------|---------------|---------------------|-------|
| DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F | DATE     | DISCH<br>KCFS | SPILL<br>KCFS | TURBIDITY<br>SECCHI | DEG F |
| Nov 1    | 27.9          | 0.0           | 3.5                 | 57.0  | Dec 1    | 25.5          | 0.0           | 4.0                 | 47.0  |
| Nov 2    | 22.6          | 0.0           | 3.5                 | 57.0  | Dec 2    | 25.2          | 0.0           | 4.0                 | 47.0  |
| Nov 3    | 25.7          | 0.0           | 3.5                 | 57.0  | Dec 3    | 37.0          | 0.0           | 4.0                 | 47.0  |
| Nov 4    | 24.3          | 0.0           | 4.0                 | 56.0  | Dec 4    | 44.4          | 0.0           | 4.0                 | 47.0  |
| Nov 5    | 16.3          | 0.0           | 4.0                 | 56.0  | Dec 5    | 35.9          | 0.0           | 4.0                 | 47.0  |
| Nov 6    | 25.2          | 0.0           | 4.0                 | 55.0  | Dec 6    | 42.3          | 0.0           | 4.0                 | 46.0  |
| Nov 7    | 20.9          | 0.0           | 4.0                 | 55.0  | Dec 7    | 45.1          | 0.0           | 4.0                 | 46.0  |
| Nov 8    | 22.6          | 0.0           | 4.0                 | 55.0  | Dec 8    | 41.0          | 0.0           | 4.0                 | 46.0  |
| Nov 9    | 25.0          | 0.0           | 4.0                 | 55.0  | Dec 9    | 36.5          | 0.0           | 4.0                 | 46.0  |
| Nov 10   | 15.9          | 0.0           | 4.0                 | 55.0  | Dec 10   | 29.3          | 0.0           | 4.0                 | 46.0  |
| Nov 11   | 16.0          | 0.0           | 4.0                 | 54.0  | Dec 11   | 38.3          | 0.0           | 4.0                 | 45.0  |
| Nov 12   | 19.5          | 0.0           | 4.0                 | 54.0  | Dec 12   | 30.7          | 0.0           | 4.0                 | 44.0  |
| Nov 13   | 20.4          | 0.0           | 4.0                 | 54.0  | Dec 13   | 34.5          | 0.0           | 4.0                 | 44.0  |
| Nov 14   | 24.5          | 0.0           | 4.0                 | 53.0  | Dec 14   | 37.7          | 0.0           | 4.5                 | 43.0  |
| Nov 15   | 24.6          | 0.0           | 4.0                 | 53.0  | Dec 15   | 19.7          | 0.0           | 4.5                 | 43.0  |
| Nov 16   | 23.6          | 0.0           | 4.0                 | 53.0  | Dec 16   | 25.0          | 0.0           | 4.5                 | 43.0  |
| Nov 17   | 17.3          | 0.0           | 4.0                 | 52.0  | Dec 17   | 29.0          | 0.0           | 4.5                 | 43.0  |
| Nov 18   | 17.3          | 0.0           | 4.0                 | 51.0  | Dec 18   | 27.6          | 0.0           | 4.5                 | 43.0  |
| Nov 19   | 25.2          | 0.0           | 4.0                 | 51.0  | Dec 19   | 26.4          | 0.0           | 4.5                 | 42.0  |
| Nov 20   | 21.6          | 0.0           | 4.0                 | 51.0  | Dec 20   | 22.0          | 0.0           | 4.5                 | 42.0  |
| Nov 21   | 16.3          | 0.0           | 4.0                 | 51.0  | Dec 21   | 28.8          | 0.0           | 4.5                 | 42.0  |
| Nov 22   | 24.0          | 0.0           | 4.0                 | 50.0  | Dec 22   | 30.9          | 0.0           | 4.5                 | 42.0  |
| Nov 23   | 26.1          | 0.0           | 4.0                 | 50.0  | Dec 23   | 26.7          | 0.0           | 4.5                 | 41.0  |
| Nov 24   | 20.3          | 0.0           | 4.0                 | 50.0  | Dec 24   | 25.8          | 0.0           | 4.5                 | 41.0  |
| Nov 25   | 23.4          | 0.0           | 4.0                 | 50.0  | Dec 25   | 21.0          | 0.0           | 4.5                 | 41.0  |
| Nov 26   | 23.9          | 0.0           | 4.0                 | 48.0  | Dec 26   | 26.0          | 0.0           | 4.5                 | 41.0  |
| Nov 27   | 26.4          | 0.0           | 4.5                 | 48.0  | Dec 27   | 29.2          | 0.0           | 4.5                 | 41.0  |
| Nov 28   | 27.2          | 0.0           | 4.5                 | 48.0  | Dec 28   | 28.1          | 0.0           | 4.5                 | 41.0  |
| Nov 29   | 22.7          | 0.0           | 4.5                 | 48.0  | Dec 29   | 28.9          | 0.0           | 4.5                 | 41.0  |
| Nov 30   | 18.9          | 0.0           | 4.0                 | 47.0  | Dec 30   | 27.3          | 0.0           | 4.5                 | 41.0  |
|          |               |               |                     |       | Dec 31   | 30.0          | 0.0           | 4.5                 | 41.0  |
| AVG.     | 22.2          | 0.0           | 4.0                 | 52.5  | AVG.     | 30.8          | 0.0           | 4.3                 | 43.5  |

TABLE 98  
 YEARLY TOTALS OF SALMONIDS COUNTED OVER  
 LOWER MONUMENTAL DAM  
 1969 - 2012

| YEAR                   | CHINOOK*         | STEELHEAD        | SOCKEYE       | COHO*         | TOTALS           |
|------------------------|------------------|------------------|---------------|---------------|------------------|
| 1969                   | 86,700           | 71,436           | 1,127         | 6,466         | 165,729          |
| 1970                   | 75,310           | 62,167           | 240           | 2,972         | 140,689          |
| 1971                   | 68,885           | 70,114           | 808           | 2,171         | 141,978          |
| 1972                   | 72,220           | 66,857           | 415           | 733           | 140,225          |
| 1973                   | 80,557           | 39,530           | 206           | 1,333         | 121,626          |
| 1974                   | 31,728           | 15,139           | 114           | 812           | 47,793           |
| 1975                   | 33,013           | 17,363           | 146           | 572           | 51,094           |
| 1976                   | 34,395           | 21,822           | 364           | 361           | 56,942           |
| 1977                   | 49,301           | 47,749           | 293           | 122           | 97,465           |
| 1978                   | 56,835           | 20,540           | 96            | 218           | 77,689           |
| 1979                   | 11,288           | 17,794           | 31            | 194           | 29,307           |
| 1980                   | 10,885           | 34,322           | 48            | 73            | 45,328           |
| 1981                   | 19,991           | 35,923           | 136           | 63            | 56,113           |
| 1982                   | 21,965           | 62,772           | 154           | 89            | 84,980           |
| 1983                   | 19,082           | 80,562           | 118           | 110           | 99,872           |
| 1984                   | 17,866           | 88,655           | 63            | 26            | 106,610          |
| 1985                   | 42,437           | 109,718          | 68            | 24            | 152,247          |
| 1986                   | 50,584           | 120,479          | 26            | 9             | 171,098          |
| 1987                   | 42,434           | 62,586           | 16            | 6             | 105,042          |
| 1988                   | 44,262           | 84,746           | 35            | 3             | 129,046          |
| 1989                   | 25,590           | 129,618          | 9             | 17            | 155,234          |
| 1990                   | 28,215           | 44,907           | 0             | 1             | 73,123           |
| 1991                   | 18,210           | 98,315           | 6             | 5             | 116,536          |
| 1992                   | 30,145           | 130,429          | 15            | 0             | 160,589          |
| 1993                   | 34,195           | 70,992           | 18            | 0             | 105,205          |
| 1994                   | 7,219            | 49,917           | 7             | 0             | 57,143           |
| 1995                   | 7,883            | 90,157           | 4             | 4             | 98,048           |
| 1996                   | 15,606           | 96,609           | 3             | 6             | 112,224          |
| 1997                   | 51,556           | 85,602           | 16            | 30            | 137,204          |
| 1998                   | 21,537           | 66,118           | 2             | 0             | 87,657           |
| 1999                   | 20,271           | 72,842           | 15            | 88            | 93,216           |
| 2000                   | 68,961           | 112,616          | 291           | 750           | 182,618          |
| 2001                   | 225,667          | 285,745          | 32            | 1,210         | 512,654          |
| 2002                   | 124,897          | 232,809          | 46            | 158           | 357,910          |
| 2003                   | 123,158          | 187,338          | 14            | 1,106         | 311,616          |
| 2004                   | 114,030          | 158,792          | 80            | 3,665         | 276,567          |
| 2005                   | 52,281           | 153,792          | 18            | 2,095         | 208,186          |
| 2006                   | 54,482           | 135,566          | 17            | 1,181         | 191,246          |
| 2007                   | 73,333           | 154,104          | 44            | 2,231         | 229,712          |
| 2008                   | 123,018          | 186,058          | 722           | 4,513         | 314,311          |
| 2009                   | 183,451          | 317,275          | 1,162         | 5,617         | 507,505          |
| 2010                   | 200,817          | 213,811          | 1,652         | 2,003         | 418,283          |
| 2011                   | 178,281          | 187,272          | 1,395         | 4,829         | 371,777          |
| 2012                   | 144,661          | 101,523          | 486           | 2,501         | 249,171          |
| <b>Total</b>           | <b>2,797,202</b> | <b>4,492,481</b> | <b>10,558</b> | <b>48,367</b> | <b>7,348,608</b> |
| <b>10-Year Average</b> | <b>124,751</b>   | <b>179,553</b>   | <b>559</b>    | <b>2,974</b>  | <b>307,837</b>   |

\*Jacks included

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.

Includes 2003 and 2004 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.



TABLE 99  
MONTHLY COUNT OF CHINOOK SALMON  
LOWER MONUMENTAL DAM  
1969-2012

| YEAR            | JAN | FEB | MAR | APR     | MAY       | JUN     | JUL     | AUG    | SEP     | OCT     | NOV   | DEC | TOTALS*   |
|-----------------|-----|-----|-----|---------|-----------|---------|---------|--------|---------|---------|-------|-----|-----------|
| 1969            |     |     | 1   | 67      | 38,702    | 25,289  | 13,832  | 1,776  | 5,069   | 1,619   | 340   | 5   | 86,700    |
| 1970            | 1   |     | 1   | 9,194   | 32,623    | 15,818  | 9,369   | 1,720  | 5,178   | 1,281   | 122   | 3   | 75,310    |
| 1971            |     |     |     | 358     | 19,340    | 23,842  | 14,492  | 857    | 8,599   | 1,397   |       |     | 68,885    |
| 1972            |     |     |     | 6,838   | 36,448    | 6,989   | 15,501  | 1,835  | 3,737   | 872     |       |     | 72,220    |
| 1973            |     |     |     | 27,168  | 31,973    | 11,282  | 4,343   | 678    | 4,273   | 840     |       |     | 80,557    |
| 1974            |     |     |     | 327     | 15,796    | 4,904   | 7,241   | 602    | 1,972   | 886     |       |     | 31,728    |
| 1975            |     |     |     | 704     | 17,421    | 6,648   | 4,884   | 548    | 2,428   | 380     |       |     | 33,013    |
| 1976            |     |     |     | 1,995   | 19,292    | 7,731   | 3,172   | 175    | 1,609   | 421     |       |     | 34,395    |
| 1977            |     |     |     | 19,125  | 17,093    | 7,884   | 3,092   | 300    | 1,321   | 486     |       |     | 49,301    |
| 1978            |     |     |     | 12,324  | 30,067    | 8,941   | 3,853   | 831    | 536     | 283     |       |     | 56,835    |
| 1979            |     |     |     | 1,332   | 5,637     | 2,010   | 922     | 211    | 916     | 260     |       |     | 11,288    |
| 1980            |     |     |     | 1,008   | 5,198     | 2,318   | 1,315   | 319    | 405     | 322     |       |     | 10,885    |
| 1981            |     |     |     | 4,039   | 9,012     | 3,349   | 1,924   | 97     | 1,100   | 470     |       |     | 19,991    |
| 1982            |     |     |     | 372     | 11,319    | 5,031   | 2,773   | 264    | 1,631   | 575     |       |     | 21,965    |
| 1983            |     |     |     | 1,250   | 10,262    | 3,841   | 2,103   | 220    | 1,008   | 398     |       |     | 19,082    |
| 1984            |     |     |     | 513     | 7,186     | 6,297   | 2,549   | 205    | 789     | 327     |       |     | 17,866    |
| 1985            |     |     |     | 7,360   | 20,572    | 7,303   | 1,279   | 402    | 2,451   | 3,070   |       |     | 42,437    |
| 1986            |     |     |     | 10,893  | 25,454    | 7,436   | 1,821   | 123    | 2,786   | 2,071   |       |     | 50,584    |
| 1987            |     |     |     | 8,706   | 21,166    | 5,492   | 2,400   | 278    | 2,625   | 1,767   |       |     | 42,434    |
| 1988            |     |     |     | 11,451  | 19,823    | 7,851   | 1,832   | 607    | 1,752   | 946     |       |     | 44,262    |
| 1989            |     |     |     | 159     | 14,924    | 4,858   | 1,615   | 476    | 1,852   | 706     |       |     | 24,590    |
| 1990            |     |     |     | 6,830   | 12,127    | 5,197   | 1,594   | 181    | 1,205   | 1,081   |       |     | 28,215    |
| 1991            |     |     |     | 925     | 6,537     | 5,491   | 1,936   | 127    | 2,177   | 1,017   |       |     | 18,210    |
| 1992            |     |     |     | 10,529  | 10,822    | 5,001   | 1,220   | 188    | 1,729   | 656     |       |     | 30,145    |
| 1993            |     |     |     | 3,848   | 16,154    | 9,720   | 2,016   | 313    | 1,591   | 509     | 44    |     | 34,195    |
| 1994            |     |     |     | 574     | 2,448     | 1,287   | 322     | 156    | 1,308   | 1,124   |       |     | 7,219     |
| 1995            |     |     |     | 210     | 1,435     | 1,092   | 471     | 280    | 2,183   | 2,212   |       |     | 7,883     |
| 1996            |     |     |     | 62      | 5,836     | 4,442   | 1,407   | 395    | 2,547   | 917     |       |     | 15,606    |
| 1997            |     |     |     | 1,493   | 26,966    | 16,833  | 2,484   | 309    | 2,174   | 1,297   |       |     | 51,556    |
| 1998            |     |     |     | 2,325   | 6,626     | 5,095   | 1,222   | 272    | 3,418   | 2,579   |       |     | 21,537    |
| 1999            |     |     |     | 124     | 4,551     | 4,951   | 1,630   | 623    | 5,499   | 2,893   |       |     | 20,271    |
| 2000            |     |     |     | 10,018  | 30,132    | 11,068  | 2,469   | 1,367  | 8,950   | 4,957   |       |     | 68,961    |
| 2001            |     |     |     | 104,119 | 60,247    | 32,422  | 6,261   | 1,472  | 16,390  | 4,411   | 334   | 11  | 225,667   |
| 2002            | 1   |     | 7   | 3,881   | 60,767    | 31,795  | 6,496   | 2,367  | 15,707  | 3,660   | 214   | 2   | 124,897   |
| 2003            |     |     | 50  | 33,435  | 31,906    | 28,381  | 6,247   | 951    | 15,255  | 6,642   | 288   | 3   | 123,158   |
| 2004            |     |     | 1   | 29,462  | 36,732    | 18,114  | 3,721   | 566    | 21,620  | 3,670   | 145   | -1  | 114,030   |
| 2005            |     |     |     | 1,174   | 18,726    | 13,028  | 2,942   | 948    | 12,215  | 3,248   |       |     | 52,281    |
| 2006            |     |     |     | 10      | 17,659    | 12,916  | 3,541   | 1,816  | 12,534  | 6,006   |       |     | 54,482    |
| 2007            |     |     |     | 2,143   | 27,277    | 13,221  | 5,238   | 1,804  | 17,407  | 6,243   |       |     | 73,333    |
| 2008            |     |     |     | 2,468   | 43,772    | 37,105  | 7,801   | 3,334  | 24,325  | 4,213   |       |     | 123,018   |
| 2009            |     |     |     | 483     | 64,754    | 45,527  | 10,839  | 7,310  | 49,587  | 4,951   |       |     | 183,451   |
| 2010            |     |     |     | 23,522  | 70,028    | 39,285  | 9,253   | 2,937  | 44,326  | 11,466  |       |     | 200,817   |
| 2011            |     |     |     | 193     | 71,045    | 44,773  | 15,764  | 4,502  | 34,401  | 7,603   |       |     | 178,281   |
| 2012            |     |     |     | 203     | 59,645    | 23,507  | 4,218   | 4,103  | 47,126  | 5,859   |       |     | 144,661   |
| Total           | 2   | 0   | 60  | 363,214 | 1,095,500 | 585,365 | 199,404 | 48,845 | 395,711 | 106,591 | 1,487 | 23  | 2,796,202 |
| 10-Year Average |     |     |     | 9,309   | 44,154    | 27,586  | 6,956   | 2,827  | 27,880  | 5,990   |       |     | 124,751   |

\*Jacks included  
 Includes 2001 extended season counts for November and December 0600-1600 PST.  
 Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.  
 Includes 2003 and 2004 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

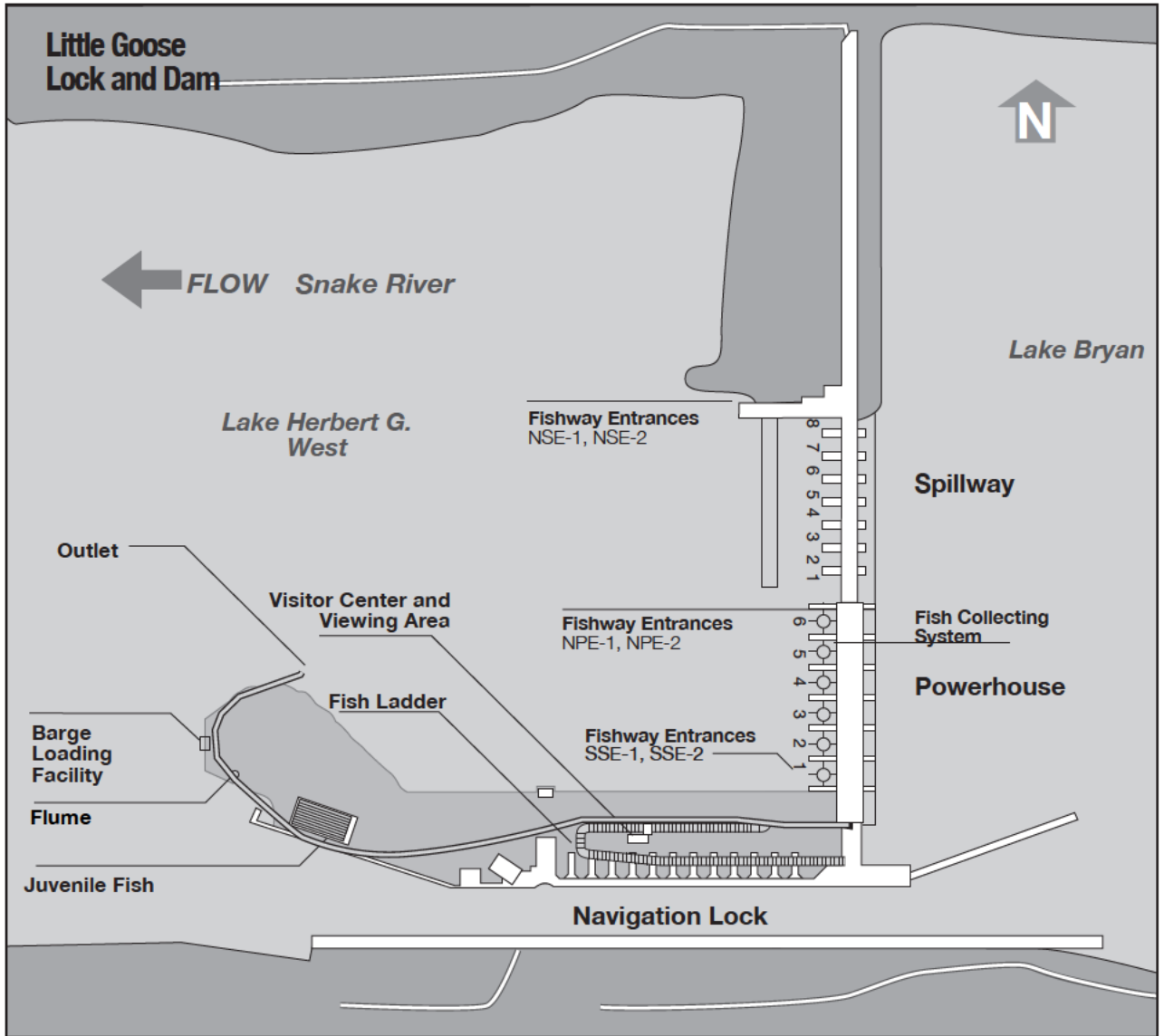
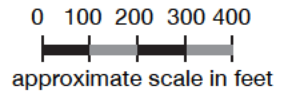
TABLE 100  
MONTHLY COUNT OF STEELHEAD  
LOWER MONUMENTAL DAM  
1969 - 2012

| YEAR                   | JAN          | FEB          | MAR           | APR            | MAY           | JUN           | JUL            | AUG            | SEP              | OCT              | NOV           | DEC           | TOTALS           |
|------------------------|--------------|--------------|---------------|----------------|---------------|---------------|----------------|----------------|------------------|------------------|---------------|---------------|------------------|
| 1969                   |              | 5            | 1,525         | 9,235          | 5,475         | 248           | 2,141          | 6,410          | 26,647           | 15,195           | 4,189         | 366           | 71,436           |
| 1970                   | 252          | 1,025        | 1,519         | 3,143          | 2,134         | 232           | 1,989          | 7,947          | 30,701           | 11,194           | 1,615         | 416           | 62,167           |
| 1971                   |              |              | 422           | 2,404          | 1,510         | 131           | 2,199          | 2,992          | 42,438           | 18,018           |               |               | 70,114           |
| 1972                   |              |              |               | 2,182          | 744           | 86            | 2,336          | 7,184          | 32,417           | 21,908           |               |               | 66,857           |
| 1973                   |              |              |               | 2,061          | 658           | 82            | 2,060          | 3,505          | 21,241           | 9,923            |               |               | 39,530           |
| 1974                   |              |              |               | 1,221          | 256           | 17            | 1,237          | 2,835          | 4,929            | 4,644            |               |               | 15,139           |
| 1975                   |              |              |               | 745            | 444           | 24            | 873            | 4,417          | 7,437            | 3,423            |               |               | 17,363           |
| 1976                   |              |              |               | 806            | 256           | 146           | 1,092          | 4,409          | 10,328           | 4,785            |               |               | 21,822           |
| 1977                   |              |              |               | 849            | 192           | 127           | 3,026          | 2,991          | 22,494           | 18,070           |               |               | 47,749           |
| 1978                   |              |              |               | 1,324          | 128           | 16            | 719            | 2,522          | 10,477           | 5,354            |               |               | 20,540           |
| 1979                   |              |              |               | 643            | 118           | 28            | 1,314          | 1,937          | 4,898            | 8,856            |               |               | 17,794           |
| 1980                   |              |              |               | 2,467          | 573           | 70            | 754            | 3,725          | 14,078           | 12,655           |               |               | 34,322           |
| 1981                   |              |              |               | 996            | 321           | 75            | 1,783          | 1,632          | 12,416           | 18,700           |               |               | 35,923           |
| 1982                   |              |              |               | 2,026          | 1,123         | 35            | 1,851          | 7,373          | 22,426           | 27,938           |               |               | 62,772           |
| 1983                   |              |              |               | 1,021          | 131           | 14            | 3,027          | 10,101         | 40,004           | 26,264           |               |               | 80,562           |
| 1984                   |              |              |               | 2,663          | 482           | 52            | 3,150          | 4,820          | 42,788           | 34,700           |               |               | 88,655           |
| 1985                   |              |              |               | 6,889          | 548           | 189           | 1,888          | 10,086         | 63,734           | 26,384           |               |               | 109,718          |
| 1986                   |              |              |               | 1,914          | 205           | 89            | 5,082          | 7,751          | 46,876           | 58,562           |               |               | 120,479          |
| 1987                   |              |              |               | 2,483          | 264           | 142           | 2,531          | 4,692          | 20,766           | 31,708           |               |               | 62,586           |
| 1988                   |              |              |               | 4,274          | 604           | 411           | 1,903          | 5,725          | 35,290           | 36,539           |               |               | 84,746           |
| 1989                   |              |              |               | 1,067          | 389           | 304           | 6,364          | 8,093          | 63,026           | 50,375           |               |               | 129,618          |
| 1990                   |              |              |               | 2,691          | 197           | 189           | 1,804          | 1,579          | 14,209           | 24,238           |               |               | 44,907           |
| 1991                   |              |              |               | 2,211          | 288           | 70            | 2,275          | 1,497          | 41,894           | 50,080           |               |               | 98,315           |
| 1992                   |              |              |               | 1,456          | 182           | 285           | 2,890          | 7,223          | 68,606           | 49,787           |               |               | 130,429          |
| 1993                   |              |              |               | 7,752          | 277           | 564           | 5,367          | 8,197          | 16,146           | 30,228           | 2,461         |               | 70,992           |
| 1994                   |              |              |               | 2,844          | 76            | 186           | 2,595          | 2,998          | 14,901           | 26,317           |               |               | 49,917           |
| 1995                   |              |              |               | 1,072          | 162           | 138           | 4,074          | 10,424         | 38,890           | 35,397           |               |               | 90,157           |
| 1996                   |              |              |               | 934            | 96            | 137           | 3,199          | 12,413         | 47,234           | 32,596           |               |               | 96,609           |
| 1997                   |              |              |               | 1,044          | 162           | 177           | 3,422          | 9,326          | 34,521           | 36,950           |               |               | 85,602           |
| 1998                   |              |              |               | 1,501          | 62            | 198           | 2,361          | 1,835          | 19,892           | 40,269           |               |               | 66,118           |
| 1999                   |              |              |               | 559            | 59            | 98            | 2,652          | 11,170         | 37,899           | 20,405           |               |               | 72,842           |
| 2000                   |              |              |               | 937            | -26           | 546           | 5,741          | 9,045          | 61,072           | 35,301           |               |               | 112,616          |
| 2001                   |              |              |               | 1,636          | 113           | 2,874         | 19,045         | 26,264         | 126,517          | 76,474           | 23,900        | 8,922         | 285,745          |
| 2002                   | 3,687        | 1,858        | 3,429         | 4,876          | 196           | 688           | 10,901         | 25,998         | 94,310           | 75,670           | 9,028         | 2,168         | 232,809          |
| 2003                   | 775          | 3,686        | 5,325         | 1,872          | 45            | 850           | 7,704          | 8,122          | 93,190           | 60,813           | 3,945         | 1,011         | 187,338          |
| 2004                   | 115          | 1,036        | 2,619         | 1,473          | 127           | 1,052         | 6,477          | 4,020          | 90,900           | 45,380           | 4,101         | 1,492         | 158,792          |
| 2005                   |              |              |               | 783            | 181           | 1,062         | 5,193          | 7,445          | 70,701           | 68,427           |               |               | 153,792          |
| 2006                   |              |              |               | 2,756          | 98            | 454           | 3,392          | 7,778          | 63,849           | 57,239           |               |               | 135,566          |
| 2007                   |              |              |               | 2,174          | 143           | 914           | 5,735          | 8,657          | 77,612           | 58,869           |               |               | 154,104          |
| 2008                   |              |              |               | 3,520          | 510           | 552           | 12,664         | 21,947         | 97,562           | 49,303           |               |               | 186,058          |
| 2009                   |              |              |               | 4,294          | 426           | 1,358         | 12,112         | 23,920         | 167,680          | 107,485          |               |               | 317,275          |
| 2010                   |              |              |               | 3,621          | 489           | 1,377         | 19,765         | 25,351         | 109,728          | 53,480           |               |               | 213,811          |
| 2011                   |              |              |               | 3,331          | 548           | 196           | 7,342          | 45,999         | 82,453           | 47,403           |               |               | 187,272          |
| 2012                   |              |              |               | 3,189          | 421           | 518           | 2,960          | 4,550          | 55,979           | 33,906           |               |               | 101,523          |
| <b>Total</b>           | <b>4,829</b> | <b>7,610</b> | <b>14,839</b> | <b>106,939</b> | <b>21,387</b> | <b>17,001</b> | <b>196,989</b> | <b>396,905</b> | <b>2,101,156</b> | <b>1,561,212</b> | <b>49,239</b> | <b>14,375</b> | <b>4,492,481</b> |
| <b>10-Year Average</b> |              |              |               | <b>2,701</b>   | <b>299</b>    | <b>833</b>    | <b>8,334</b>   | <b>15,779</b>  | <b>90,965</b>    | <b>58,231</b>    |               |               | <b>179,553</b>   |

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002, '03, and '04 extended season counts for January through March 0800-1600 PST and November and December 0600-1600 PST.

# Plate 8 Little Goose Lock and Dam



# LITTLE GOOSE DAM

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## FISH COUNTING SCHEDULE

|                          |  |
|--------------------------|--|
| 1 January – 31 March     | No counting                                    |
| 1 April – 31 October     | Visual counting daily from 0400-2000 hours PST |
| 1 November – 31 December | No counting                                    |

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## FISH LADDER OPERATING SCHEDULE

|                           |  |
|---------------------------|--|
| 1 January – 2 January     | Ladder in service.                       |
| 3 January – 15 February   | Ladder dewatered for annual maintenance. |
| 16 February – 31 December | Ladder in service.                       |

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## FISHWAY ACTIVITIES

As in previous years water temperature at the ladder exit was recorded on an hourly basis and reported monthly to determine if summer spill had an effect on ladder temperature.

Using a concrete substrate monitor located near the ladder exit, the COE continued to monitor for invasive species with particular attention to Zebra Mussels and Quagga Mussels. Reports are submitted monthly to district.

NSE 1 and NSE 2 operators failed in 2010. Again in 2012, these weirs were positioned fixed at approximately 631.5 feet to maintain best adult fish passage conditions throughout the year.

Auxiliary Fish Pump 3 failed on September 25 and remained out of service for the remainder of the year. Pumps 1 and 2 were increased in RPM to “make-up” additional water. To make-up lost head differential, NPE 2 was raised and closed off on September 27 for the remainder of the year.

Washington State Dept. of Fish and Wildlife (contracted fish counters) continued to monitor and report Bull Trout migration past the adult fish ladder at Little Goose. Sightings are reported annually to U.S. Fish and Wildlife Services.

TABLE 101

MONTHLY TOTALS OF SALMONIDS, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER LITTLE GOOSE DAM  
2012

| SPECIES      | JAN | FEB | MAR | APR          | MAY           | JUN           | JUL          | AUG          | SEP           | OCT           | NOV | DEC | TOTAL          |
|--------------|-----|-----|-----|--------------|---------------|---------------|--------------|--------------|---------------|---------------|-----|-----|----------------|
| CHINOOK*     |     |     |     | 113          | 58,343        | 22,568        | 6,156        | 3,227        | 43,726        | 7,986         |     |     | 142,119        |
| STEELHEAD    |     |     |     | 3,416        | 510           | 184           | 1,419        | 3,031        | 52,470        | 37,248        |     |     | 98,278         |
| SOCKEYE      |     |     |     |              |               | 43            | 382          | 26           | 2             |               |     |     | 453            |
| COHO         |     |     |     |              |               |               |              |              | 1,810         | 852           |     |     | 2,662          |
| PINK         |     |     |     |              |               |               |              |              |               |               |     |     | 0              |
| <b>TOTAL</b> |     |     |     | <b>3,529</b> | <b>58,853</b> | <b>22,795</b> | <b>7,957</b> | <b>6,284</b> | <b>98,008</b> | <b>46,086</b> |     |     | <b>243,512</b> |
| LAMPREY      |     |     |     | 1            |               |               | 12           | 39           | 27            | 8             |     |     | 87             |
| STURGEON     |     |     |     |              |               |               |              |              |               |               |     |     | 0              |
| BULL TROUT   |     |     |     | 2            | 28            | 9             | 0            | 0            | 0             | 1             |     |     | 40             |

\*Jacks included

TABLE 102

DISCHARGE AND WATER QUALITY DATA  
LITTLE GOOSE PROJECT 2012

| JANUARY |       |       |           |       |
|---------|-------|-------|-----------|-------|
| DATE    | DISCH | SPILL | TURBIDITY |       |
|         | KCFS  | KCFS  | SECCHI    | DEG F |
| Jan 1   | 27.5  | 0.0   |           | 34.0  |
| Jan 2   | 28.2  | 0.0   |           | 34.0  |
| Jan 3   | 31.5  | 0.0   |           | 34.0  |
| Jan 4   | 31.0  | 0.0   |           | 34.0  |
| Jan 5   | 24.8  | 0.0   |           | 34.0  |
| Jan 6   | 24.8  | 0.0   |           | 33.9  |
| Jan 7   | 19.5  | 0.0   |           | 33.9  |
| Jan 8   | 21.7  | 0.0   |           | 33.9  |
| Jan 9   | 25.4  | 0.0   |           | 33.9  |
| Jan 10  | 22.6  | 0.0   |           | 33.9  |
| Jan 11  | 22.3  | 0.0   |           | 34.0  |
| Jan 12  | 27.4  | 0.0   |           | 34.0  |
| Jan 13  | 24.5  | 0.0   |           | 34.0  |
| Jan 14  | 16.2  | 0.0   |           | 34.0  |
| Jan 15  | 20.3  | 0.0   |           | 33.9  |
| Jan 16  | 20.4  | 0.0   |           | 33.8  |
| Jan 17  | 20.0  | 0.0   |           | 33.5  |
| Jan 18  | 29.3  | 0.0   |           | 33.5  |
| Jan 19  | 27.9  | 0.0   |           | 33.5  |
| Jan 20  | 28.7  | 0.0   |           | 33.5  |
| Jan 21  | 27.0  | 0.0   |           | 33.5  |
| Jan 22  | 30.3  | 0.0   |           | 33.5  |
| Jan 23  | 33.5  | 0.0   |           | 33.5  |
| Jan 24  | 30.0  | 0.0   |           | 33.5  |
| Jan 25  | 29.1  | 0.0   |           | 33.4  |
| Jan 26  | 28.3  | 0.0   |           | 33.5  |
| Jan 27  | 30.7  | 0.0   |           | 33.5  |
| Jan 28  | 32.4  | 0.0   |           | 33.5  |
| Jan 29  | 29.3  | 0.0   |           | 33.5  |
| Jan 30  | 30.9  | 0.0   |           | 33.5  |
| Jan 31  | 29.9  | 0.0   |           | 33.5  |

AVG.    26.6    0.0    33.7

| FEBRUARY |       |       |           |       |
|----------|-------|-------|-----------|-------|
| DATE     | DISCH | SPILL | TURBIDITY |       |
|          | KCFS  | KCFS  | SECCHI    | DEG F |
| Feb 1    | 25.1  | 0.0   |           | 33.4  |
| Feb 2    | 32.4  | 0.0   |           | 33.4  |
| Feb 3    | 36.7  | 0.0   |           | 33.5  |
| Feb 4    | 31.0  | 0.0   |           | 33.6  |
| Feb 5    | 30.0  | 0.0   |           | 33.7  |
| Feb 6    | 23.6  | 16.4  |           | 33.7  |
| Feb 7    | 27.8  | 23.0  |           | 33.7  |
| Feb 8    | 29.9  | 24.7  |           | 33.8  |
| Feb 9    | 31.0  | 24.9  |           | 33.8  |
| Feb 10   | 23.9  | 16.6  |           | 33.8  |
| Feb 11   | 27.8  | 22.7  |           | 33.8  |
| Feb 12   | 23.0  | 17.9  |           | 33.8  |
| Feb 13   | 30.9  | 17.7  |           | 33.8  |
| Feb 14   | 31.1  | 0.0   |           | 33.8  |
| Feb 15   | 29.3  | 0.0   |           | 33.9  |
| Feb 16   | 31.5  | 0.0   |           | 33.9  |
| Feb 17   | 24.1  | 0.0   |           | 33.9  |
| Feb 18   | 27.7  | 0.0   |           | 33.9  |
| Feb 19   | 29.3  | 0.0   |           | 33.9  |
| Feb 20   | 29.6  | 0.0   |           | 33.8  |
| Feb 21   | 28.6  | 0.0   |           | 33.9  |
| Feb 22   | 35.7  | 0.0   |           | 34.1  |
| Feb 23   | 62.4  | 0.0   |           | 34.2  |
| Feb 24   | 52.4  | 0.0   |           | 34.3  |
| Feb 25   | 31.4  | 0.0   |           | 34.4  |
| Feb 26   | 38.8  | 0.0   |           | 34.4  |
| Feb 27   | 35.3  | 0.0   |           | 34.3  |
| Feb 28   | 38.1  | 0.0   |           | 34.3  |
| Feb 29   | 38.1  | 0.0   |           | 34.5  |

AVG.    32.3    5.7    33.9

| MARCH  |       |       |           |       |
|--------|-------|-------|-----------|-------|
| DATE   | DISCH | SPILL | TURBIDITY |       |
|        | KCFS  | KCFS  | SECCHI    | DEG F |
| Mar 1  | 38.5  | 0.0   | 6.0       | 34.5  |
| Mar 2  | 33.0  | 0.0   |           | 34.5  |
| Mar 3  | 35.9  | 0.0   |           | 34.6  |
| Mar 4  | 35.3  | 0.0   |           | 34.6  |
| Mar 5  | 42.8  | 0.0   | 1.8       | 34.6  |
| Mar 6  | 33.5  | 0.0   |           | 34.6  |
| Mar 7  | 36.8  | 0.0   |           | 34.6  |
| Mar 8  | 34.4  | 0.0   | 2.9       | 34.6  |
| Mar 9  | 36.0  | 0.0   |           | 34.6  |
| Mar 10 | 40.6  | 0.0   |           | 34.6  |
| Mar 11 | 33.6  | 0.0   |           | 34.7  |
| Mar 12 | 48.0  | 0.0   | 4.2       | 34.8  |
| Mar 13 | 50.7  | 0.0   |           | 34.9  |
| Mar 14 | 54.1  | 0.0   | 5.0       | 35.0  |
| Mar 15 | 51.7  | 0.0   | 5.4       | 35.1  |
| Mar 16 | 63.6  | 0.0   |           | 35.1  |
| Mar 17 | 62.3  | 3.3   |           | 35.2  |
| Mar 18 | 56.9  | 4.1   |           | 35.4  |
| Mar 19 | 67.6  | 0.0   |           | 35.5  |
| Mar 20 | 65.4  | 0.0   | 5.4       | 35.4  |
| Mar 21 | 72.9  | 0.0   | 3.8       | 35.5  |
| Mar 22 | 69.6  | 0.0   | 2.8       | 35.5  |
| Mar 23 | 71.6  | 0.0   | 2.1       | 35.5  |
| Mar 24 | 69.6  | 0.0   |           | 35.5  |
| Mar 25 | 71.1  | 0.0   |           | 35.5  |
| Mar 26 | 79.0  | 10.0  | 3.1       | 35.5  |
| Mar 27 | 91.6  | 5.1   | 3.3       | 35.4  |
| Mar 28 | 87.8  | 6.6   |           | 35.5  |
| Mar 29 | 86.6  | 0.0   | 3.0       | 35.6  |
| Mar 30 | 91.3  | 23.4  |           | 35.9  |
| Mar 31 | 116.1 | 26.4  |           | 36.1  |

AVG.    59.0    2.5    3.8    35.1

\*Water temps from water quality sensor located in the tailrace

TABLE 103

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | BULL TROUT | LAMPREY  | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|-----------------|---------------------|------|------------|----------|------------|------------|-----------|-------|
|              | SPRING        | SUMMER | FALL |              |            |           |         |                 |                     |      |            |          |            |            | SECCHI    | DEG F |
| Apr 1        | 0             |        |      | 0            |            |           |         | 191             | 103                 |      | 0          | 0        | 119.6      | 16.3       | 1.5       | 45.5  |
| Apr 2        | 1             |        |      | 0            |            |           |         | 167             | 88                  |      | 0          | 0        | 112.3      | 12.0       |           | 45.2  |
| Apr 3        | 0             |        |      | 0            |            |           |         | 81              | 49                  |      | 0          | 0        | 104.5      | 36.9       | 1.7       | 45.5  |
| Apr 4        | 0             |        |      | 0            |            |           |         | 146             | 72                  |      | 0          | 0        | 102.2      | 30.7       |           | 45.8  |
| Apr 5        | 0             |        |      | 0            |            |           |         | 162             | 92                  |      | 0          | 0        | 102.2      | 30.7       | 1.9       | 45.8  |
| Apr 6        | 0             |        |      | 0            |            |           |         | 174             | 102                 |      | 0          | 0        | 102.8      | 30.9       | 1.2       | 44.8  |
| Apr 7        | 0             |        |      | 0            |            |           |         | 156             | 86                  |      | 0          | 0        | 96.1       | 30.2       |           | 45.0  |
| Apr 8        | 0             |        |      | 1            |            |           |         | 85              | 54                  |      | 0          | 0        | 93.5       | 28.0       | 2.3       | 45.3  |
| Apr 9        | 0             |        |      | 0            |            |           |         | 131             | 73                  |      | 0          | 0        | 88.6       | 26.6       |           | 45.4  |
| Apr 10       | 0             |        |      | 0            |            |           |         | 93              | 52                  |      | 0          | 0        | 89.3       | 26.8       | 2.3       | 45.7  |
| Apr 11       | 0             |        |      | 0            |            |           |         | 148             | 78                  |      | 0          | 0        | 93.5       | 27.9       |           | 46.0  |
| Apr 12       | 0             |        |      | 0            |            |           |         | 121             | 62                  |      | 0          | 0        | 98.3       | 30.6       |           | 46.4  |
| Apr 13       | 1             |        |      | 0            |            |           |         | 180             | 91                  |      | 0          | 0        | 108.0      | 32.7       | 3.0       | 47.0  |
| Apr 14       | 0             |        |      | 0            |            |           |         | 146             | 94                  |      | 0          | 0        | 106.6      | 37.1       |           | 48.0  |
| Apr 15       | 0             |        |      | 0            |            |           |         | 144             | 100                 |      | 1          | 0        | 100.2      | 32.4       | 3.0       | 48.7  |
| Apr 16       | 1             |        |      | 0            |            |           |         | 82              | 44                  |      | 1          | 0        | 95.3       | 28.9       |           | 49.2  |
| Apr 17       | 0             |        |      | 0            |            |           |         | 139             | 79                  |      | 0          | 0        | 96.7       | 28.9       | 2.3       | 48.7  |
| Apr 18       | 0             |        |      | 0            |            |           |         | 109             | 68                  |      | 0          | 0        | 96.4       | 29.5       |           | 48.5  |
| Apr 19       | 1             |        |      | 0            |            |           |         | 91              | 53                  |      | 0          | 0        | 101.7      | 32.4       |           | 48.6  |
| Apr 20       | 0             |        |      | 0            |            |           |         | 105             | 77                  |      | 0          | 0        | 98.7       | 34.3       |           | 48.6  |
| Apr 21       | 1             |        |      | 0            |            |           |         | 94              | 60                  |      | 0          | 0        | 103.6      | 31.0       | 3.0       | 48.0  |
| Apr 22       | 5             |        |      | 0            |            |           |         | 128             | 86                  |      | 0          | 0        | 109.5      | 32.7       |           | 48.8  |
| Apr 23       | 5             |        |      | 0            |            |           |         | 72              | 48                  |      | 0          | 1        | 122.8      | 38.9       | 2.6       | 49.6  |
| Apr 24       | 5             |        |      | 0            |            |           |         | 57              | 34                  |      | 0          | 0        | 136.6      | 63.1       |           | 50.5  |
| Apr 25       | 0             |        |      | 0            |            |           |         | 85              | 53                  |      | 0          | 0        | 158.2      | 70.4       | 3.2       | 51.2  |
| Apr 26       | 7             |        |      | 0            |            |           |         | 66              | 40                  |      | 0          | 0        | 160.2      | 59.7       |           | 52.1  |
| Apr 27       | 10            |        |      | 1            |            |           |         | 76              | 40                  |      | 0          | 0        | 178.4      | 72.0       | 1.4       | 51.1  |
| Apr 28       | 11            |        |      | 0            |            |           |         | 69              | 37                  |      | 0          | 0        | 168.3      | 63.3       | 1.8       | 50.0  |
| Apr 29       | 26            |        |      | 2            |            |           |         | 60              | 38                  |      | 0          | 0        | 144.5      | 44.5       |           | 49.0  |
| Apr 30       | 34            |        |      | 1            |            |           |         | 58              | 26                  |      | 0          | 0        | 127.2      | 42.3       |           | 48.4  |
| <b>TOTAL</b> | <b>108</b>    |        |      | <b>5</b>     |            |           |         | <b>3,416</b>    | <b>1,979</b>        |      | <b>2</b>   | <b>1</b> |            |            |           |       |
| AVG.         | 4             |        |      | 0            |            |           |         | 114             | 66                  |      | 0          | 0        | 113.9      | 36.7       | 2.2       | 47.7  |

\*April 2-Oct 31 water temps collected from juvenile fish collection channel.

TABLE 104

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT |                      |                     | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD  | unclipped STEELHEAD        | PINK | BULL TROUT        | LAMPREY        | DISCH KCFS   | SPILL KCFS  | TURBIDITY SECCHI | TURBIDITY DEG F |  |
|-----------------------|---------------|----------------------|---------------------|--------------|------------|-----------|---------|------------------|----------------------------|------|-------------------|----------------|--------------|-------------|------------------|-----------------|--|
|                       | SPRING        | SUMMER               | FALL                |              |            |           |         |                  |                            |      |                   |                |              |             |                  |                 |  |
| May 1                 | 38            |                      |                     | 0            |            |           |         | 51               | 17                         |      | 0                 |                | 129.6        | 41.9        | 1.5              | 47.7            |  |
| May 2                 | 78            |                      |                     | 1            |            |           |         | 43               | 26                         |      | 0                 |                | 122.7        | 38.9        | 1.4              | 47.6            |  |
| May 3                 | 121           |                      |                     | 0            |            |           |         | 41               | 23                         |      | 0                 |                | 114.9        | 34.4        |                  | 48.6            |  |
| May 4                 | 144           |                      |                     | 5            |            |           |         | 27               | 16                         |      | 2                 |                | 109.6        | 44.7        | 1.8              | 49.3            |  |
| May 5                 | 174           |                      |                     | 6            |            |           |         | 22               | 16                         |      | 1                 |                | 98.6         | 37.6        |                  | 49.2            |  |
| May 6                 | 403           |                      |                     | 16           |            |           |         | 37               | 26                         |      | 0                 |                | 93.8         | 28.0        | 2.5              | 49.6            |  |
| May 7                 | 238           |                      |                     | 13           |            |           |         | 21               | 14                         |      | 0                 |                | 95.2         | 29.2        |                  | 50.4            |  |
| May 8                 | 306           |                      |                     | 26           |            |           |         | 25               | 18                         |      | 2                 |                | 88.9         | 30.4        |                  | 50.8            |  |
| May 9                 | 226           |                      |                     | 4            |            |           |         | 39               | 28                         |      | 1                 |                | 90.3         | 39.1        | 3.0              | 51.3            |  |
| May 10                | 485           |                      |                     | 12           |            |           |         | 18               | 17                         |      | 0                 |                | 94.7         | 29.8        |                  | 51.5            |  |
| May 11                | 512           |                      |                     | 17           |            |           |         | 30               | 20                         |      | 0                 |                | 97.4         | 29.2        | 2.8              | 52.0            |  |
| May 12                | 242           |                      |                     | 4            |            |           |         | 23               | 17                         |      | 1                 |                | 91.4         | 27.3        |                  | 52.3            |  |
| May 13                | 360           |                      |                     | 10           |            |           |         | 20               | 12                         |      | 0                 |                | 92.8         | 27.7        | 2.9              | 52.9            |  |
| May 14                | 1,098         |                      |                     | 19           |            |           |         | 19               | 13                         |      | 0                 |                | 97.2         | 29.0        |                  | 52.9            |  |
| May 15                | 1,518         |                      |                     | 52           |            |           |         | 11               | 11                         |      | 2                 |                | 101.7        | 30.3        |                  | 54.2            |  |
| May 16                | 2,266         |                      |                     | 89           |            |           |         | 12               | 7                          |      | 0                 |                | 114.7        | 38.3        | 3.2              | 54.6            |  |
| May 17                | 2,308         |                      |                     | 53           |            |           |         | 11               | 6                          |      | 2                 |                | 127.5        | 46.6        |                  | 53.9            |  |
| May 18                | 10,621        |                      |                     | 197          |            |           |         | 12               | 8                          |      | 0                 |                | 122.1        | 38.9        | 2.8              | 54.2            |  |
| May 19                | 6,439         |                      |                     | 120          |            |           |         | 18               | 14                         |      | 2                 |                | 104.8        | 34.5        |                  | 54.5            |  |
| May 20                | 4,026         |                      |                     | 132          |            |           |         | 5                | 4                          |      | 1                 |                | 103.8        | 31.2        |                  | 54.6            |  |
| May 21                | 4,886         |                      |                     | 200          |            |           |         | 2                | 0                          |      | 1                 |                | 100.4        | 29.1        |                  | 54.2            |  |
| May 22                | 3,762         |                      |                     | 251          |            |           |         | 4                | 2                          |      | 5                 |                | 112.1        | 29.6        | 1.8              | 52.9            |  |
| May 23                | 3,586         |                      |                     | 223          |            |           |         | 2                | 2                          |      | 0                 |                | 130.2        | 38.8        | 2.2              | 52.3            |  |
| May 24                | 2,621         |                      |                     | 276          |            |           |         | 2                | 2                          |      | 0                 |                | 116.5        | 31.3        |                  | 52.4            |  |
| May 25                | 1,914         |                      |                     | 192          |            |           |         | 2                | 0                          |      | 2                 |                | 104.3        | 31.3        | 2.4              | 52.5            |  |
| May 26                | 880           |                      |                     | 94           |            |           |         | 4                | 2                          |      | 1                 |                | 91.3         | 27.3        |                  | 52.5            |  |
| May 27                | 1,224         |                      |                     | 107          |            |           |         | 2                | 1                          |      | 2                 |                | 77.1         | 22.9        | 3.1              | 52.1            |  |
| May 28                | 1,253         |                      |                     | 108          |            |           |         | 2                | 1                          |      | 2                 |                | 74.1         | 22.2        |                  | 52.0            |  |
| May 29                | 1,272         |                      |                     | 148          |            |           |         | 1                | 1                          |      | 0                 |                | 80.8         | 24.3        | 2.7              | 52.3            |  |
| May 30                | 1,542         |                      |                     | 148          |            |           |         | 2                | 1                          |      | 0                 |                | 78.0         | 23.4        |                  | 53.0            |  |
| May 31                | 1,158         |                      |                     | 119          |            |           |         | 2                | 1                          |      | 1                 |                | 77.9         | 23.2        |                  | 53.3            |  |
| <b>TOTAL</b>          | <b>55,701</b> |                      |                     | <b>2,642</b> |            |           |         | <b>510</b>       | <b>326</b>                 |      | <b>28</b>         |                |              |             |                  |                 |  |
| <b>AVG.</b>           | <b>1,797</b>  |                      |                     | <b>85</b>    |            |           |         | <b>16</b>        | <b>11</b>                  |      | <b>1</b>          |                | <b>101.1</b> | <b>31.9</b> | <b>2.4</b>       | <b>52.0</b>     |  |
| <b>RUN YEAR</b>       |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |            |           |         | <b>STEELHEAD</b> | <b>unclipped STEELHEAD</b> |      | <b>BULL TROUT</b> | <b>LAMPREY</b> |              |             |                  |                 |  |
| <b>TOTALS TO DATE</b> |               |                      |                     |              |            |           |         |                  |                            |      |                   |                |              |             |                  |                 |  |
| <b>SPRING</b>         |               | <b>55,809</b>        | <b>2,647</b>        |              |            |           |         | <b>3,926</b>     | <b>2,305</b>               |      | <b>30</b>         | <b>1</b>       |              |             |                  |                 |  |



TABLE 105

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE   | TOTAL STEELHEAD | unclipped STEELHEAD | PINK | BULL  |          | DISCH KCFS | SPILL KCFS  | TURBIDITY SECCHI | TEMP DEG F |             |
|--------------|---------------|--------------|------|--------------|------------|-----------|-----------|-----------------|---------------------|------|-------|----------|------------|-------------|------------------|------------|-------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |           |                 |                     |      | TROUT | LAMPREY  |            |             |                  |            |             |
| Jun 1        | 738           |              |      | 68           |            |           | 0         | 0               | 0                   |      |       | 2        | 0          | 77.4        | 23.1             | 4.2        | 53.3        |
| Jun 2        | 968           |              |      | 77           |            |           | 0         | 1               | -1                  |      |       | 0        | 0          | 88.0        | 26.4             |            | 53.2        |
| Jun 3        | 785           |              |      | 96           |            |           | 0         | 2               | 0                   |      |       | 0        | 0          | 99.0        | 29.8             |            | 54.2        |
| Jun 4        | 770           |              |      | 62           |            |           | 0         | 2               | 0                   |      |       | 1        | 0          | 99.8        | 29.8             | 4.8        | 55.5        |
| Jun 5        | 551           |              |      | 37           |            |           | 0         | 2               | 0                   |      |       | 2        | 0          | 114.3       | 36.8             | 3.0        | 55.6        |
| Jun 6        | 473           |              |      | 28           |            |           | 0         | 1               | 0                   |      |       | 1        | 0          | 123.7       | 49.2             |            | 56.4        |
| Jun 7        | 804           |              |      | 38           |            |           | 0         | 2               | 0                   |      |       | 0        | 0          | 107.1       | 37.8             |            | 54.9        |
| Jun 8        | 731           |              |      | 44           |            |           | 0         | 3               | 1                   |      |       | 0        | 0          | 94.5        | 46.3             | 3.2        | 54.5        |
| Jun 9        | 126           |              |      | 16           |            |           | 0         | 0               | 0                   |      |       | 1        | 0          | 86.3        | 52.6             |            | 54.2        |
| Jun 10       | 712           |              |      | 40           |            |           | 0         | 2               | 0                   |      |       | 0        | 0          | 87.8        | 38.4             |            | 53.3        |
| Jun 11       | 2,315         |              |      | 92           |            |           | 0         | 1               | 1                   |      |       | 0        | 0          | 88.4        | 30.8             | 2.5        | 53.2        |
| Jun 12       | 784           |              |      | 58           |            |           | 0         | 1               | 0                   |      |       | 0        | 0          | 77.1        | 30.0             | 3.0        | 53.2        |
| Jun 13       | 222           |              |      | 32           |            |           | 0         | 1               | 0                   |      |       | 0        | 0          | 82.5        | 45.2             |            | 54.0        |
| Jun 14       | 1,079         |              |      | 48           |            |           | 0         | 6               | 4                   |      |       | 1        | 0          | 93.4        | 31.2             |            | 53.7        |
| Jun 15       | 1,380         |              |      | 66           |            |           | 0         | 4               | 0                   |      |       | 0        | 0          | 85.9        | 28.2             | 3.6        | 54.3        |
| Jun 16       |               | 564          |      | 46           |            |           | 0         | 8               | 2                   |      |       | 0        | 0          | 83.8        | 25.8             |            | 55.1        |
| Jun 17       |               | 521          |      | 47           |            |           | 0         | 8               | 2                   |      |       | 0        | 0          | 82.4        | 34.1             |            | 56.0        |
| Jun 18       |               | 444          |      | 40           |            |           | 0         | 2               | 0                   |      |       | 1        | 0          | 79.9        | 34.3             |            | 56.9        |
| Jun 19       |               | 1,338        |      | 119          |            |           | 0         | 11              | 1                   |      |       | 0        | 0          | 94.6        | 34.1             | 3.7        | 57.6        |
| Jun 20       |               | 896          |      | 55           |            |           | 1         | 5               | 1                   |      |       | 0        | 0          | 84.7        | 25.3             |            | 57.7        |
| Jun 21       |               | 578          |      | 65           |            |           | 1         | 8               | 1                   |      |       | 0        | 0          | 81.3        | 24.2             | 4.8        | 58.6        |
| Jun 22       |               | 301          |      | 43           |            |           | 2         | 7               | 0                   |      |       | 0        | 0          | 79.0        | 30.1             | 6.0        | 59.6        |
| Jun 23       |               | 492          |      | 61           |            |           | 2         | 9               | 1                   |      |       | 0        | 0          | 83.9        | 30.0             |            | 59.7        |
| Jun 24       |               | 593          |      | 62           |            |           | 1         | 8               | 2                   |      |       | 0        | 0          | 85.7        | 28.7             |            | 58.9        |
| Jun 25       |               | 883          |      | 48           |            |           | 5         | 16              | 4                   |      |       | 0        | 0          | 79.8        | 25.5             | 4.8        | 58.7        |
| Jun 26       |               | 380          |      | 38           |            |           | 6         | 11              | 5                   |      |       | 0        | 1          | 82.0        | 31.5             | 4.2        | 59.1        |
| Jun 27       |               | 794          |      | 60           |            |           | 8         | 24              | 5                   |      |       | 0        | 0          | 84.5        | 26.8             |            | 59.7        |
| Jun 28       |               | 272          |      | 32           |            |           | 5         | 9               | 1                   |      |       | 0        | 0          | 72.4        | 22.6             |            | 61.1        |
| Jun 29       |               | 364          |      | 54           |            |           | 6         | 20              | 6                   |      |       | 0        | 0          | 65.8        | 21.1             | 5.0        | 61.7        |
| Jun 30       |               | 98           |      | 40           |            |           | 6         | 10              | 2                   |      |       | 0        | 0          | 65.2        | 26.0             | 5.6        | 62.2        |
| <b>TOTAL</b> | <b>12,438</b> | <b>8,518</b> |      | <b>1,612</b> |            |           | <b>43</b> | <b>184</b>      | <b>38</b>           |      |       | <b>9</b> | <b>1</b>   |             |                  |            |             |
| <b>AVG.</b>  | <b>829</b>    | <b>568</b>   |      | <b>54</b>    |            |           | <b>1</b>  | <b>6</b>        | <b>1</b>            |      |       | <b>0</b> | <b>0</b>   | <b>87.0</b> | <b>31.9</b>      | <b>4.2</b> | <b>56.5</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,247        | 3,449        |
| SUMMER         | 8,518         | 810          |
| <b>TOTALS</b>  | <b>76,765</b> | <b>4,259</b> |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD |
|---------|-----------|---------------------|
| 43      | 4,110     | 2,343               |

| BULL TROUT | LAMPREY |
|------------|---------|
| 39         | 2       |

TABLE 106

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE    | TOTAL        |                     | PINK | BULL  |           | DISCH KCFS  | SPILL KCFS  | TURBIDITY SECCHI | TEMP DEG F  |
|--------------|---------------|--------------|------|--------------|------------|-----------|------------|--------------|---------------------|------|-------|-----------|-------------|-------------|------------------|-------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |            | STEELHEAD    | unclipped STEELHEAD |      | TROUT | LAMPREY   |             |             |                  |             |
| Jul 1        |               | 74           |      | 22           |            |           | 6          | 13           | 5                   |      |       | 0         | 61.7        | 36.9        |                  | 62.5        |
| Jul 2        |               | 600          |      | 42           |            |           | 7          | 27           | 11                  |      |       | 0         | 63.0        | 30.7        |                  | 62.3        |
| Jul 3        |               | 401          |      | 31           |            |           | 5          | 22           | 4                   |      |       | 0         | 58.8        | 26.1        | 4.6              | 62.2        |
| Jul 4        |               | 260          |      | 35           |            |           | 13         | 43           | 18                  |      |       | 0         | 59.5        | 17.8        |                  | 62.6        |
| Jul 5        |               | 64           |      | 29           |            |           | 13         | 32           | 7                   |      |       | -1        | 49.1        | 19.7        |                  | 63.1        |
| Jul 6        |               | 154          |      | 23           |            |           | 20         | 9            | 7                   |      |       | 0         | 49.2        | 14.7        | 5.1              | 64.4        |
| Jul 7        |               | 308          |      | 26           |            |           | 26         | 29           | 12                  |      |       | 0         | 52.1        | 15.6        |                  | 64.8        |
| Jul 8        |               | 386          |      | 34           |            |           | 26         | 21           | 7                   |      |       | 0         | 47.6        | 14.4        | 5.9              | 64.5        |
| Jul 9        |               | 450          |      | 34           |            |           | 23         | 30           | 18                  |      |       | 0         | 44.3        | 13.3        |                  | 65.2        |
| Jul 10       |               | 208          |      | 28           |            |           | 14         | 27           | 10                  |      |       | 0         | 51.3        | 19.5        | 6.0              | 65.9        |
| Jul 11       |               | 149          |      | 44           |            |           | 16         | 34           | 10                  |      |       | 0         | 55.7        | 21.0        |                  | 64.9        |
| Jul 12       |               | 64           |      | 14           |            |           | 5          | 17           | 11                  |      |       | 0         | 50.5        | 15.7        |                  | 66.2        |
| Jul 13       |               | 102          |      | 34           |            |           | 23         | 52           | 23                  |      |       | 0         | 49.1        | 18.2        | 5.3              | 66.8        |
| Jul 14       |               | 186          |      | 31           |            |           | 11         | 62           | 19                  |      |       | 0         | 40.3        | 13.6        | 4.9              | 68.1        |
| Jul 15       |               | 79           |      | 17           |            |           | 19         | 43           | 18                  |      |       | 0         | 42.5        | 28.6        |                  | 67.6        |
| Jul 16       |               | 110          |      | 18           |            |           | 14         | 56           | 24                  |      |       | 1         | 47.8        | 22.2        |                  | 67.9        |
| Jul 17       |               | 107          |      | 35           |            |           | 17         | 64           | 32                  |      |       | 0         | 45.9        | 15.1        | 4.4              | 68.6        |
| Jul 18       |               | 148          |      | 13           |            |           | 30         | 56           | 32                  |      |       | 1         | 45.0        | 15.9        |                  | 69.0        |
| Jul 19       |               | 142          |      | 20           |            |           | 5          | 48           | 31                  |      |       | 0         | 44.3        | 13.3        |                  | 69.0        |
| Jul 20       |               | 182          |      | 22           |            |           | 17         | 74           | 30                  |      |       | 0         | 39.7        | 15.8        | 5.8              | 69.1        |
| Jul 21       |               | 226          |      | 34           |            |           | 13         | 90           | 46                  |      |       | 0         | 44.8        | 18.9        |                  | 68.3        |
| Jul 22       |               | 96           |      | 14           |            |           | 10         | 56           | 32                  |      |       | 1         | 40.2        | 17.9        | 4.9              | 68.6        |
| Jul 23       |               | 149          |      | 23           |            |           | 11         | 73           | 26                  |      |       | 1         | 37.2        | 13.0        |                  | 67.7        |
| Jul 24       |               | 192          |      | 29           |            |           | 6          | 106          | 56                  |      |       | 2         | 37.2        | 11.1        | 5.4              | 68.4        |
| Jul 25       |               | 144          |      | 14           |            |           | 6          | 64           | 34                  |      |       | 1         | 37.1        | 11.1        |                  | 69.0        |
| Jul 26       |               | 66           |      | 4            |            |           | 4          | 17           | 7                   |      |       | 1         | 40.1        | 12.0        |                  | 68.9        |
| Jul 27       |               | 95           |      | 13           |            |           | 5          | 55           | 26                  |      |       | 1         | 41.5        | 16.5        | 6.0              | 68.6        |
| Jul 28       |               | 104          |      | 13           |            |           | 2          | 52           | 24                  |      |       | 1         | 36.2        | 15.9        |                  | 68.3        |
| Jul 29       |               | 73           |      | 5            |            |           | 5          | 64           | 35                  |      |       | 2         | 33.0        | 13.7        |                  | 68.9        |
| Jul 30       |               | 50           |      | 5            |            |           | 4          | 32           | 19                  |      |       | 0         | 34.4        | 12.0        |                  | 68.8        |
| Jul 31       |               | 71           |      | 10           |            |           | 6          | 51           | 23                  |      |       | 1         | 39.3        | 12.9        | 4.8              | 68.4        |
| <b>TOTAL</b> |               | <b>5,440</b> |      | <b>716</b>   |            |           | <b>382</b> | <b>1,419</b> | <b>657</b>          |      |       | <b>12</b> |             |             |                  |             |
| <b>AVG.</b>  |               | <b>175</b>   |      | <b>23</b>    |            |           | <b>12</b>  | <b>46</b>    | <b>21</b>           |      |       | <b>0</b>  | <b>45.8</b> | <b>17.5</b> | <b>5.3</b>       | <b>66.7</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,247        | 3,449        |
| SUMMER         | 13,958        | 1,526        |
| <b>TOTAL</b>   | <b>82,205</b> | <b>4,975</b> |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD |
|---------|-----------|---------------------|
| 425     | 5,529     | 3,000               |

| BULL TROUT | LAMPREY |
|------------|---------|
| 39         | 14      |

TABLE 107

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |            |              | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE   | TOTAL        |                     | PINK | BULL TROUT |         | LAMPREY   | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|--------------|---------------|------------|--------------|--------------|------------|-----------|-----------|--------------|---------------------|------|------------|---------|-----------|------------|------------|-----------|-------|
|              | SPRING        | SUMMER     | FALL         |              |            |           |           | STEELHEAD    | unclipped STEELHEAD |      | TROUT      | LAMPREY |           |            |            | SECCHI    | DEG F |
| Aug 1        |               | 38         |              | 12           |            |           | 2         | 35           | 23                  |      |            |         | 1         | 34.6       | 10.5       | 5.0       | 68.6  |
| Aug 2        |               | 36         |              | 6            |            |           | 5         | 26           | 13                  |      |            |         | 4         | 35.1       | 10.5       |           | 67.8  |
| Aug 3        |               | 77         |              | 7            |            |           | 4         | 27           | 16                  |      |            |         | 1         | 31.8       | 9.5        | 5.8       | 68.1  |
| Aug 4        |               | 29         |              | 1            |            |           | 4         | 42           | 23                  |      |            |         | 1         | 32.3       | 9.7        |           | 68.9  |
| Aug 5        |               | 34         |              | 1            |            |           | 2         | 29           | 11                  |      |            |         | 1         | 29.1       | 8.7        | 5.5       | 68.1  |
| Aug 6        |               | 62         |              | 7            |            |           | 0         | 55           | 35                  |      |            |         | 1         | 28.9       | 10.0       |           | 68.3  |
| Aug 7        |               | 48         |              | 8            |            |           | 0         | 37           | 24                  |      |            |         | 0         | 34.5       | 11.2       | 6.0       | 68.7  |
| Aug 8        |               | 64         |              | 4            |            |           | 2         | 98           | 52                  |      |            |         | 0         | 28.7       | 11.2       |           | 67.8  |
| Aug 9        |               | 73         |              | 7            |            |           | 0         | 88           | 58                  |      |            |         | 1         | 29.6       | 11.2       |           | 68.2  |
| Aug 10       |               | 40         |              | 7            |            |           | 2         | 89           | 43                  |      |            |         | 1         | 30.6       | 10.4       | 4.8       | 68.4  |
| Aug 11       |               | 55         |              | 8            |            |           | 1         | 88           | 50                  |      |            |         | 4         | 30.2       | 9.3        |           | 68.8  |
| Aug 12       |               | 66         |              | 2            |            |           | 4         | 99           | 46                  |      |            |         | 1         | 28.1       | 9.3        |           | 68.5  |
| Aug 13       |               | 37         |              | 5            |            |           | 0         | 85           | 38                  |      |            |         | 0         | 27.3       | 9.3        | 5.3       | 68.2  |
| Aug 14       |               | 37         |              | 5            |            |           | 0         | 153          | 68                  |      |            |         | 2         | 26.9       | 9.3        | 6.0       | 67.4  |
| Aug 15       |               | 94         |              | 7            |            |           | 0         | 172          | 71                  |      |            |         | 2         | 27.9       | 9.3        |           | 67.6  |
| Aug 16       |               |            | 56           | 11           |            |           | 0         | 135          | 50                  |      |            |         | 0         | 26.7       | 9.3        |           | 67.9  |
| Aug 17       |               |            | 52           | 14           |            |           | 0         | 115          | 50                  |      |            |         | 0         | 28.8       | 9.3        | 6.0+      | 67.4  |
| Aug 18       |               |            | 68           | 13           |            |           | 0         | 142          | 59                  |      |            |         | 4         | 25.4       | 9.3        |           | 67.5  |
| Aug 19       |               |            | 53           | 8            |            |           | 0         | 95           | 41                  |      |            |         | 1         | 25.1       | 9.3        |           | 67.5  |
| Aug 20       |               |            | 83           | 10           |            |           | 0         | 88           | 44                  |      |            |         | 6         | 24.6       | 9.3        |           | 66.8  |
| Aug 21       |               |            | 115          | 30           |            |           | 0         | 141          | 53                  |      |            |         | 1         | 27.6       | 9.3        | 6.0       | 67.0  |
| Aug 22       |               |            | 131          | 35           |            |           | 0         | 161          | 48                  |      |            |         | 1         | 26.1       | 9.3        | 6.0+      | 66.5  |
| Aug 23       |               |            | 103          | 25           |            |           | 0         | 119          | 49                  |      |            |         | 2         | 25.5       | 9.3        |           | 66.9  |
| Aug 24       |               |            | 137          | 28           |            |           | 0         | 160          | 64                  |      |            |         | 0         | 24.1       | 9.3        | 6.0+      | 66.5  |
| Aug 25       |               |            | 90           | 14           |            |           | 0         | 100          | 44                  |      |            |         | 0         | 27.1       | 9.3        |           | 67.4  |
| Aug 26       |               |            | 92           | 19           |            |           | 0         | 110          | 40                  |      |            |         | 1         | 26.4       | 9.3        |           | 67.7  |
| Aug 27       |               |            | 97           | 47           |            |           | 0         | 101          | 41                  |      |            |         | 1         | 23.8       | 9.3        |           | 67.1  |
| Aug 28       |               |            | 108          | 41           |            |           | 0         | 72           | 24                  |      |            |         | 2         | 23.4       | 8.5        | 6.0+      | 66.6  |
| Aug 29       |               |            | 152          | 85           |            |           | 0         | 125          | 35                  |      |            |         | 0         | 24.5       | 7.5        | 6.0+      | 66.2  |
| Aug 30       |               |            | 191          | 97           |            |           | 0         | 97           | 23                  |      |            |         | 0         | 27.2       | 7.6        |           | 66.9  |
| Aug 31       |               |            | 271          | 74           |            |           | 0         | 147          | 44                  |      |            |         | 0         | 27.2       | 7.4        | 6.0+      | 67.2  |
| <b>TOTAL</b> |               | <b>790</b> | <b>1,799</b> | <b>638</b>   |            |           | <b>26</b> | <b>3,031</b> | <b>1,280</b>        |      |            |         | <b>39</b> |            |            |           |       |

|      |    |     |    |  |  |  |   |    |    |  |  |  |   |      |     |     |      |
|------|----|-----|----|--|--|--|---|----|----|--|--|--|---|------|-----|-----|------|
| AVG. | 53 | 112 | 21 |  |  |  | 1 | 98 | 41 |  |  |  | 1 | 28.0 | 9.4 | 5.6 | 67.6 |
|------|----|-----|----|--|--|--|---|----|----|--|--|--|---|------|-----|-----|------|

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 68,247        | 3,449        |
| SUMMER         | 14,748        | 1,613        |
| FALL           | 1,799         | 551          |
| <b>TOTALS</b>  | <b>84,794</b> | <b>5,613</b> |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD | BULL TROUT | LAMPREY |
|---------|-----------|---------------------|------------|---------|
| 451     | 8,560     | 4,280               | 39         | 53      |

TABLE 108

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK       | COHO          | COHO         | TOTAL      | unclipped | BULL          | LAMPREY       | DISCH | SPILL | TURBIDITY | DEG F       |            |            |             |
|--------------|---------------|--------|---------------|---------------|--------------|------------|-----------|---------------|---------------|-------|-------|-----------|-------------|------------|------------|-------------|
|              | SPRING        | SUMMER | FALL          | JACK          | ADULT        |            | JACK      |               |               |       |       |           |             | SOCKEYE    | STEELHEAD  | PINK        |
| Sep 1        |               |        | 278           | 119           | 0            | 0          | 0         | 257           | 78            |       |       | 1         | 20.0        | 0.0        |            | 66.6        |
| Sep 2        |               |        | 442           | 185           | 0            | 1          | 0         | 420           | 136           |       |       | 2         | 22.3        | 0.0        |            | 66.9        |
| Sep 3        |               |        | 527           | 220           | 0            | 0          | 0         | 536           | 169           |       |       | 0         | 12.9        | 0.0        |            | 66.3        |
| Sep 4        |               |        | 551           | 233           | 2            | 1          | 0         | 472           | 143           |       |       | 0         | 18.1        | 0.0        | 6.0+       | 65.9        |
| Sep 5        |               |        | 701           | 266           | 2            | 0          | 0         | 592           | 182           |       |       | -1        | 22.9        | 0.0        | 6.0+       | 66.1        |
| Sep 6        |               |        | 978           | 377           | 4            | 0          | 0         | 570           | 186           |       |       | -1        | 33.3        | 0.0        |            | 66.2        |
| Sep 7        |               |        | 1,004         | 458           | 10           | 2          | 0         | 677           | 229           |       |       | 2         | 30.5        | 0.0        | 6.0        | 65.7        |
| Sep 8        |               |        | 976           | 467           | 6            | 5          | 0         | 934           | 293           |       |       | 0         | 21.7        | 0.0        |            | 65.1        |
| Sep 9        |               |        | 768           | 370           | 12           | 2          | 0         | 1,266         | 421           |       |       | 0         | 26.0        | 0.0        | 6.0        | 65.3        |
| Sep 10       |               |        | 1,762         | 828           | 24           | 10         | 0         | 2,127         | 634           |       |       | 1         | 25.8        | 0.0        |            | 64.7        |
| Sep 11       |               |        | 1,626         | 944           | 58           | 28         | 0         | 2,942         | 799           |       |       | 2         | 27.1        | 0.0        | 6.0+       | 65.3        |
| Sep 12       |               |        | 667           | 379           | 34           | 6          | 0         | 1,793         | 486           |       |       | 1         | 24.8        | 0.0        |            | 65.7        |
| Sep 13       |               |        | 858           | 563           | 30           | 11         | 0         | 2,159         | 583           |       |       | 4         | 23.5        | 0.0        | 6.0+       | 65.7        |
| Sep 14       |               |        | 1,169         | 631           | 48           | 1          | 0         | 2,193         | 673           |       |       | 1         | 25.5        | 0.0        | 6.0+       | 64.8        |
| Sep 15       |               |        | 1,153         | 542           | 106          | 17         | 0         | 2,479         | 696           |       |       | 0         | 18.9        | 0.0        |            | 64.7        |
| Sep 16       |               |        | 1,654         | 652           | 94           | 10         | 2         | 2,681         | 714           |       |       | 0         | 22.1        | 0.0        |            | 64.4        |
| Sep 17       |               |        | 1,242         | 547           | 83           | 30         | 0         | 1,999         | 540           |       |       | 0         | 26.7        | 0.0        |            | 64.2        |
| Sep 18       |               |        | 996           | 559           | 44           | 7          | 0         | 1,938         | 492           |       |       | 1         | 21.3        | 0.0        | 6.0+       | 64.2        |
| Sep 19       |               |        | 970           | 524           | 49           | 8          | 0         | 1,595         | 414           |       |       | 0         | 21.1        | 0.0        |            | 64.5        |
| Sep 20       |               |        | 815           | 431           | 58           | 4          | 0         | 1,756         | 440           |       |       | 0         | 21.4        | 0.0        | 6.0+       | 64.5        |
| Sep 21       |               |        | 1,103         | 667           | 25           | 5          | 0         | 1,781         | 433           |       |       | 1         | 15.3        | 0.0        | 6.0+       | 64.5        |
| Sep 22       |               |        | 1,843         | 923           | 138          | 5          | 0         | 2,412         | 714           |       |       | 5         | 14.7        | 0.0        |            | 64.7        |
| Sep 23       |               |        | 1,517         | 1,074         | 70           | 5          | 0         | 2,327         | 649           |       |       | 1         | 20.3        | 0.0        | 6.0        | 64.5        |
| Sep 24       |               |        | 742           | 658           | 54           | 5          | 0         | 2,029         | 551           |       |       | 2         | 17.1        | 0.0        |            | 64.5        |
| Sep 25       |               |        | 935           | 524           | 101          | 1          | 0         | 2,359         | 698           |       |       | 2         | 16.4        | 0.0        | 6.0        | 64.7        |
| Sep 26       |               |        | 998           | 660           | 125          | 5          | 0         | 2,585         | 664           |       |       | 0         | 17.0        | 0.0        |            | 64.5        |
| Sep 27       |               |        | 707           | 485           | 102          | 7          | 0         | 2,777         | 653           |       |       | 1         | 13.7        | 0.0        | 6.0        | 64.7        |
| Sep 28       |               |        | 427           | 437           | 110          | 8          | 0         | 2,299         | 565           |       |       | 0         | 12.6        | 0.0        | 6.0+       | 64.5        |
| Sep 29       |               |        | 464           | 337           | 116          | 13         | 0         | 2,204         | 498           |       |       | 2         | 14.5        | 0.0        |            | 64.6        |
| Sep 30       |               |        | 463           | 330           | 96           | 12         | 0         | 2,311         | 576           |       |       | 0         | 19.8        | 0.0        | 6.0        | 64.5        |
| <b>TOTAL</b> |               |        | <b>28,336</b> | <b>15,390</b> | <b>1,601</b> | <b>209</b> | <b>2</b>  | <b>52,470</b> | <b>14,309</b> |       |       | <b>27</b> |             |            |            |             |
| <b>AVG.</b>  |               |        | <b>945</b>    | <b>513</b>    | <b>53</b>    | <b>7</b>   | <b>0</b>  | <b>1,749</b>  | <b>477</b>    |       |       | <b>1</b>  | <b>20.9</b> | <b>0.0</b> | <b>6.0</b> | <b>65.1</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 68,247         | 3,449         |
| SUMMER         | 14,748         | 1,613         |
| FALL           | 30,135         | 15,941        |
| <b>TOTALS</b>  | <b>113,130</b> | <b>21,003</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD |
|------------|-----------|---------|-----------|---------------------|
| 1,601      | 209       | 453     | 61,030    | 18,589              |

| BULL TROUT | LAMPREY |
|------------|---------|
| 39         | 80      |

TABLE 109

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LITTLE GOOSE PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        |              | CHINOOK      | COHO       | COHO      | SOCKEYE | TOTAL         | unclipped    | PINK | BULL     | LAMPREY  | DISCH | SPILL | TURBIDITY |       |
|--------------|---------------|--------|--------------|--------------|------------|-----------|---------|---------------|--------------|------|----------|----------|-------|-------|-----------|-------|
|              | SPRING        | SUMMER | FALL         | JACK         | ADULT      | JACK      |         | STEELHEAD     | STEELHEAD    |      | TROUT    |          | KCFS  | KCFS  | SECCHI    | DEG F |
| Oct 1        |               |        | 382          | 287          | 59         | 4         |         | 1,803         | 398          |      | 0        | 1        | 24.4  | 0.0   |           | 64.2  |
| Oct 2        |               |        | 304          | 184          | 40         | 1         |         | 2,088         | 460          |      | 0        | 1        | 13.5  | 0.0   |           | 64.6  |
| Oct 3        |               |        | 438          | 274          | 80         | 10        |         | 3,356         | 877          |      | 0        | 1        | 22.7  | 0.0   |           | 64.0  |
| Oct 4        |               |        | 384          | 281          | 55         | 1         |         | 2,257         | 527          |      | 0        | 1        | 20.1  | 0.0   |           | 64.0  |
| Oct 5        |               |        | 545          | 353          | 79         | 0         |         | 2,749         | 656          |      | 0        | 1        | 19.2  | 0.0   |           | 63.8  |
| Oct 6        |               |        | 295          | 192          | 43         | 1         |         | 1,912         | 473          |      | 0        | 0        | 16.3  | 0.0   |           | 63.6  |
| Oct 7        |               |        | 246          | 164          | 36         | 0         |         | 1,599         | 415          |      | 0        | 0        | 14.3  | 0.0   | 6.0+      | 63.4  |
| Oct 8        |               |        | 176          | 148          | 32         | 0         |         | 1,133         | 292          |      | 0        | 0        | 17.8  | 0.0   |           | 63.2  |
| Oct 9        |               |        | 181          | 85           | 20         | 2         |         | 972           | 254          |      | 0        | 0        | 15.1  | 0.0   |           | 63.0  |
| Oct 10       |               |        | 137          | 107          | 31         | 0         |         | 1,027         | 265          |      | 0        | 1        | 18.3  | 0.0   |           | 62.7  |
| Oct 11       |               |        | 79           | 82           | 30         | 2         |         | 1,096         | 290          |      | 0        | -1       | 19.0  | 0.0   |           | 62.7  |
| Oct 12       |               |        | 146          | 85           | 14         | 0         |         | 956           | 268          |      | 0        | 1        | 13.8  | 0.0   |           | 62.4  |
| Oct 13       |               |        | 92           | 97           | 36         | 5         |         | 1,113         | 275          |      | 0        | 1        | 12.9  | 0.0   |           | 62.2  |
| Oct 14       |               |        | 118          | 121          | 25         | 2         |         | 1,080         | 270          |      | 0        | 0        | 12.7  | 0.0   |           | 62.1  |
| Oct 15       |               |        | 79           | 84           | 25         | 1         |         | 1,127         | 323          |      | 0        | 0        | 15.5  | 0.0   | 5.8       | 62.1  |
| Oct 16       |               |        | 100          | 62           | 22         | 2         |         | 1,388         | 386          |      | 0        | 0        | 12.1  | 0.0   |           | 61.8  |
| Oct 17       |               |        | 96           | 76           | 24         | 1         |         | 1,398         | 342          |      | 0        | 0        | 23.8  | 0.0   |           | 61.5  |
| Oct 18       |               |        | 162          | 84           | 32         | 1         |         | 1,134         | 334          |      | 0        | 0        | 20.1  | 0.0   |           | 61.2  |
| Oct 19       |               |        | 64           | 53           | 13         | 5         |         | 963           | 238          |      | 1        | 0        | 18.1  | 0.0   |           | 61.2  |
| Oct 20       |               |        | 52           | 30           | 16         | 4         |         | 1,271         | 337          |      | 0        | 0        | 13.1  | 0.0   |           | 60.9  |
| Oct 21       |               |        | 65           | 60           | 11         | 5         |         | 861           | 230          |      | 0        | 0        | 18.4  | 0.0   |           | 60.4  |
| Oct 22       |               |        | 73           | 74           | 11         | 0         |         | 684           | 202          |      | 0        | -2       | 20.4  | 0.0   |           | 59.9  |
| Oct 23       |               |        | 55           | 36           | 5          | 0         |         | 649           | 182          |      | 0        | 0        | 17.2  | 0.0   |           | 59.4  |
| Oct 24       |               |        | 80           | 42           | 13         | 1         |         | 739           | 194          |      | 0        | 2        | 22.2  | 0.0   |           | 58.4  |
| Oct 25       |               |        | 70           | 40           | 7          | 0         |         | 565           | 155          |      | 0        | 0        | 16.9  | 0.0   | 6.0       | 58.2  |
| Oct 26       |               |        | 48           | 34           | 6          | 0         |         | 517           | 162          |      | 0        | 0        | 16.4  | 0.0   |           | 57.0  |
| Oct 27       |               |        | 25           | 17           | 8          | 0         |         | 543           | 167          |      | 0        | 0        | 15.2  | 0.0   |           | 56.7  |
| Oct 28       |               |        | 35           | 30           | 6          | 1         |         | 528           | 156          |      | 0        | 1        | 20.7  | 0.0   |           | 56.5  |
| Oct 29       |               |        | 62           | 35           | 11         | 1         |         | 760           | 238          |      | 0        | 0        | 19.5  | 0.0   |           | 56.2  |
| Oct 30       |               |        | 47           | 31           | 6          | 1         |         | 452           | 133          |      | 0        | 0        | 28.2  | 0.0   |           | 56.2  |
| Oct 31       |               |        | 72           | 30           | 5          | 0         |         | 528           | 162          |      | 0        | 0        | 28.2  | 0.0   |           | 56.1  |
| <b>TOTAL</b> |               |        | <b>4,708</b> | <b>3,278</b> | <b>801</b> | <b>51</b> |         | <b>37,248</b> | <b>9,661</b> |      | <b>1</b> | <b>8</b> |       |       |           |       |

|      |  |  |     |     |    |   |  |       |     |  |   |   |      |     |     |      |
|------|--|--|-----|-----|----|---|--|-------|-----|--|---|---|------|-----|-----|------|
| AVG. |  |  | 152 | 106 | 26 | 2 |  | 1,202 | 312 |  | 0 | 0 | 18.3 | 0.0 | 5.9 | 61.0 |
|------|--|--|-----|-----|----|---|--|-------|-----|--|---|---|------|-----|-----|------|

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | BULL TROUT | LAMPREY |
|----------------|----------------|---------------|------------|-----------|---------|-----------|---------------------|------------|---------|
| TOTALS TO DATE |                |               |            |           |         |           |                     |            |         |
| SPRING         | 68,247         | 3,449         | 2,402      | 260       | 453     | 98,278    | 28,250              | 40         | 88      |
| SUMMER         | 14,748         | 1,613         |            |           |         |           |                     |            |         |
| FALL           | 34,843         | 19,219        |            |           |         |           |                     |            |         |
| <b>TOTALS</b>  | <b>117,838</b> | <b>24,281</b> |            |           |         |           |                     |            |         |

TABLE 110

DISCHARGE AND WATER QUALITY DATA  
LITTLE GOOSE PROJECT 2012

| NOVEMBER |       |       |           |       | DECEMBER |       |       |           |       |
|----------|-------|-------|-----------|-------|----------|-------|-------|-----------|-------|
| DATE     | DISCH | SPILL | TURBIDITY |       | DATE     | DISCH | SPILL | TURBIDITY |       |
|          | KCFS  | KCFS  | SECCHI    | DEG F |          | KCFS  | KCFS  | SECCHI    | DEG F |
| Nov 1    | 25.8  | 0.0   |           | 39.3  | Dec 1    | 22.3  | 0.0   |           | 36.6  |
| Nov 2    | 21.1  | 0.0   |           | 39.3  | Dec 2    | 25.2  | 0.0   |           | 36.5  |
| Nov 3    | 24.9  | 0.0   |           | 39.3  | Dec 3    | 35.6  | 0.0   | 6.0       | 36.5  |
| Nov 4    | 24.3  | 0.0   |           | 39.3  | Dec 4    | 40.4  | 0.0   | 6.0       | 36.4  |
| Nov 5    | 19.2  | 0.0   | 5.8       | 39.2  | Dec 5    | 32.0  | 0.0   | 6.0       | 36.3  |
| Nov 6    | 21.6  | 0.0   |           | 39.0  | Dec 6    | 39.3  | 0.0   |           | 36.3  |
| Nov 7    | 20.1  | 0.0   |           | 38.8  | Dec 7    | 38.1  | 0.0   |           | 36.2  |
| Nov 8    | 23.5  | 0.0   |           | 38.7  | Dec 8    | 40.6  | 0.0   |           | 36.1  |
| Nov 9    | 23.8  | 0.0   |           | 38.7  | Dec 9    | 32.9  | 0.0   |           | 35.7  |
| Nov 10   | 14.2  | 0.0   |           | 38.6  | Dec 10   | 28.4  | 0.0   | 6.0+      | 35.7  |
| Nov 11   | 16.9  | 0.0   |           | 38.5  | Dec 11   | 35.3  | 0.0   | 6.0+      | 35.6  |
| Nov 12   | 20.1  | 0.0   |           | 38.4  | Dec 12   | 27.7  | 0.0   | 6.0       | 35.5  |
| Nov 13   | 20.2  | 0.0   | 6.0       | 38.3  | Dec 13   | 31.1  | 0.0   |           | 35.5  |
| Nov 14   | 23.6  | 0.0   | 5.5       | 38.1  | Dec 14   | 35.6  | 0.0   |           | 35.4  |
| Nov 15   | 21.3  | 0.0   | 5.8       | 37.9  | Dec 15   | 18.8  | 0.0   |           | 35.4  |
| Nov 16   | 22.1  | 0.0   |           | 37.8  | Dec 16   | 22.4  | 0.0   |           | 35.3  |
| Nov 17   | 17.8  | 0.0   |           | 37.7  | Dec 17   | 28.3  | 0.0   |           | 35.2  |
| Nov 18   | 16.8  | 0.0   |           | 37.6  | Dec 18   | 27.0  | 0.0   | 4.3       | 35.1  |
| Nov 19   | 25.0  | 0.0   | 5.4       | 37.6  | Dec 19   | 24.3  | 0.0   | 4.5       | 35.0  |
| Nov 20   | 20.9  | 0.0   | 5.6       | 37.6  | Dec 20   | 19.8  | 0.0   |           | 35.0  |
| Nov 21   | 16.7  | 0.0   | 5.2       | 37.5  | Dec 21   | 26.7  | 0.0   |           | 35.0  |
| Nov 22   | 19.6  | 0.0   |           | 37.4  | Dec 22   | 29.0  | 0.0   |           | 34.9  |
| Nov 23   | 25.6  | 0.0   |           | 37.4  | Dec 23   | 23.7  | 0.0   |           | 34.8  |
| Nov 24   | 20.2  | 0.0   |           | 37.4  | Dec 24   | 25.3  | 0.0   |           | 34.8  |
| Nov 25   | 20.9  | 0.0   |           | 37.4  | Dec 25   | 19.0  | 0.0   |           | 34.7  |
| Nov 26   | 23.1  | 0.0   |           | 37.3  | Dec 26   | 22.3  | 0.0   | 5.0       | 34.7  |
| Nov 27   | 24.9  | 0.0   | 5.8       | 37.2  | Dec 27   | 25.4  | 0.0   | 6.0       | 34.6  |
| Nov 28   | 26.4  | 0.0   | 6.0+      | 37.0  | Dec 28   | 27.0  | 0.0   |           | 34.6  |
| Nov 29   | 20.9  | 0.0   | 6.0       | 36.8  | Dec 29   | 28.0  | 0.0   |           | 34.6  |
| Nov 30   | 18.5  | 0.0   |           | 36.7  | Dec 30   | 23.4  | 0.0   |           | 34.5  |
|          |       |       |           |       | Dec 31   | 29.5  | 0.0   |           | 34.5  |

|      |      |     |     |      |      |      |     |     |      |
|------|------|-----|-----|------|------|------|-----|-----|------|
| AVG. | 21.3 | 0.0 | 5.7 | 38.1 | AVG. | 28.5 | 0.0 | 5.5 | 35.4 |
|------|------|-----|-----|------|------|------|-----|-----|------|

\*Water temps from water quality sensor located in the tailrace

**TABLE 111**  
**YEARLY TOTALS OF SALMONIDS COUNTED OVER**  
**LITTLE GOOSE DAM**  
**1970 - 1981, 1991 - 2012**

| YEAR             | CHINOOK*         | STEELHEAD        | SOCKEYE      | COHO*         | TOTALS           |
|------------------|------------------|------------------|--------------|---------------|------------------|
| 1970             | 72,971           | 59,640           | 163          | 2,480         | 135,254          |
| 1971             | 61,402           | 70,013           | 891          | 2,701         | 135,007          |
| 1972             | 64,211           | 63,638           | 408          | 799           | 129,056          |
| 1973             | 70,605           | 38,820           | 192          | 1,157         | 110,774          |
| 1974             | 26,787           | 14,784           | 124          | 532           | 42,227           |
| 1975             | 26,960           | 15,225           | 173          | 697           | 43,055           |
| 1976             | 32,359           | 20,894           | 644          | 733           | 54,630           |
| 1977             | 49,176           | 47,388           | 574          | 438           | 97,576           |
| 1978             | 56,069           | 24,927           | 168          | 307           | 81,471           |
| 1979             | 12,515           | 21,049           | 72           | 390           | 34,026           |
| 1980             | 10,605           | 38,627           | 88           | 124           | 49,444           |
| 1981             | 19,086           | 38,680           | 200          | 120           | 58,086           |
| **               |                  |                  |              |               |                  |
| 1991             | 13,737           | 96,830           | 10           | 1             | 110,578          |
| 1992             | 26,746           | 117,698          | 12           | 0             | 144,456          |
| 1993             | 32,384           | 59,740           | 16           | 0             | 92,140           |
| 1994             | 5,457            | 45,815           | 44           | 0             | 51,316           |
| 1995             | 5,061            | 77,744           | 17           | 9             | 82,831           |
| 1996             | 13,538           | 82,203           | 1            | 0             | 95,742           |
| 1997             | 49,664           | 74,219           | 10           | 59            | 123,952          |
| 1998             | 19,798           | 63,753           | 5            | 1             | 83,557           |
| 1999             | 17,235           | 65,471           | 16           | 89            | 82,811           |
| 2000             | 62,886           | 101,030          | 296          | 313           | 164,525          |
| 2001             | 214,726          | 261,132          | 72           | 768           | 476,698          |
| 2002             | 119,429          | 215,251          | 38           | 133           | 334,851          |
| 2003             | 114,902          | 176,193          | 23           | 865           | 291,983          |
| 2004             | 100,998          | 151,406          | 81           | 3,042         | 255,527          |
| 2005             | 46,553           | 143,537          | 13           | 1,992         | 192,095          |
| 2006             | 44,695           | 124,440          | 26           | 972           | 170,133          |
| 2007             | 60,398           | 135,414          | 37           | 2,141         | 197,990          |
| 2008             | 108,953          | 168,105          | 594          | 3,806         | 281,458          |
| 2009             | 163,562          | 305,436          | 1,061        | 5,239         | 475,298          |
| 2010             | 189,451          | 193,891          | 1,658        | 2,008         | 387,008          |
| 2011             | 197,424          | 175,328          | 1,436        | 4,851         | 379,039          |
| 2012             | 142,119          | 98,278           | 453          | 2,662         | 243,512          |
| <b>Total</b>     | <b>2,252,462</b> | <b>3,386,599</b> | <b>9,616</b> | <b>39,429</b> | <b>5,688,106</b> |
| <b>10-Yr Avg</b> | <b>116,906</b>   | <b>167,203</b>   | <b>538</b>   | <b>2,758</b>  | <b>287,404</b>   |

\*Jacks included

\*\*1981 was the last year visual counts were made at Little Goose Project until 1991.

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002 extended season counts for February and March 0800-1600 PST and

November and December 0600-1600 PST.

Includes 2003 and 2004 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

TABLE 112

**MONTHLY COUNT OF CHINOOK SALMON  
LITTLE GOOSE DAM; 1970-1981, 1991-2012**

| YEAR            | JAN | FEB | MAR | APR     | MAY     | JUN     | JUL     | AUG    | SEP     | OCT    | NOV   | DEC | TOTALS*   |
|-----------------|-----|-----|-----|---------|---------|---------|---------|--------|---------|--------|-------|-----|-----------|
| 1970            |     |     |     | 6,765   | 32,616  | 15,204  | 11,200  | 1,529  | 4,508   | 965    | 178   | 6   | 72,971    |
| 1971            |     |     |     | 133     | 16,012  | 24,096  | 14,473  | 707    | 5,319   | 606    | 55    | 1   | 61,402    |
| 1972            |     |     |     | 2,226   | 37,991  | 5,585   | 14,747  | 1,614  | 1,445   | 576    | 27    |     | 64,211    |
| 1973            |     |     |     | 17,490  | 34,570  | 10,661  | 4,344   | 520    | 2,472   | 528    | 19    | 1   | 70,605    |
| 1974            |     |     |     | 136     | 14,224  | 4,451   | 6,213   | 556    | 749     | 449    | 9     |     | 26,787    |
| 1975            |     |     |     | 152     | 14,161  | 6,487   | 4,182   | 540    | 1,143   | 295    |       |     | 26,960    |
| 1976            |     |     |     | 612     | 17,403  | 9,470   | 3,575   | 302    | 642     | 355    |       |     | 32,359    |
| 1977            |     |     |     | 16,973  | 19,936  | 6,707   | 4,181   | 182    | 842     | 355    |       |     | 49,176    |
| 1978            |     |     |     | 8,190   | 29,195  | 10,676  | 6,172   | 717    | 621     | 498    |       |     | 56,069    |
| 1979            |     |     |     | 947     | 4,436   | 4,396   | 1,391   | 254    | 802     | 289    |       |     | 12,515    |
| 1980            |     |     |     | 508     | 5,250   | 2,560   | 1,488   | 191    | 368     | 240    |       |     | 10,605    |
| 1981            |     |     |     | 2,798   | 9,399   | 3,214   | 2,217   | 108    | 724     | 626    |       |     | 19,086    |
| **              |     |     |     |         |         |         |         |        |         |        |       |     |           |
| 1991            |     |     |     | 469     | 4,968   | 5,066   | 1,949   | 85     | 715     | 394    | 91    |     | 13,737    |
| 1992            |     |     |     | 8,000   | 11,108  | 4,932   | 1,217   | 94     | 959     | 331    | 105   |     | 26,746    |
| 1993            |     |     |     | 2,032   | 16,308  | 10,018  | 2,425   | 241    | 989     | 317    | 54    |     | 32,384    |
| 1994            |     |     |     | 294     | 2,307   | 1,281   | 282     | 98     | 540     | 610    | 45    |     | 5,457     |
| 1995            |     |     |     | 82      | 1,117   | 1,041   | 481     | 146    | 1,179   | 1,015  |       |     | 5,061     |
| 1996            |     |     |     | 57      | 4,872   | 4,695   | 1,450   | 280    | 1,572   | 612    |       |     | 13,538    |
| 1997            |     |     |     | 519     | 26,980  | 16,769  | 3,007   | 296    | 1,302   | 791    |       |     | 49,664    |
| 1998            |     |     |     | 1,327   | 6,787   | 5,655   | 1,422   | 207    | 2,020   | 2,380  |       |     | 19,798    |
| 1999            |     |     |     | 73      | 3,990   | 4,878   | 1,937   | 432    | 3,787   | 2,138  |       |     | 17,235    |
| 2000            |     |     |     | 7,510   | 31,034  | 11,091  | 2,680   | 749    | 5,148   | 4,674  |       |     | 62,886    |
| 2001            |     |     |     | 96,386  | 61,247  | 31,686  | 6,792   | 1,082  | 12,222  | 4,953  | 356   | 2   | 214,726   |
| 2002            |     | 1   |     | 1,807   | 60,391  | 32,782  | 6,846   | 1,493  | 12,631  | 3,374  | 96    | 8   | 119,429   |
| 2003            |     | 2   |     | 32,082  | 29,615  | 26,129  | 5,838   | 829    | 14,048  | 5,917  | 433   | 9   | 114,902   |
| 2004            |     |     |     | 21,955  | 34,443  | 16,941  | 3,946   | 473    | 19,087  | 3,888  | 264   | 1   | 100,998   |
| 2005            |     |     |     | 599     | 16,952  | 11,484  | 3,638   | 679    | 10,362  | 2,839  |       |     | 46,553    |
| 2006            |     |     |     | 10      | 14,632  | 10,859  | 4,432   | 1,108  | 9,228   | 4,426  |       |     | 44,695    |
| 2007            |     |     |     | 998     | 21,050  | 14,741  | 4,650   | 1,154  | 12,109  | 5,696  |       |     | 60,398    |
| 2008            |     |     |     | 1,294   | 39,284  | 35,674  | 7,926   | 2,252  | 18,892  | 3,631  |       |     | 108,953   |
| 2009            |     |     |     | 173     | 52,369  | 43,467  | 11,800  | 4,289  | 44,304  | 7,160  |       |     | 163,562   |
| 2010            |     |     |     | 14,935  | 72,430  | 37,156  | 9,058   | 2,761  | 39,443  | 13,668 |       |     | 189,451   |
| 2011            |     |     |     | 145     | 60,525  | 67,803  | 21,088  | 5,064  | 31,454  | 11,345 |       |     | 197,424   |
| 2012            |     |     |     | 113     | 58,343  | 22,568  | 6,156   | 3,227  | 43,726  | 7,986  |       |     | 142,119   |
| Total           |     |     | 3   | 247,790 | 865,945 | 520,223 | 183,203 | 34,259 | 305,352 | 93,927 | 1,732 | 28  | 2,252,462 |
| 10-Year Average |     |     |     | 7,230   | 39,964  | 28,682  | 7,853   | 2,184  | 24,265  | 6,656  |       |     | 116,906   |

\*\*1981 was the last year visual counts were made at Little Goose Project until 1991.

\*Jacks included

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.

Includes 2003 and 2004 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.



TABLE 113  
MONTHLY COUNT OF STEELHEAD  
LITTLE GOOSE DAM  
1970 - 1981, 1991 - 2012

| YEAR                   | JAN          | FEB          | MAR           | APR           | MAY           | JUN          | JUL           | AUG            | SEP              | OCT              | NOV           | DEC           | TOTAL            |
|------------------------|--------------|--------------|---------------|---------------|---------------|--------------|---------------|----------------|------------------|------------------|---------------|---------------|------------------|
| 1970                   |              |              | 3,346         | 4,148         | 1,762         | 167          | 1,485         | 7,487          | 27,898           | 11,931           | 1,136         | 280           | 59,640           |
| 1971                   |              |              | 586           | 1,968         | 1,319         | 85           | 1,286         | 3,337          | 38,988           | 19,674           | 2,161         | 609           | 70,013           |
| 1972                   | 248          | 251          | 943           | 2,565         | 720           | 54           | 1,209         | 6,637          | 25,089           | 24,323           | 1,258         | 341           | 63,638           |
| 1973                   | 133          | 80           | 1,039         | 2,051         | 829           | 65           | 1,249         | 2,856          | 16,650           | 12,420           | 1,129         | 319           | 38,820           |
| 1974                   | 191          | 294          | 543           | 1,105         | 278           | 5            | 726           | 2,203          | 3,970            | 4,721            | 583           | 165           | 14,784           |
| 1975                   | 96           | 75           | 70            | 732           | 472           | 16           | 390           | 3,433          | 6,230            | 3,711            |               |               | 15,225           |
| 1976                   |              |              |               | 1,052         | 345           | 133          | 678           | 3,556          | 8,988            | 6,142            |               |               | 20,894           |
| 1977                   |              |              |               | 1,340         | 272           | 155          | 1,951         | 2,738          | 18,753           | 22,179           |               |               | 47,388           |
| 1978                   |              |              |               | 1,625         | 216           | 20           | 593           | 2,617          | 11,547           | 8,309            |               |               | 24,927           |
| 1979                   |              |              |               | 742           | 222           | 16           | 1,614         | 2,326          | 5,278            | 10,851           |               |               | 21,049           |
| 1980                   |              |              |               | 3,063         | 668           | 43           | 821           | 3,858          | 15,305           | 14,869           |               |               | 38,627           |
| 1981                   |              |              |               | 1,360         | 424           | 119          | 1,740         | 2,024          | 11,559           | 21,454           |               |               | 38,680           |
| **                     |              |              |               |               |               |              |               |                |                  |                  |               |               |                  |
| 1991                   |              |              |               | 804           | 266           | 99           | 1,637         | 559            | 31,818           | 53,734           | 7,913         |               | 96,830           |
| 1992                   |              |              |               | 472           | 189           | 141          | 997           | 2,652          | 54,585           | 48,870           | 9,792         |               | 117,698          |
| 1993                   |              |              |               | 1,569         | 343           | 322          | 3,601         | 5,891          | 12,770           | 32,357           | 2,887         |               | 59,740           |
| 1994                   |              |              |               | 771           | 148           | 162          | 1,522         | 2,239          | 8,828            | 25,830           | 6,315         |               | 45,815           |
| 1995                   |              |              |               | 1,130         | 232           | 107          | 1,644         | 5,743          | 31,493           | 37,395           |               |               | 77,744           |
| 1996                   |              |              |               | 936           | 99            | 105          | 1,489         | 7,560          | 40,468           | 31,546           |               |               | 82,203           |
| 1997                   |              |              |               | 1,208         | 197           | 92           | 1,919         | 6,629          | 25,883           | 38,291           |               |               | 74,219           |
| 1998                   |              |              |               | 1,924         | 107           | 139          | 1,090         | 912            | 12,939           | 46,642           |               |               | 63,753           |
| 1999                   |              |              |               | 841           | 78            | 61           | 1,796         | 7,444          | 33,818           | 21,433           |               |               | 65,471           |
| 2000                   |              |              |               | 841           | 112           | 384          | 3,355         | 5,361          | 54,244           | 36,733           |               |               | 101,030          |
| 2001                   |              |              |               | 1,818         | 179           | 1,505        | 9,814         | 17,590         | 111,452          | 90,311           | 20,313        | 8150          | 261,132          |
| 2002                   |              | 1,387        | 3,342         | 5,873         | 294           | 455          | 5,853         | 21,066         | 86,596           | 83,357           | 5,483         | 1545          | 215,251          |
| 2003                   | 310          | 2,067        | 6,744         | 2,001         | 109           | 586          | 4,741         | 6,701          | 81,173           | 65,715           | 5,020         | 1026          | 176,193          |
| 2004                   | 106          | 911          | 2,702         | 1,814         | 87            | 524          | 3,133         | 4,118          | 83,925           | 48,491           | 4,326         | 1269          | 151,406          |
| 2005                   |              |              |               | 896           | 128           | 494          | 2,528         | 5,165          | 62,611           | 71,715           |               |               | 143,537          |
| 2006                   |              |              |               | 2,569         | 120           | 129          | 978           | 3,547          | 54,727           | 62,370           |               |               | 124,440          |
| 2007                   |              |              |               | 2,096         | 205           | 339          | 2,062         | 4,560          | 63,517           | 62,635           |               |               | 135,414          |
| 2008                   |              |              |               | 2,127         | 490           | 179          | 5,770         | 15,499         | 93,240           | 50,800           |               |               | 168,105          |
| 2009                   |              |              |               | 4,839         | 538           | 595          | 5,655         | 13,821         | 160,927          | 119,061          |               |               | 305,436          |
| 2010                   |              |              |               | 2,755         | 369           | 632          | 9,165         | 19,891         | 103,207          | 57,872           |               |               | 193,891          |
| 2011                   |              |              |               | 5,505         | 697           | 151          | 4,283         | 29,183         | 83,281           | 52,228           |               |               | 175,328          |
| 2012                   |              |              |               | 3,416         | 510           | 184          | 1,419         | 3,031          | 52,470           | 37,248           |               |               | 98,278           |
| <b>Total</b>           | <b>1,084</b> | <b>5,065</b> | <b>19,315</b> | <b>67,956</b> | <b>13,024</b> | <b>8,263</b> | <b>88,193</b> | <b>232,234</b> | <b>1,534,227</b> | <b>1,335,218</b> | <b>68,316</b> | <b>13,704</b> | <b>3,386,599</b> |
| <b>10-Year Average</b> |              |              |               | <b>2,802</b>  | <b>325</b>    | <b>381</b>   | <b>3,973</b>  | <b>10,552</b>  | <b>83,908</b>    | <b>62,814</b>    |               |               | <b>167,203</b>   |

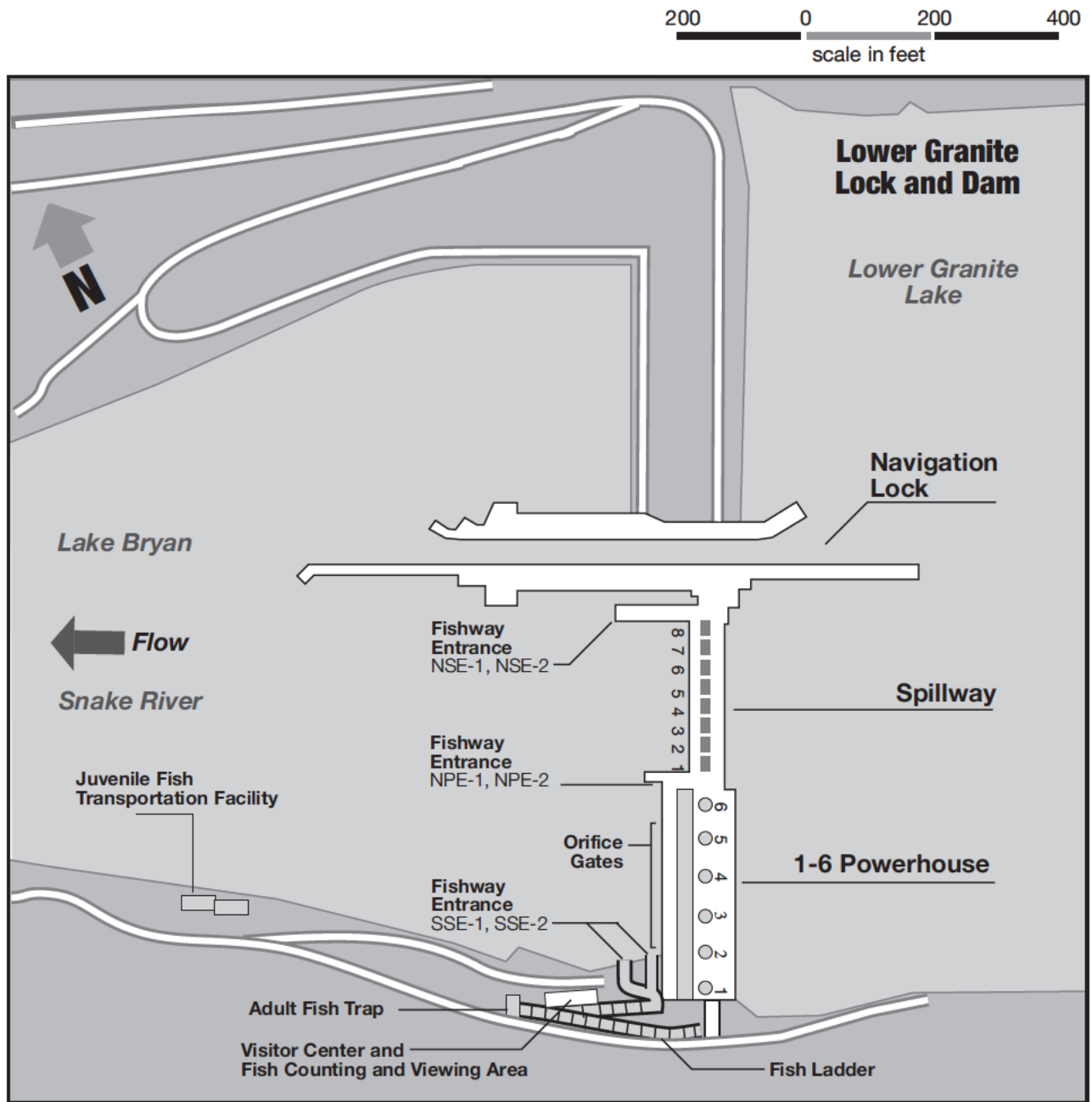
\*\* 1981 was the last year visual counts were made at Little Goose Project until 1991.

Includes 2001 extended season counts for November and December 0600-1600 PST.

Includes 2002 extended season counts for February and March 0800-1600 PST and November and December 0600-1600 PST.

Includes 2003 and 2004 extended season counts for January, February, and March 0800-1600 PST and November and December 0600-1600 PST.

# Plate 9 Lower Granite Lock and Dam



## LOWER GRANITE DAM

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### FISH COUNTING SCHEDULE

|                  |   |
|------------------|---|
| 1 Jan – 28 Feb   | No counting.  |
| 1 Mar – 31 Mar   | Video counting daily 0600 – 1600 hours PST.           |
| 1 April – 31 Oct | Visual counting daily 0400 – 2000 hours PST.          |
| 15 June – 31 Aug | Night video counts for sockeye 2000 – 0400 hours PST. |
| 1 July – 30 Sept | Night video counts for lamprey 2000 – 0400 PST        |
| 1 Nov – 17 Dec   | Video counting daily 0600 – 1600 hours PST.           |

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### FISH LADDER OPERATING SCHEDULE

|                 |  |
|-----------------|--|
| 1 Jan – 3 Jan   | Ladder in service  |
| 4 Jan – 13 Feb  | Ladder dewatered for annual maintenance  |
| 13 Feb – 17 Dec | Ladder in service  |
| 17 Dec - 31 Dec | Ladder dewatered for annual maintenance and lamprey modifications/new grating installation in the powerhouse channel |

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### FISHWAY ACTIVITIES

Water temperatures were monitored hourly by hobo from the fish ladder exit pool and the downstream end of the juvenile fish collection channel. During 2012, hourly readings were taken continuously from June 1 to October 7. In addition, substrate media at the ladder exit pool was examined monthly for zebra and quagga mussels from March through December.

Normal maintenance activities on the adult fish ladder complex took place during the January 4 – February 13 fishway outage. A visual inspection was conducted on all diffuser gratings, gate valves were checked and repaired, fish pumps were serviced, adult fish counting machinery was serviced, picketed leads were refurbished, windows were cleaned and the viewing room window cleaning brush was checked.

Problems continued with the weir motor and cable control system on north shore fishway entrance number 1 (NSE-1) from May 31, 2011. Inspection in 2011 had revealed that the cable had broken and the weir gate had dropped to the sill. The weir motor was also burned up. A temporary adjustment was done on the weir gate by crane on June 7, 2011 and the gate was dogged off at 635.0 feet by cables. This setting was maintained until July 22, 2011 when an A-frame and chain hoist system was put in place to adjust the weir depth relative (at this point 628.5 feet) to the tailwater elevation. The gate remains in this state.

The ladder was dewatered early for the winter 2013 maintenance season in order to facilitate work being done in the ladder to improve lamprey passage. New grating is also being installed in the powerhouse channel.

During the 2012 fish season, the adult fish trap at Lower Granite Dam was operated between March 8 and November 19. Unlike the 2011 season, it was necessary to take the trap out of service several times due to water temperatures exceeding 70°F. The trap was taken out of service for 24 hours starting at 0740 hours on July 18 due to water temperatures in excess of 70°F. The adult fish trap was shut down again at 0700 hours on the morning of Thursday July 26 due to high water temperatures. The trap temperature at the time of shutdown was 71.0 Degrees F. On July 30 at 0730 hours the adult fish trap was again placed in operation, as water temperatures had decreased into the 67 Degree F. range. The adult fish trap was once again shut down at 0704 hours on the morning of Sunday August 5 due to high water temperatures. The trap water temperature at the time of shutdown was 71.5 Degrees F. On August 9 at 0730 hours the adult fish trap was again placed in operation, as water temperatures had decreased into the 68 Degree F. range. On August 12 at 0700 hours the adult fish trap was shut down again because of high water temperatures in their system. Adult fish trap operations resumed on August 28 During 2012 the adult fish trap sample rate was set at a 10% sample rate for the start of the season but was increased to 15% on August 28 and remained at that rate for the duration of the season.

One sort-by-code project was also continued from 2011: 1) diversion of up to 15 Lemhi-Origin Chinook for radio-tagging.

Fall Chinook Transport: Collection of adult fall Chinook for transport to Lyons Ferry Hatchery and the Nez Perce Hatchery at Cherry Lane began on August 28. Actual trucking operations began on Friday, August 31. The hatcheries are picked up fish when numbers on hand were sufficient to warrant a trip to the trap. Trucking operations continued into November when hatchery needs were met.

The juvenile fish facility was operated for fish transport/bypass from March 25 to October 31 and for monitoring and bypass of adult fallbacks and juvenile PIT-tagged fish from March 25 to December 17.

TABLE 114

MONTHLY TOTALS OF SALMONIDS, SHAD, LAMPREY, STURGEON, AND BULL TROUT COUNTED OVER LOWER GRANITE DAM  
2012

| SPECIES      | JAN | FEB | MAR          | APR          | MAY           | JUN           | JUL          | AUG          | SEP           | OCT           | NOV          | DEC          | TOTAL          |
|--------------|-----|-----|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|----------------|
| CHINOOK*     |     |     |              | 36           | 53,549        | 24,743        | 5,607        | 2,353        | 45,341        | 9,016         | 793          | 11           | 141,449        |
| STEELHEAD    |     |     | 4,451        | 3,863        | 613           | 108           | 1,202        | 2,374        | 46,049        | 40,984        | 8,927        | 2,104        | 110,675        |
| SOCKEYE      |     |     |              |              |               | 15            | 410          | 32           | 13            | 0             |              |              | 470            |
| COHO*        |     |     |              |              |               |               |              |              | 1,021         | 1,499         | 114          | 1            | 2,635          |
| PINK         |     |     |              |              |               |               |              |              |               |               |              |              |                |
| <b>TOTAL</b> |     |     | <b>4,451</b> | <b>3,899</b> | <b>54,162</b> | <b>24,866</b> | <b>7,219</b> | <b>4,759</b> | <b>92,424</b> | <b>51,499</b> | <b>9,834</b> | <b>2,116</b> | <b>255,229</b> |
| SHAD         |     |     |              |              |               | 62            | 7,043        | 308          | 0             |               |              |              | 7,413          |
| LAMPREY      |     |     |              |              |               |               | 2            | 40           | 6             | 0             |              |              | 48             |
| STURGEON     |     |     |              |              |               |               |              |              |               |               |              |              | 0              |
| BULL TROUT   |     |     |              |              | 1             | 1             |              |              |               |               |              |              | 2              |

\*Jacks included

These counts include the extended season videotaped counts that were made between 0600 and 1600 hours in November and December.

TABLE 115  
DISCHARGE AND WATER DATA  
LOWER GRANITE PROJECT 2012

|        |  | JANUARY |       |           |       |        |  | FEBRUARY |       |           |       |
|--------|--|---------|-------|-----------|-------|--------|--|----------|-------|-----------|-------|
|        |  | DISCH   | SPILL | TURBIDITY |       |        |  | DISCH    | SPILL | TURBIDITY |       |
|        |  | KCFS    | KCFS  | SECCHI    | DEG F |        |  | KCFS     | KCFS  | SECCHI    | DEG F |
| Jan 1  |  | 32.0    | 0.0   |           |       | Feb 1  |  | 29.0     | 0.0   |           |       |
| Jan 2  |  | 28.7    | 0.0   |           |       | Feb 2  |  | 32.8     | 0.0   |           |       |
| Jan 3  |  | 32.9    | 0.0   |           |       | Feb 3  |  | 31.0     | 0.0   |           |       |
| Jan 4  |  | 30.0    | 0.0   |           |       | Feb 4  |  | 31.0     | 0.0   |           |       |
| Jan 5  |  | 26.0    | 0.0   |           |       | Feb 5  |  | 30.9     | 0.0   |           |       |
| Jan 6  |  | 24.5    | 0.0   |           |       | Feb 6  |  | 29.9     | 0.0   |           |       |
| Jan 7  |  | 22.6    | 0.0   |           |       | Feb 7  |  | 33.7     | 0.0   |           |       |
| Jan 8  |  | 26.7    | 0.0   |           |       | Feb 8  |  | 25.9     | 0.0   |           |       |
| Jan 9  |  | 26.1    | 0.0   |           |       | Feb 9  |  | 31.6     | 0.0   |           |       |
| Jan 10 |  | 24.3    | 0.0   |           |       | Feb 10 |  | 28.6     | 0.0   |           |       |
| Jan 11 |  | 23.5    | 0.0   |           |       | Feb 11 |  | 31.0     | 0.0   |           |       |
| Jan 12 |  | 24.7    | 0.0   |           |       | Feb 12 |  | 28.2     | 0.0   |           |       |
| Jan 13 |  | 27.0    | 0.0   |           |       | Feb 13 |  | 31.0     | 0.0   |           |       |
| Jan 14 |  | 22.4    | 0.0   |           |       | Feb 14 |  | 30.5     | 0.0   |           |       |
| Jan 15 |  | 23.8    | 0.0   |           |       | Feb 15 |  | 32.2     | 0.0   |           |       |
| Jan 16 |  | 20.3    | 0.0   |           |       | Feb 16 |  | 32.4     | 0.0   |           |       |
| Jan 17 |  | 23.2    | 0.0   |           |       | Feb 17 |  | 27.5     | 0.0   |           |       |
| Jan 18 |  | 30.1    | 0.0   |           |       | Feb 18 |  | 29.8     | 0.0   |           |       |
| Jan 19 |  | 27.2    | 0.0   |           |       | Feb 19 |  | 30.0     | 0.0   |           |       |
| Jan 20 |  | 31.6    | 0.0   |           |       | Feb 20 |  | 33.0     | 0.0   |           |       |
| Jan 21 |  | 30.6    | 0.0   |           |       | Feb 21 |  | 30.5     | 0.0   |           |       |
| Jan 22 |  | 31.8    | 0.0   |           |       | Feb 22 |  | 37.2     | 0.0   |           |       |
| Jan 23 |  | 33.6    | 0.0   |           |       | Feb 23 |  | 62.5     | 14.9  |           |       |
| Jan 24 |  | 32.5    | 0.0   |           |       | Feb 24 |  | 56.8     | 0.0   |           |       |
| Jan 25 |  | 32.1    | 0.0   |           |       | Feb 25 |  | 39.1     | 0.0   |           |       |
| Jan 26 |  | 31.9    | 0.0   |           |       | Feb 26 |  | 41.6     | 0.0   |           |       |
| Jan 27 |  | 32.7    | 0.0   |           |       | Feb 27 |  | 37.1     | 0.0   |           |       |
| Jan 28 |  | 31.8    | 0.0   |           |       | Feb 28 |  | 40.3     | 0.0   |           |       |
| Jan 29 |  | 33.5    | 0.0   |           |       | Feb 29 |  | 42.6     | 0.0   |           |       |
| Jan 30 |  | 31.7    | 0.0   |           |       |        |  |          |       |           |       |
| Jan 31 |  | 30.5    | 0.0   |           |       |        |  |          |       |           |       |
| AVG.   |  | 28.4    | 0.0   |           |       | AVG.   |  | 34.4     | 0.5   |           |       |

TABLE 116  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

MARCH 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL     |                     | SHAD | LAMPREY | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY |       |  |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|-----------|---------------------|------|---------|------------|------------|------------|-----------|-------|--|
|              | SPRING        | SUMMER | FALL |              |            |           |         | STEELHEAD | unclipped STEELHEAD |      |         |            |            |            | SECCHI    | DEG F |  |
| Mar 1        |               |        |      |              |            |           |         | 84        | 34                  |      |         |            | 38.4       | 0.0        | 2.4       | 42.4  |  |
| Mar 2        |               |        |      |              |            |           |         | 70        | 30                  |      |         |            | 35.2       | 0.0        |           |       |  |
| Mar 3        |               |        |      |              |            |           |         | 115       | 35                  |      |         |            | 37.8       | 0.0        |           |       |  |
| Mar 4        |               |        |      |              |            |           |         | 129       | 51                  |      |         |            | 39.3       | 0.0        |           |       |  |
| Mar 5        |               |        |      |              |            |           |         | 60        | 18                  |      |         |            | 38.9       | 0.0        | 3.0       | 42.3  |  |
| Mar 6        |               |        |      |              |            |           |         | 33        | 8                   |      |         |            | 36.1       | 0.0        | 3.6       | 42.8  |  |
| Mar 7        |               |        |      |              |            |           |         | 20        | 5                   |      |         |            | 38.4       | 0.0        | 4.6       | 43.0  |  |
| Mar 8        |               |        |      |              |            |           |         | 37        | 12                  |      |         |            | 36.7       | 0.0        |           |       |  |
| Mar 9        |               |        |      |              |            |           |         | 51        | 16                  |      |         |            | 38.1       | 0.0        |           |       |  |
| Mar 10       |               |        |      |              |            |           |         | 66        | 25                  |      |         |            | 41.8       | 0.0        |           |       |  |
| Mar 11       |               |        |      |              |            |           |         | 210       | 81                  |      |         |            | 33.8       | 0.0        |           |       |  |
| Mar 12       |               |        |      |              |            |           |         | 71        | 33                  |      |         |            | 49.7       | 0.0        | 4.4       | 43.7  |  |
| Mar 13       |               |        |      |              |            |           |         | 91        | 37                  |      |         |            | 46.5       | 0.0        | 3.8       | 44.3  |  |
| Mar 14       |               |        |      |              |            |           |         | 86        | 34                  |      |         |            | 51.5       | 0.0        | 4.0       | 44.9  |  |
| Mar 15       |               |        |      |              |            |           |         | 132       | 58                  |      |         |            | 52.4       | 0.0        |           |       |  |
| Mar 16       |               |        |      |              |            |           |         | 154       | 68                  |      |         |            | 66.7       | 0.0        |           |       |  |
| Mar 17       |               |        |      |              |            |           |         | 96        | 34                  |      |         |            | 75.8       | 15.0       |           |       |  |
| Mar 18       |               |        |      |              |            |           |         | 247       | 85                  |      |         |            | 69.9       | 11.0       |           |       |  |
| Mar 19       |               |        |      |              |            |           |         | 290       | 69                  |      |         |            | 70.1       | 0.0        | 1.6       | 45.7  |  |
| Mar 20       |               |        |      |              |            |           |         | 227       | 40                  |      |         |            | 68.2       | 0.0        | 1.3       | 45.9  |  |
| Mar 21       |               |        |      |              |            |           |         | 169       | 35                  |      |         |            | 73.4       | 0.0        | 1.5       | 46.0  |  |
| Mar 22       |               |        |      |              |            |           |         | 192       | 44                  |      |         |            | 73.9       | 0.0        |           |       |  |
| Mar 23       |               |        |      |              |            |           |         | 182       | 36                  |      |         |            | 73.9       | 0.0        |           |       |  |
| Mar 24       |               |        |      |              |            |           |         | 205       | 43                  |      |         |            | 75.0       | 0.0        |           |       |  |
| Mar 25       |               |        |      |              |            |           |         | 200       | 96                  |      |         |            | 76.1       | 0.9        | 2.6       | 45.8  |  |
| Mar 26       |               |        |      |              |            |           |         | 121       | 42                  |      |         |            | 86.8       | 12.8       | 2.8       | 45.8  |  |
| Mar 27       |               |        |      |              |            |           |         | 205       | 76                  |      |         |            | 94.2       | 7.5        | 2.7       | 46.4  |  |
| Mar 28       |               |        |      |              |            |           |         | 204       | 43                  |      |         |            | 88.3       | 5.3        | 0.9       | 46.8  |  |
| Mar 29       |               |        |      |              |            |           |         | 199       | 29                  |      |         |            | 88.4       | 0.0        | 0.8       | 47.7  |  |
| Mar 30       |               |        |      |              |            |           |         | 300       | 101                 |      |         |            | 96.8       | 25.8       |           |       |  |
| Mar 31       |               |        |      |              |            |           |         | 205       | 96                  |      |         |            | 114.7      | 24.5       |           |       |  |
| <b>TOTAL</b> |               |        |      |              |            |           |         | 4,451     | 1,414               |      |         |            |            |            |           |       |  |
| AVG.         |               |        |      |              |            |           |         | 144       | 46                  |      |         |            | 61.5       | 3.3        | 2.7       | 46.3  |  |

Note: March counts were from video tape. The counts are 10-hour counts and occurred between 0600-1600 PST.

TABLE 117  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

APRIL 2012

| DATE           | CHINOOK ADULT |                      |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL        |                            | SHAD | LAMPREY | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|----------------|---------------|----------------------|------|--------------|------------|-----------|---------|--------------|----------------------------|------|---------|------------|------------|------------|-----------|-------|
|                | SPRING        | SUMMER               | FALL |              |            |           |         | STEELHEAD    | unclipped STEELHEAD        |      |         |            |            |            | SECCHI    | DEG F |
| Apr 1          | 0             |                      |      |              |            |           |         | 316          | 173                        |      |         |            | 127.9      | 24.1       | 1.7       | 48.5  |
| Apr 2          | 0             |                      |      |              |            |           |         | 328          | 160                        |      |         |            | 126.0      | 21.0       | 1.4       | 48.6  |
| Apr 3          | 0             |                      |      |              |            |           |         | 216          | 120                        |      |         |            | 111.3      | 27.8       | 1.6       | 48.8  |
| Apr 4          | 0             |                      |      |              |            |           |         | 238          | 110                        |      |         |            | 106.1      | 20.1       |           |       |
| Apr 5          | 0             |                      |      |              |            |           |         | 172          | 82                         |      |         |            | 108.2      | 20.2       | 2.4       | 48.7  |
| Apr 6          | 0             |                      |      |              |            |           |         | 145          | 68                         |      |         |            | 106.3      | 20.3       | 2.7       | 47.7  |
| Apr 7          | 0             |                      |      |              |            |           |         | 157          | 85                         |      |         |            | 99.9       | 23.2       | 3.0       | 47.9  |
| Apr 8          | 0             |                      |      |              |            |           |         | 180          | 84                         |      |         |            | 95.3       | 20.3       | 3.1       | 47.7  |
| Apr 9          | 0             |                      |      |              |            |           |         | 179          | 95                         |      |         |            | 92.6       | 20.3       |           |       |
| Apr 10         | 0             |                      |      |              |            |           |         | 117          | 61                         |      |         |            | 92.3       | 20.0       | 3.1       | 49.5  |
| Apr 11         | 0             |                      |      |              |            |           |         | 141          | 82                         |      |         |            | 97.3       | 20.2       |           |       |
| Apr 12         | 0             |                      |      |              |            |           |         | 121          | 56                         |      |         |            | 103.0      | 23.4       | 3.5       | 49.6  |
| Apr 13         | 0             |                      |      |              |            |           |         | 138          | 74                         |      |         |            | 112.1      | 21.5       | 3.7       | 50.9  |
| Apr 14         | 0             |                      |      |              |            |           |         | 153          | 85                         |      |         |            | 111.2      | 28.6       | 3.9       | 51.1  |
| Apr 15         | 1             |                      |      |              |            |           |         | 152          | 72                         |      |         |            | 104.8      | 26.1       | 3.6       | 50.7  |
| Apr 16         | 0             |                      |      |              |            |           |         | 93           | 50                         |      |         |            | 100.1      | 21.1       |           |       |
| Apr 17         | 0             |                      |      |              |            |           |         | 102          | 53                         |      |         |            | 99.8       | 20.1       |           |       |
| Apr 18         | 0             |                      |      |              |            |           |         | 58           | 36                         |      |         |            | 101.3      | 21.2       | 3.4       | 49.8  |
| Apr 19         | 0             |                      |      |              |            |           |         | 101          | 55                         |      |         |            | 104.3      | 24.4       |           |       |
| Apr 20         | 0             |                      |      |              |            |           |         | 85           | 44                         |      |         |            | 104.2      | 24.4       | 2.5       | 51.5  |
| Apr 21         | 0             |                      |      |              |            |           |         | 79           | 55                         |      |         |            | 106.3      | 20.4       | 2.7       | 52.0  |
| Apr 22         | 0             |                      |      |              |            |           |         | 82           | 52                         |      |         |            | 115.3      | 24.3       | 3.0       | 52.2  |
| Apr 23         | 1             |                      |      |              |            |           |         | 88           | 48                         |      |         |            | 129.2      | 40.6       |           |       |
| Apr 24         | 4             |                      |      |              |            |           |         | 78           | 48                         |      |         |            | 143.7      | 58.4       | 3.0       | 53.6  |
| Apr 25         | 4             |                      |      |              |            |           |         | 72           | 46                         |      |         |            | 167.5      | 79.7       |           |       |
| Apr 26         | 6             |                      |      |              |            |           |         | 69           | 49                         |      |         |            | 170.5      | 77.1       |           |       |
| Apr 27         | 2             |                      |      |              |            |           |         | 46           | 34                         |      |         |            | 186.3      | 92.5       | 1.7       | 51.8  |
| Apr 28         | 1             |                      |      |              |            |           |         | 54           | 32                         |      |         |            | 178.4      | 84.4       | 1.9       | 50.2  |
| Apr 29         | 6             |                      |      |              |            |           |         | 43           | 36                         |      |         |            | 154.3      | 60.9       | 2.0       | 49.0  |
| Apr 30         | 11            |                      |      |              |            |           |         | 60           | 38                         |      |         |            | 135.1      | 43.2       | 1.5       | 49.1  |
| <b>TOTAL</b>   | <b>36</b>     |                      |      |              |            |           |         | <b>3,863</b> | <b>2,083</b>               |      |         |            |            |            |           |       |
| AVG.           | 1             |                      |      |              |            |           |         | 129          | 69                         |      |         |            | 119.7      | 34.3       | 2.6       | 49.9  |
| RUN YEAR       |               | <b>CHINOOK ADULT</b> |      |              |            |           |         |              | <b>unclipped STEELHEAD</b> |      |         |            |            |            |           |       |
| TOTALS TO DATE |               | 36                   |      |              |            |           |         | 8,314        | 3,497                      |      |         |            |            |            |           |       |

Note: Visual counts occurred April 1 through October 31. The counts are 16-hour counts and occurred between 0400-2000 PST.



TABLE 118

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT |                      |                     | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL            |                            | SHAD | LAMPREY | BULL TROUT        | DISCH KCFS   | SPILL KCFS  | TURBIDITY SECCHI | DEG F       |
|-----------------------|---------------|----------------------|---------------------|--------------|------------|-----------|---------|------------------|----------------------------|------|---------|-------------------|--------------|-------------|------------------|-------------|
|                       | SPRING        | SUMMER               | FALL                |              |            |           |         | STEELHEAD        | unclipped STEELHEAD        |      |         |                   |              |             |                  |             |
| May 1                 | 22            |                      |                     | 0            |            |           |         | 64               | 50                         |      |         | 0                 | 137.8        | 46.9        |                  |             |
| May 2                 | 35            |                      |                     | 0            |            |           |         | 58               | 34                         |      |         | 0                 | 130.4        | 37.8        | 1.7              | 52.5        |
| May 3                 | 36            |                      |                     | 1            |            |           |         | 55               | 35                         |      |         | 0                 | 121.4        | 28.7        |                  |             |
| May 4                 | 82            |                      |                     | 2            |            |           |         | 36               | 26                         |      |         | 0                 | 113.7        | 42.2        | 2.1              | 52.1        |
| May 5                 | 120           |                      |                     | 2            |            |           |         | 27               | 20                         |      |         | 0                 | 103.9        | 43.9        | 3.0              | 52.0        |
| May 6                 | 187           |                      |                     | 5            |            |           |         | 34               | 23                         |      |         | 0                 | 97.4         | 23.5        | 3.3              | 51.9        |
| May 7                 | 197           |                      |                     | 6            |            |           |         | 29               | 22                         |      |         | 0                 | 98.9         | 22.7        |                  |             |
| May 8                 | 281           |                      |                     | 26           |            |           |         | 33               | 25                         |      |         | 0                 | 93.6         | 30.1        | 3.0              | 50.0        |
| May 9                 | 330           |                      |                     | 17           |            |           |         | 26               | 13                         |      |         | 0                 | 93.4         | 42.6        |                  |             |
| May 10                | 220           |                      |                     | 11           |            |           |         | 23               | 17                         |      |         | 0                 | 96.8         | 25.3        |                  |             |
| May 11                | 316           |                      |                     | 14           |            |           |         | 25               | 14                         |      |         | 1                 | 101.4        | 20.1        | 3.5              | 54.5        |
| May 12                | 446           |                      |                     | 19           |            |           |         | 24               | 20                         |      |         | 0                 | 97.5         | 20.3        | 3.3              | 54.8        |
| May 13                | 372           |                      |                     | 24           |            |           |         | 23               | 19                         |      |         | 0                 | 95.1         | 20.2        | 3.8              | 54.4        |
| May 14                | 277           |                      |                     | 11           |            |           |         | 13               | 12                         |      |         | 0                 | 101.6        | 20.2        |                  |             |
| May 15                | 619           |                      |                     | 50           |            |           |         | 24               | 16                         |      |         | 0                 | 107.2        | 20.5        |                  |             |
| May 16                | 1,687         |                      |                     | 32           |            |           |         | 12               | 10                         |      |         | 0                 | 120.2        | 30.6        |                  |             |
| May 17                | 1,609         |                      |                     | 41           |            |           |         | 14               | 10                         |      |         | 0                 | 133.8        | 48.4        | 3.0              | 54.1        |
| May 18                | 3,172         |                      |                     | 65           |            |           |         | 10               | 8                          |      |         | 0                 | 129.2        | 44.8        | 2.4              | 54.4        |
| May 19                | 8,425         |                      |                     | 161          |            |           |         | 14               | 7                          |      |         | 0                 | 112.4        | 32.0        | 2.9              | 54.3        |
| May 20                | 6,402         |                      |                     | 181          |            |           |         | 18               | 17                         |      |         | 0                 | 106.2        | 21.5        |                  |             |
| May 21                | 3,673         |                      |                     | 118          |            |           |         | 11               | 10                         |      |         | 0                 | 106.9        | 21.3        |                  |             |
| May 22                | 4,418         |                      |                     | 215          |            |           |         | 6                | 4                          |      |         | 0                 | 118.1        | 31.8        | 2.7              | 54.6        |
| May 23                | 3,727         |                      |                     | 203          |            |           |         | 4                | 4                          |      |         | 0                 | 137.7        | 47.4        |                  |             |
| May 24                | 3,750         |                      |                     | 290          |            |           |         | 8                | 6                          |      |         | 0                 | 122.1        | 30.4        | 2.5              | 55.0        |
| May 25                | 2,902         |                      |                     | 179          |            |           |         | 1                | 1                          |      |         | 0                 | 109.6        | 25.8        | 3.2              | 53.7        |
| May 26                | 2,036         |                      |                     | 180          |            |           |         | 4                | 4                          |      |         | 0                 | 96.1         | 20.2        | 3.6              | 53.2        |
| May 27                | 965           |                      |                     | 100          |            |           |         | 4                | 4                          |      |         | 0                 | 81.9         | 20.2        | 3.6              | 53.5        |
| May 28                | 1,385         |                      |                     | 113          |            |           |         | 3                | 2                          |      |         | 0                 | 77.5         | 20.1        |                  |             |
| May 29                | 992           |                      |                     | 112          |            |           |         | 5                | 4                          |      |         | 0                 | 81.1         | 20.1        | 3.5              | 55.0        |
| May 30                | 1,350         |                      |                     | 115          |            |           |         | 4                | 4                          |      |         | 0                 | 81.6         | 20.1        |                  |             |
| May 31                | 1,111         |                      |                     | 112          |            |           |         | 1                | 1                          |      |         | 0                 | 79.2         | 20.3        |                  |             |
| <b>TOTAL</b>          | <b>51,144</b> |                      |                     | <b>2,405</b> |            |           |         | <b>613</b>       | <b>442</b>                 |      |         | <b>1</b>          |              |             |                  |             |
| <b>AVG.</b>           | <b>1650</b>   |                      |                     | <b>78</b>    |            |           |         | <b>20</b>        | <b>14</b>                  |      |         | <b>0</b>          | <b>105.9</b> | <b>29.0</b> | <b>3.0</b>       | <b>53.5</b> |
| <b>RUN YEAR</b>       |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |            |           |         | <b>STEELHEAD</b> | <b>unclipped STEELHEAD</b> |      |         | <b>BULL TROUT</b> |              |             |                  |             |
| <b>TOTALS TO DATE</b> |               |                      |                     |              |            |           |         |                  |                            |      |         |                   |              |             |                  |             |
| <b>SPRING</b>         |               | <b>51,180</b>        | <b>2,405</b>        |              |            |           |         | <b>8,927</b>     | <b>3,939</b>               |      |         | <b>1</b>          |              |             |                  |             |

TABLE 119

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE   | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD      | LAMPREY | BULL TROUT | DISCH KCFS  | SPILL KCFS  | TURBIDITY  |             |
|--------------|---------------|--------------|------|--------------|------------|-----------|-----------|-----------------|---------------------|-----------|---------|------------|-------------|-------------|------------|-------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |           |                 |                     |           |         |            |             |             | SECCHI     | DEG F       |
| Jun 1        | 1,584         |              |      | 133          |            |           | 0         | 1               | 1                   | 0         |         | 0          | 80.0        | 20.3        | 4.1        | 55.5        |
| Jun 2        | 898           |              |      | 95           |            |           | 0         | 1               | 1                   | 0         |         | 0          | 93.1        | 20.4        | 4.5        | 55.8        |
| Jun 3        | 1,130         |              |      | 113          |            |           | 0         | 0               | 0                   | 0         |         | 0          | 103.0       | 20.4        | 4.0        | 56.8        |
| Jun 4        | 574           |              |      | 66           |            |           | 0         | 1               | 0                   | 0         |         | 0          | 106.4       | 20.5        |            |             |
| Jun 5        | 829           |              |      | 80           |            |           | 0         | 2               | 1                   | 0         |         | 0          | 121.1       | 35.8        |            |             |
| Jun 6        | 724           |              |      | 72           |            |           | 0         | 0               | 0                   | 0         |         | 0          | 130.3       | 48.7        |            |             |
| Jun 7        | 449           |              |      | 31           |            |           | 0         | 0               | 0                   | 0         |         | 0          | 111.5       | 34.5        | 3.6        | 54.7        |
| Jun 8        | 628           |              |      | 30           |            |           | 0         | 0               | 0                   | 0         |         | 0          | 102.1       | 49.0        | 2.8        | 54.3        |
| Jun 9        | 858           |              |      | 53           |            |           | 0         | 2               | 1                   | 0         |         | 0          | 91.8        | 56.9        |            |             |
| Jun 10       | 468           |              |      | 22           |            |           | 0         | 2               | 1                   | 0         |         | 0          | 91.6        | 50.0        | 3.6        | 53.7        |
| Jun 11       | 484           |              |      | 32           |            |           | 0         | 1               | 1                   | 0         |         | 0          | 90.5        | 31.2        |            |             |
| Jun 12       | 1,548         |              |      | 70           |            |           | 0         | 2               | 0                   | 0         |         | 0          | 81.0        | 29.4        |            |             |
| Jun 13       | 1,410         |              |      | 94           |            |           | 0         | 0               | 0                   | 0         |         | 0          | 83.7        | 51.1        |            |             |
| Jun 14       | 485           |              |      | 44           |            |           | 0         | 4               | 0                   | 0         |         | 0          | 94.6        | 32.5        | 3.0        | 56.0        |
| Jun 15       | 881           |              |      | 50           |            |           | 0         | 2               | 0                   | 0         |         | 0          | 89.1        | 25.9        | 4.3        | 56.6        |
| Jun 16       | 1,427         |              |      | 70           |            |           | 0         | 1               | 0                   | 0         |         | 0          | 86.1        | 31.1        | 4.4        | 57.5        |
| Jun 17       | 809           |              |      | 65           |            |           | 0         | 6               | 1                   | 0         |         | 1          | 84.3        | 41.4        | 5.0        | 58.4        |
| Jun 18       |               | 532          |      | 44           |            |           | 0         | 5               | 0                   | 0         |         | 0          | 83.7        | 41.6        | 4.8        | 58.6        |
| Jun 19       |               | 490          |      | 49           |            |           | 0         | 6               | 1                   | 0         |         | 0          | 93.9        | 37.6        | 4.6        | 59.0        |
| Jun 20       |               | 703          |      | 66           |            |           | 0         | 2               | 0                   | 0         |         | 0          | 89.2        | 21.3        |            |             |
| Jun 21       |               | 1093         |      | 83           |            |           | 0         | 1               | 1                   | 0         |         | 0          | 82.3        | 20.5        |            |             |
| Jun 22       |               | 685          |      | 72           |            |           | 0         | 2               | 1                   | 0         |         | 0          | 81.2        | 34.5        | 5.0        | 58.1        |
| Jun 23       |               | 354          |      | 41           |            |           | 0         | 11              | 6                   | 2         |         | 0          | 83.6        | 34.3        | 5.0        | 59.2        |
| Jun 24       |               | 419          |      | 78           |            |           | 1         | 2               | 2                   | 0         |         | 0          | 86.1        | 29.4        | 5.0        | 59.8        |
| Jun 25       |               | 425          |      | 74           |            |           | 0         | 4               | 0                   | 7         |         | 0          | 83.9        | 21.1        |            |             |
| Jun 26       |               | 910          |      | 86           |            |           | 0         | 6               | 1                   | 6         |         | 0          | 82.7        | 38.1        | 4.4        | 60.7        |
| Jun 27       |               | 438          |      | 44           |            |           | 2         | 9               | 1                   | 6         |         | 0          | 86.4        | 25.2        |            |             |
| Jun 28       |               | 893          |      | 54           |            |           | 2         | 10              | 5                   | 7         |         | 0          | 75.0        | 19.7        |            |             |
| Jun 29       |               | 379          |      | 46           |            |           | 4         | 7               | 2                   | 6         |         | 0          | 65.5        | 23.5        | 5.0        | 61.2        |
| Jun 30       |               | 335          |      | 44           |            |           | 6         | 18              | 6                   | 28        |         | 0          | 64.1        | 29.7        | 4.4        | 61.0        |
| <b>TOTAL</b> | <b>15,186</b> | <b>7,656</b> |      | <b>1,901</b> |            |           | <b>15</b> | <b>108</b>      | <b>33</b>           | <b>62</b> |         | <b>1</b>   |             |             |            |             |
| <b>AVG.</b>  | <b>893</b>    | <b>589</b>   |      | <b>63</b>    |            |           | <b>1</b>  | <b>4</b>        | <b>1</b>            | <b>2</b>  |         | <b>0</b>   | <b>89.9</b> | <b>32.5</b> | <b>4.3</b> | <b>57.6</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 66,366        | 3,525        |
| SUMMER         | 7,656         | 781          |
| TOTAL          | 74,022        | 4,306        |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD | BULL TROUT |
|---------|-----------|---------------------|------|------------|
| 15      | 9,035     | 3,972               | 62   | 2          |

TABLE 120

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE    | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD         | LAMPREY  | BULL TROUT | DISCH KCFS  | SPILL KCFS  | TURBIDITY  |             |
|--------------|---------------|--------------|------|--------------|------------|-----------|------------|-----------------|---------------------|--------------|----------|------------|-------------|-------------|------------|-------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |            |                 |                     |              |          |            |             |             | SECCHI     | DEG F       |
| Jul 1        |               | 200          |      | 41           |            |           | 6          | 16              | 5                   | 5            | 0        |            | 61.2        | 37.4        | 5.0        | 62.0        |
| Jul 2        |               | 118          |      | 30           |            |           | 4          | 20              | 8                   | 16           | 0        |            | 62.3        | 31.3        |            |             |
| Jul 3        |               | 439          |      | 46           |            |           | 4          | 19              | 5                   | 5            | 0        |            | 61.4        | 24.6        | 5.0        | 62.6        |
| Jul 4        |               | 476          |      | 66           |            |           | 6          | 12              | 5                   | 13           | 0        |            | 60.4        | 24.6        |            |             |
| Jul 5        |               | 295          |      | 49           |            |           | 11         | 25              | 11                  | 10           | 0        |            | 51.2        | 21.6        | 5.0        | 63.3        |
| Jul 6        |               | 133          |      | 30           |            |           | 13         | 29              | 12                  | 48           | 1        |            | 48.4        | 18.6        | 5.0        | 64.1        |
| Jul 7        |               | 118          |      | 37           |            |           | 20         | 20              | 8                   | 94           | 0        |            | 52.0        | 18.4        | 5.0        | 64.1        |
| Jul 8        |               | 157          |      | 32           |            |           | 18         | 18              | 11                  | 206          | 0        |            | 46.7        | 18.4        | 5.0        | 65.7        |
| Jul 9        |               | 191          |      | 13           |            |           | 18         | 25              | 6                   | 119          | 0        |            | 46.2        | 18.4        |            |             |
| Jul 10       |               | 456          |      | 43           |            |           | 32         | 24              | 13                  | 389          | 0        |            | 50.4        | 21.2        |            |             |
| Jul 11       |               | 209          |      | 18           |            |           | 7          | 21              | 11                  | 451          | 0        |            | 55.9        | 23.4        |            |             |
| Jul 12       |               | 124          |      | 25           |            |           | 16         | 28              | 11                  | 263          | 0        |            | 50.8        | 20.4        |            |             |
| Jul 13       |               | 103          |      | 11           |            |           | 16         | 17              | 6                   | 235          | 0        |            | 49.2        | 22.4        | 5.0        | 67.8        |
| Jul 14       |               | 73           |      | 14           |            |           | 16         | 30              | 14                  | 334          | 0        |            | 40.7        | 19.2        | 5.0        | 67.2        |
| Jul 15       |               | 85           |      | 12           |            |           | 18         | 31              | 11                  | 331          | 0        |            | 42.5        | 26.5        | 5.0        | 67.4        |
| Jul 16       |               | 124          |      | 44           |            |           | 16         | 66              | 20                  | 508          | 0        |            | 46.9        | 22.0        | 5.0        | 67.0        |
| Jul 17       |               | 58           |      | 25           |            |           | 14         | 52              | 17                  | 406          | 0        |            | 45.3        | 18.9        |            |             |
| Jul 18       |               | 97           |      | 35           |            |           | 24         | 42              | 22                  | 668          | 0        |            | 44.9        | 19.8        |            |             |
| Jul 19       |               | 128          |      | 26           |            |           | 22         | 27              | 13                  | 518          | 0        |            | 43.9        | 18.2        | 5.0        | 65.8        |
| Jul 20       |               | 100          |      | 25           |            |           | 12         | 45              | 25                  | 362          | 0        |            | 41.6        | 20.3        | 5.0        | 66.0        |
| Jul 21       |               | 161          |      | 26           |            |           | 19         | 51              | 23                  | 466          | 0        |            | 44.6        | 22.4        | 5.0        | 66.7        |
| Jul 22       |               | 172          |      | 41           |            |           | 17         | 59              | 37                  | 365          | 0        |            | 39.3        | 21.0        | 5.0        | 67.1        |
| Jul 23       |               | 133          |      | 34           |            |           | 16         | 68              | 30                  | 209          | 0        |            | 38.3        | 19.1        | 5.0        | 67.4        |
| Jul 24       |               | 124          |      | 19           |            |           | 14         | 82              | 42                  | 133          | 0        |            | 37.7        | 18.4        |            |             |
| Jul 25       |               | 73           |      | 12           |            |           | 5          | 60              | 26                  | 73           | 0        |            | 37.6        | 18.8        | 5.0        | 67.0        |
| Jul 26       |               | 55           |      | 12           |            |           | 11         | 63              | 34                  | 151          | 0        |            | 39.5        | 18.5        | 5.0        | 66.6        |
| Jul 27       |               | 134          |      | 13           |            |           | 8          | 101             | 58                  | 266          | -1       |            | 40.6        | 19.3        | 5.0        | 66.6        |
| Jul 28       |               | 82           |      | 17           |            |           | 5          | 44              | 20                  | 142          | 1        |            | 37.7        | 20.1        | 5.0        | 66.4        |
| Jul 29       |               | 73           |      | 16           |            |           | 11         | 37              | 14                  | 88           | 0        |            | 33.7        | 18.3        | 5.0        | 65.8        |
| Jul 30       |               | 38           |      | 11           |            |           | 1          | 28              | 5                   | 108          | 1        |            | 36.2        | 18.4        |            |             |
| Jul 31       |               | 53           |      | 2            |            |           | 10         | 42              | 20                  | 61           | 0        |            | 38.5        | 18.3        |            |             |
| <b>TOTAL</b> |               | <b>4,782</b> |      | <b>825</b>   |            |           | <b>410</b> | <b>1,202</b>    | <b>543</b>          | <b>7,043</b> | <b>2</b> |            |             |             |            |             |
| <b>AVG.</b>  |               | <b>154</b>   |      | <b>27</b>    |            |           | <b>13</b>  | <b>39</b>       | <b>18</b>           | <b>227</b>   |          |            | <b>46.0</b> | <b>21.2</b> | <b>5.0</b> | <b>65.8</b> |

| RUN YEAR<br>TOTALS TO DATE | CHINOOK ADULT | CHINOOK JACK | unclipped |        |         | BULL TROUT |  |
|----------------------------|---------------|--------------|-----------|--------|---------|------------|--|
|                            | SOCKEYE       | STEELHEAD    | STEELHEAD | SHAD   | LAMPREY | TROUT      |  |
| SPRING                     | 66,366        | 3,525        |           |        |         |            |  |
| SUMMER                     | 12,438        | 1,606        | 425       | 10,237 | 4,515   | 7,105      |  |
| <b>TOTAL</b>               | <b>78,804</b> | <b>5,131</b> |           |        |         | <b>2</b>   |  |

TABLE 121  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |        |       | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD | LAMPREY | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|--------------|---------------|--------|-------|--------------|------------|-----------|---------|-----------------|---------------------|------|---------|------------|------------|------------|-----------|-------|
|              | SPRING        | SUMMER | FALL  |              |            |           |         |                 |                     |      |         |            |            |            | SECCHI    | DEG F |
| Aug 1        |               | 38     |       | 4            |            |           | 4       | 27              | 13                  | 64   | 4       |            | 35.6       | 18.3       | 5.0       | 66.3  |
| Aug 2        |               | 32     |       | 6            |            |           | 1       | 37              | 17                  | 42   | 0       |            | 34.7       | 18.3       |           |       |
| Aug 3        |               | 41     |       | 6            |            |           | 6       | 21              | 11                  | 24   | 1       |            | 32.5       | 18.2       | 5.0       | 65.9  |
| Aug 4        |               | 24     |       | 1            |            |           | 0       | 20              | 10                  | 30   | 0       |            | 32.2       | 18.3       | 5.0       | 67.6  |
| Aug 5        |               | 44     |       | 1            |            |           | 2       | 45              | 28                  | 22   | 2       |            | 29.0       | 15.9       | 5.0       | 65.9  |
| Aug 6        |               | 44     |       | 5            |            |           | 1       | 20              | 14                  | 18   | 0       |            | 29.9       | 16.7       |           |       |
| Aug 7        |               | -2     |       | 1            |            |           | 2       | 10              | 6                   | 19   | 1       |            | 31.2       | 18.3       |           |       |
| Aug 8        |               | 46     |       | 6            |            |           | 0       | 34              | 20                  | 10   | 2       |            | 28.6       | 15.8       | 5.0       | 65.7  |
| Aug 9        |               | 60     |       | 7            |            |           | 0       | 40              | 23                  | 20   | 2       |            | 27.4       | 14.6       |           |       |
| Aug 10       |               | 94     |       | 13           |            |           | 0       | 92              | 48                  | 24   | 4       |            | 28.7       | 15.8       | 5.0       | 64.5  |
| Aug 11       |               | 65     |       | 14           |            |           | 4       | 65              | 36                  | 4    | 1       |            | 29.4       | 16.5       | 5.0       | 64.7  |
| Aug 12       |               | 16     |       | 5            |            |           | 1       | 43              | 32                  | 7    | 0       |            | 27.8       | 14.9       | 5.0       | 64.3  |
| Aug 13       |               | 28     |       | 5            |            |           | 0       | 48              | 20                  | 12   | 0       |            | 25.4       | 16.3       |           |       |
| Aug 14       |               | 24     |       | 5            |            |           | 1       | 26              | 18                  | 2    | 1       |            | 25.7       | 16.3       |           |       |
| Aug 15       |               | 73     |       | 8            |            |           | 5       | 66              | 37                  | 5    | 2       |            | 25.8       | 16.5       |           |       |
| Aug 16       |               | 67     |       | 19           |            |           | 0       | 91              | 50                  | 4    | 1       |            | 24.9       | 15.7       | 5.0       | 64.4  |
| Aug 17       |               | 31     |       | 5            |            |           | 1       | 56              | 25                  | -1   | 1       |            | 26.4       | 13.6       | 5.0       | 64.1  |
| Aug 18       |               |        | 5     | 5            |            |           | 0       | 42              | 24                  | 1    | 1       |            | 25.3       | 12.2       | 5.0       | 64.8  |
| Aug 19       |               |        | 10    | 4            |            |           | 0       | 60              | 26                  | 0    | 0       |            | 23.2       | 10.4       | 5.0       | 65.0  |
| Aug 20       |               |        | 36    | 6            |            |           | 0       | 84              | 54                  | 0    | 1       |            | 23.0       | 10.4       |           |       |
| Aug 21       |               |        | 70    | 20           |            |           | 0       | 105             | 59                  | 0    | 4       |            | 26.5       | 13.9       |           |       |
| Aug 22       |               |        | 80    | 14           |            |           | 0       | 118             | 56                  | 0    | 2       |            | 24.3       | 11.6       | 5.0       | 64.8  |
| Aug 23       |               |        | 48    | 13           |            |           | 0       | 104             | 43                  | 1    | 0       |            | 24.2       | 11.4       | 5.0       | 63.7  |
| Aug 24       |               |        | 68    | 6            |            |           | 0       | 132             | 60                  | -1   | 2       |            | 24.2       | 11.4       | 5.0       | 64.8  |
| Aug 25       |               |        | 55    | 2            |            |           | 1       | 124             | 50                  | 0    | 0       |            | 24.2       | 11.4       | 5.0       | 64.5  |
| Aug 26       |               |        | 55    | 17           |            |           | 0       | 130             | 59                  | 0    | 0       |            | 23.9       | 11.3       | 5.0       | 65.0  |
| Aug 27       |               |        | 136   | 42           |            |           | 0       | 166             | 59                  | 1    | 1       |            | 23.4       | 10.8       |           |       |
| Aug 28       |               |        | 209   | 62           |            |           | 0       | 183             | 77                  | 0    | 0       |            | 22.9       | 10.2       |           |       |
| Aug 29       |               |        | 218   | 54           |            |           | 0       | 169             | 55                  | 0    | 1       |            | 23.4       | 10.7       |           |       |
| Aug 30       |               |        | 102   | 24           |            |           | 2       | 101             | 35                  | -1   | 4       |            | 25.2       | 12.5       | 5.0       | 66.0  |
| Aug 31       |               |        | 112   | 44           |            |           | 1       | 115             | 38                  | 1    | 2       |            | 23.6       | 11.0       | 5.0       | 63.6  |
| <b>TOTAL</b> |               | 725    | 1,204 | 424          |            |           | 32      | 2,374           | 1,103               | 308  | 40      |            |            |            |           |       |
| AVG          |               | 43     | 86    | 14           |            |           | 1       | 77              | 36                  | 10   | 1       |            | 26.9       | 14.2       | 5.0       | 65.0  |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 66,366        | 3,525        |
| SUMMER         | 13,163        | 1,717        |
| FALL           | 1,204         | 313          |
| <b>TOTAL</b>   | <b>80,733</b> | <b>5,555</b> |

| SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD  | LAMPREY | BULL TROUT |
|---------|-----------|---------------------|-------|---------|------------|
| 457     | 12,611    | 5,618               | 7,413 | 42      | 2          |

TABLE 122  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD   | LAMPREY | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY SECCHI | DEG F |
|--------------|---------------|--------|--------------|------------|-----------|---------|-----------------|---------------------|--------|---------|------------|------------|------------|------------------|-------|
|              | SPRING        | SUMMER |              |            |           |         |                 |                     |        |         |            |            |            |                  |       |
| Sep 1        |               |        | 474          | 164        | 0         | 0       | 2               | 280                 | 114    |         | 2          | 23.7       | 0.1        |                  |       |
| Sep 2        |               |        | 404          | 140        | 0         | 0       | 0               | 196                 | 76     |         | 0          | 24.1       | 0.0        | 5.0              | 63.5  |
| Sep 3        |               |        | 323          | 138        | 0         | 0       | 0               | 182                 | 67     |         | 0          | 25.4       | 0.0        | 5.0              | 65.5  |
| Sep 4        |               |        | 373          | 160        | 0         | 0       | 0               | 246                 | 73     |         | 1          | 26.0       | 0.0        |                  |       |
| Sep 5        |               |        | 386          | 164        | 0         | 0       | 0               | 319                 | 110    |         | 0          | 23.6       | 0.0        |                  |       |
| Sep 6        |               |        | 677          | 232        | 0         | 0       | 1               | 427                 | 138    |         | -1         | 32.3       | 0.0        | 5.0              | 65.5  |
| Sep 7        |               |        | 791          | 244        | 1         | 0       | 0               | 443                 | 132    |         | 0          | 30.5       | 0.0        | 5.0              | 65.9  |
| Sep 8        |               |        | 995          | 252        | 2         | 0       | 0               | 465                 | 127    |         | 0          | 27.2       | 0.0        | 5.0              | 66.6  |
| Sep 9        |               |        | 1,277        | 362        | 4         | 0       | 0               | 600                 | 198    |         | 1          | 25.0       | 0.0        | 5.0              | 66.5  |
| Sep 10       |               |        | 1,360        | 384        | 1         | 0       | 0               | 1,866               | 607    |         | 1          | 25.5       | 0.0        |                  |       |
| Sep 11       |               |        | 1,514        | 814        | 18        | 1       | 0               | 1,386               | 426    |         | 0          | 24.1       | 0.0        |                  |       |
| Sep 12       |               |        | 1,597        | 876        | 12        | 0       | 1               | 1,676               | 511    |         | 0          | 22.6       | 0.0        | 5.0              | 65.6  |
| Sep 13       |               |        | 707          | 422        | 16        | 0       | 0               | 1,768               | 462    |         | 0          | 25.0       | 0.0        | 4.5              | 65.5  |
| Sep 14       |               |        | 937          | 533        | 30        | 7       | 1               | 1,927               | 505    |         | 0          | 25.5       | 0.0        | 4.5              | 65.8  |
| Sep 15       |               |        | 1,196        | 826        | 46        | 18      | 1               | 2,104               | 578    |         | 0          | 23.8       | 0.0        | 4.8              | 65.5  |
| Sep 16       |               |        | 1,224        | 841        | 37        | 12      | 1               | 2,306               | 672    |         | 0          | 22.9       | 0.0        | 5.0              | 65.3  |
| Sep 17       |               |        | 1,451        | 677        | 20        | 4       | 1               | 2,252               | 654    |         | 1          | 22.5       | 0.0        |                  |       |
| Sep 18       |               |        | 1,357        | 719        | 16        | 1       | 1               | 1,935               | 506    |         | 0          | 22.9       | 0.0        |                  |       |
| Sep 19       |               |        | 1,157        | 602        | 17        | 0       | 0               | 1,724               | 422    |         | 0          | 23.5       | 0.0        | 5.0              | 65.8  |
| Sep 20       |               |        | 1,130        | 647        | 41        | 0       | 0               | 1,969               | 498    |         | 0          | 21.7       | 0.0        |                  |       |
| Sep 21       |               |        | 1,294        | 502        | 46        | 0       | 0               | 1,928               | 500    |         | 0          | 20.1       | 0.0        | 4.7              | 65.6  |
| Sep 22       |               |        | 966          | 558        | 23        | 1       | 0               | 1,693               | 439    |         | 0          | 18.1       | 0.0        | 4.9              | 65.4  |
| Sep 23       |               |        | 1,116        | 846        | 30        | 7       | 0               | 1,876               | 468    |         | 0          | 20.6       | 0.0        |                  |       |
| Sep 24       |               |        | 1,304        | 904        | 44        | 4       | 1               | 1,771               | 439    |         | 0          | 17.0       | 0.0        |                  |       |
| Sep 25       |               |        | 824          | 788        | 47        | 5       | 2               | 1,982               | 524    |         | 0          | 16.8       | 0.0        | 4.6              | 65.9  |
| Sep 26       |               |        | 1,100        | 1,127      | 72        | 11      | 0               | 2,922               | 721    |         | 0          | 17.5       | 0.2        |                  |       |
| Sep 27       |               |        | 722          | 733        | 66        | 11      | 0               | 2,546               | 619    |         | 0          | 15.5       | 0.0        | 4.9              | 66.2  |
| Sep 28       |               |        | 762          | 856        | 100       | 2       | 0               | 2,226               | 511    |         | 0          | 20.7       | 0.0        |                  |       |
| Sep 29       |               |        | 706          | 707        | 116       | 6       | 1               | 2,366               | 538    |         | 0          | 19.1       | 0.0        | 5.0              | 65.7  |
| Sep 30       |               |        | 490          | 509        | 121       | 5       | 0               | 2,668               | 683    |         | 1          | 24.1       | 0.0        | 5.0              | 65.7  |
| <b>TOTAL</b> |               |        | 28,614       | 16,727     | 926       | 95      | 13              | 46,049              | 12,318 |         | 6          |            |            |                  |       |
| AVG.         |               |        | 954          | 558        | 31        | 3       | 0               | 1,535               | 411    |         | 0          | 22.9       | 0.0        | 4.9              | 65.6  |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 66,366        | 3,525        |
| SUMMER         | 13,163        | 1,717        |
| FALL           | 29,818        | 17,040       |
| TOTAL          | 109,347       | 22,282       |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD  | LAMPREY | BULL TROUT |
|------------|-----------|---------|-----------|---------------------|-------|---------|------------|
| 926        | 95        | 470     | 58,660    | 17,936              | 7,413 | 48      | 2          |

TABLE 123  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK JACK | COHO ADULT   | COHO JACK    | SOCKEYE   | TOTAL         |               | SHAD | LAMPREY  | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY           |        |
|--------------|---------------|--------|--------------|--------------|--------------|-----------|---------------|---------------|------|----------|------------|------------|------------|---------------------|--------|
|              | SPRING        | SUMMER |              |              |              |           | FALL          | STEELHEAD     |      |          |            |            |            | unclipped STEELHEAD | SECCHI |
| Oct 1        |               |        | 533          | 425          | 98           | 5         | 1,901         | 487           |      | 0        |            | 18.4       | 0.0        |                     |        |
| Oct 2        |               |        | 350          | 401          | 118          | 6         | 1,935         | 475           |      | 0        |            | 17.7       | 0.0        |                     |        |
| Oct 3        |               |        | 498          | 614          | 185          | 10        | 3,693         | 862           |      | 0        |            | 23.1       | 0.0        | 5.0                 | 64.9   |
| Oct 4        |               |        | 392          | 365          | 94           | 4         | 2,475         | 611           |      | 1        |            | 19.9       | 0.0        | 5.0                 | 64.9   |
| Oct 5        |               |        | 244          | 318          | 102          | 8         | 2,870         | 682           |      | 0        |            | 19.5       | 0.0        | 4.7                 |        |
| Oct 6        |               |        | 346          | 330          | 72           | 10        | 2,315         | 532           |      | -1       |            | 17.3       | 0.0        | 5.0                 | 64.5   |
| Oct 7        |               |        | 271          | 271          | 71           | 10        | 2,276         | 540           |      | 0        |            | 15.4       | 0.0        | 5.0                 | 64.2   |
| Oct 8        |               |        | 163          | 168          | 47           | 2         | 1,528         | 365           |      | 0        |            | 20.9       | 0.0        |                     |        |
| Oct 9        |               |        | 190          | 181          | 52           | 0         | 1,273         | 337           |      | 0        |            | 20.2       | 0.0        |                     |        |
| Oct 10       |               |        | 127          | 108          | 31           | 2         | 1,024         | 252           |      | 0        |            | 17.9       | 0.0        | 4.5                 | 62.4   |
| Oct 11       |               |        | 136          | 179          | 24           | 2         | 1,230         | 320           |      | 0        |            | 16.1       | 0.0        |                     |        |
| Oct 12       |               |        | 88           | 120          | 24           | 4         | 759           | 182           |      | 0        |            | 15.8       | 0.0        | 4.2                 | 61.0   |
| Oct 13       |               |        | 84           | 167          | 40           | 4         | 1,499         | 384           |      | 0        |            | 14.8       | 0.0        | 4.5                 | 60.8   |
| Oct 14       |               |        | 54           | 110          | 50           | 4         | 1,420         | 356           |      | 0        |            | 15.8       | 0.0        | 4.4                 | 60.2   |
| Oct 15       |               |        | 62           | 48           | 26           | 0         | 681           | 167           |      | 0        |            | 20.4       | 0.0        |                     |        |
| Oct 16       |               |        | 85           | 116          | 47           | 2         | 1,410         | 388           |      | 0        |            | 14.6       | 0.0        |                     |        |
| Oct 17       |               |        | 44           | 95           | 46           | 1         | 1,617         | 454           |      | 0        |            | 25.8       | 0.0        |                     |        |
| Oct 18       |               |        | 55           | 79           | 43           | 5         | 1,340         | 331           |      | 0        |            | 20.5       | 0.0        |                     |        |
| Oct 19       |               |        | 66           | 109          | 37           | 1         | 1,048         | 246           |      | 0        |            | 20.1       | 0.0        | 4.3                 | 60.2   |
| Oct 20       |               |        | 50           | 68           | 31           | 0         | 1,271         | 337           |      | 0        |            | 15.4       | 0.0        | 4.4                 | 59.7   |
| Oct 21       |               |        | 35           | 49           | 18           | 1         | 1,059         | 254           |      | 0        |            | 17.8       | 0.0        | 3.9                 | 59.3   |
| Oct 22       |               |        | 44           | 92           | 25           | 0         | 871           | 212           |      | 0        |            | 21.8       | 0.0        |                     |        |
| Oct 23       |               |        | 24           | 31           | 17           | 2         | 626           | 166           |      | 0        |            | 17.0       | 0.0        |                     |        |
| Oct 24       |               |        | 41           | 35           | 16           | 2         | 830           | 228           |      | 0        |            | 23.3       | 0.0        |                     |        |
| Oct 25       |               |        | 32           | 41           | 13           | 0         | 354           | 104           |      | 0        |            | 19.9       | 0.0        | 4.0                 | 58.0   |
| Oct 26       |               |        | 34           | 31           | 20           | 6         | 543           | 136           |      | 0        |            | 16.8       | 0.0        | 4.1                 | 57.7   |
| Oct 27       |               |        | 47           | 59           | 8            | 1         | 680           | 204           |      | 0        |            | 17.0       | 0.0        |                     |        |
| Oct 28       |               |        | 35           | 32           | 13           | 0         | 542           | 132           |      | 0        |            | 20.4       | 0.0        |                     |        |
| Oct 29       |               |        | 38           | 56           | 11           | 1         | 670           | 191           |      | 0        |            | 20.3       | 0.0        | 4.7                 | 55.9   |
| Oct 30       |               |        | 40           | 36           | 13           | 4         | 727           | 174           |      | 0        |            | 28.9       | 0.0        | 4.5                 | 55.7   |
| Oct 31       |               |        | 34           | 40           | 10           | 0         | 517           | 150           |      | 0        |            | 29.1       | 0.0        |                     |        |
| <b>TOTAL</b> |               |        | <b>4,242</b> | <b>4,774</b> | <b>1,402</b> | <b>97</b> | <b>40,984</b> | <b>10,259</b> |      | <b>0</b> |            |            |            |                     |        |

|      |     |     |    |   |       |     |      |     |     |      |
|------|-----|-----|----|---|-------|-----|------|-----|-----|------|
| AVG. | 137 | 154 | 45 | 3 | 1,322 | 331 | 19.4 | 0.0 | 4.5 | 60.6 |
|------|-----|-----|----|---|-------|-----|------|-----|-----|------|

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD  | LAMPREY | BULL TROUT |
|----------------|---------------|--------------|------------|-----------|---------|-----------|---------------------|-------|---------|------------|
| TOTALS TO DATE | 66,366        | 3,525        | 2,328      | 192       | 470     | 99,644    | 28,195              | 7,413 | 48      | 2          |
| SPRING         | 13,163        | 1,717        |            |           |         |           |                     |       |         |            |
| SUMMER         | 34,060        | 21,814       |            |           |         |           |                     |       |         |            |
| FALL           | 113,589       | 27,056       |            |           |         |           |                     |       |         |            |
| TOTAL          |               |              |            |           |         |           |                     |       |         |            |

Note: Visual counts ended October 31.

TABLE 124  
 MONTHLY FISH PASSAGE SUMMARY REPORT  
 U.S. ARMY ENGINEER DISTRICT, PORTLAND

LOWER GRANITE PROJECT - FISH COUNTS

NOVEMBER 2012

| DATE   | CHINOOK ADULT |        |      | CHINOOK | COHO  | COHO | TOTAL | unclipped | SHAD | LAMPREY | BULL      | DISCH | SPILL | TURBIDITY |       |
|--------|---------------|--------|------|---------|-------|------|-------|-----------|------|---------|-----------|-------|-------|-----------|-------|
|        | SPRING        | SUMMER | FALL | JACK    | ADULT | JACK |       | SOCKEYE   |      |         | STEELHEAD |       |       | STEELHEAD | TROUT |
| Nov 1  |               |        | 54   | 13      | 16    | 0    | 703   | 205       |      |         |           | 27.2  | 0.0   |           |       |
| Nov 2  |               |        | 32   | 12      | 14    | 1    | 515   | 135       |      |         |           | 23.9  | 0.0   |           |       |
| Nov 3  |               |        | 47   | 17      | 8     | 0    | 424   | 121       |      |         |           | 26.1  | 0.0   | 4.4       | 55.7  |
| Nov 4  |               |        | 27   | 9       | 13    | 0    | 746   | 221       |      |         |           | 23.9  | 0.0   | 3.9       | 53.4  |
| Nov 5  |               |        | 29   | 12      | 7     | 1    | 457   | 110       |      |         |           | 20.3  | 0.0   | 4.1       | 53.8  |
| Nov 6  |               |        | 38   | 8       | 9     | 3    | 525   | 153       |      |         |           | 22.2  | 0.0   |           |       |
| Nov 7  |               |        | 24   | 11      | 4     | 0    | 414   | 104       |      |         |           | 21.2  | 0.0   |           |       |
| Nov 8  |               |        | 30   | 3       | 8     | 0    | 397   | 103       |      |         |           | 23.8  | 0.0   |           |       |
| Nov 9  |               |        | 38   | 13      | 12    | 1    | 502   | 159       |      |         |           | 25.1  | 0.0   | 3.7       | 53.3  |
| Nov 10 |               |        | 19   | 5       | 2     | 2    | 292   | 85        |      |         |           | 17.7  | 0.0   | 4.2       | 53.1  |
| Nov 11 |               |        | 15   | 10      | 1     | 0    | 348   | 112       |      |         |           | 17.1  | 0.0   | 4.6       | 52.9  |
| Nov 12 |               |        | 21   | 23      | 2     | 1    | 483   | 146       |      |         |           | 20.1  | 0.0   |           |       |
| Nov 13 |               |        | 18   | 2       | 2     | 0    | 507   | 136       |      |         |           | 20.4  | 0.0   |           |       |
| Nov 14 |               |        | 22   | 4       | 2     | 0    | 265   | 69        |      |         |           | 22.4  | 0.0   |           |       |
| Nov 15 |               |        | 10   | 1       | 2     | 1    | 223   | 51        |      |         |           | 21.2  | 0.0   |           |       |
| Nov 16 |               |        | 8    | 2       | 2     | 0    | 143   | 36        |      |         |           | 20.5  | 0.0   | 5.0       | 52.4  |
| Nov 17 |               |        | 7    | 13      | 0     | 0    | 156   | 54        |      |         |           | 18.7  | 0.0   | 5.0       | 52.2  |
| Nov 18 |               |        | 6    | 4       | 0     | 0    | 247   | 71        |      |         |           | 19.1  | 0.0   | 5.0       | 51.3  |
| Nov 19 |               |        | 9    | 8       | 0     | 0    | 272   | 88        |      |         |           | 23.7  | 0.0   |           |       |
| Nov 20 |               |        | 5    | 0       | 0     | 0    | 198   | 66        |      |         |           | 19.6  | 0.0   |           |       |
| Nov 21 |               |        | 32   | 0       | 0     | 0    | 77    | 28        |      |         |           | 25.2  | 0.0   |           |       |
| Nov 22 |               |        | 84   | 1       | 0     | 0    | 196   | 60        |      |         |           | 24.6  | 0.0   |           |       |
| Nov 23 |               |        | 30   | 1       | 0     | 0    | 249   | 90        |      |         |           | 25.8  | 0.0   | 5.0       | 52.7  |
| Nov 24 |               |        | 3    | 0       | 0     | 0    | 122   | 29        |      |         |           | 23.9  | 0.0   |           |       |
| Nov 25 |               |        | 0    | 0       | 0     | 0    | 133   | 30        |      |         |           | 22.6  | 0.0   | 4.6       | 49.3  |
| Nov 26 |               |        | 0    | 1       | 0     | 0    | 83    | 23        |      |         |           | 23.6  | 0.0   | 5.0       | 48.9  |
| Nov 27 |               |        | 5    | 0       | 0     | 0    | 60    | 9         |      |         |           | 25.7  | 0.0   |           |       |
| Nov 28 |               |        | 1    | 0       | 0     | 0    | 49    | 13        |      |         |           | 23.1  | 0.0   |           |       |
| Nov 29 |               |        | 3    | 0       | 0     | 0    | 83    | 23        |      |         |           | 21.8  | 0.0   | 5.0       | 48.8  |
| Nov 30 |               |        | 3    | 0       | 0     | 0    | 58    | 20        |      |         |           | 19.1  | 0.0   | 5.0       | 48.8  |

|              |  |  |     |     |     |    |       |       |  |  |  |      |     |     |      |
|--------------|--|--|-----|-----|-----|----|-------|-------|--|--|--|------|-----|-----|------|
| <b>TOTAL</b> |  |  | 620 | 173 | 104 | 10 | 8,927 | 2,550 |  |  |  |      |     |     |      |
| AVG.         |  |  | 21  | 6   | 3   | 0  | 298   | 85    |  |  |  | 22.3 | 0.0 | 4.6 | 51.9 |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD  | LAMPREY | BULL TROUT |
|----------------|---------------|--------------|------------|-----------|---------|-----------|---------------------|-------|---------|------------|
| TOTALS TO DATE |               |              |            |           |         |           |                     |       |         |            |
| SPRING         | 66,366        | 3,525        | 2,432      | 202       | 470     | 108,571   | 30,745              | 7,413 | 48      | 2          |
| SUMMER         | 13,163        | 1,717        |            |           |         |           |                     |       |         |            |
| FALL           | 34,680        | 21,987       |            |           |         |           |                     |       |         |            |
| TOTAL          | 114,209       | 27,229       |            |           |         |           |                     |       |         |            |

Note: From November 1 to December 31, counts were from video tape. The counts are 10-hour counts and occurred between 0600-1600 PST.

TABLE 125  
MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

**LOWER GRANITE PROJECT - FISH COUNTS**

**DECEMBER 2012**

| DATE   | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | TOTAL STEELHEAD | unclipped STEELHEAD | SHAD | LAMPREY | BULL TROUT | DISCH KCFS | SPILL KCFS | TURBIDITY |       |
|--------|---------------|--------|------|--------------|------------|-----------|---------|-----------------|---------------------|------|---------|------------|------------|------------|-----------|-------|
|        | SPRING        | SUMMER | FALL |              |            |           |         |                 |                     |      |         |            |            |            | SECCHI    | DEG F |
| Dec 1  |               |        | 2    | 1            | 0          |           |         | 55              | 21                  |      |         |            | 25.1       | 0.0        | 5.0       | 48.3  |
| Dec 2  |               |        | 1    | 1            | 0          |           |         | 151             | 49                  |      |         |            | 25.0       | 0.0        | 4.2       | 47.9  |
| Dec 3  |               |        | 1    | 1            | 0          |           |         | 160             | 53                  |      |         |            | 38.6       | 0.0        |           |       |
| Dec 4  |               |        | 1    | 0            | 0          |           |         | 170             | 60                  |      |         |            | 45.4       | 0.0        |           |       |
| Dec 5  |               |        | 0    | 0            | 0          |           |         | 90              | 19                  |      |         |            | 36.0       | 0.0        | 5.0       | 46.7  |
| Dec 6  |               |        | 1    | 0            | 1          |           |         | 112             | 36                  |      |         |            | 39.1       | 0.0        |           |       |
| Dec 7  |               |        | 0    | 0            | 0          |           |         | 256             | 87                  |      |         |            | 43.0       | 0.0        |           |       |
| Dec 8  |               |        | 0    | 0            | 0          |           |         | 306             | 103                 |      |         |            | 43.4       | 0.0        | 3.3       | 47.0  |
| Dec 9  |               |        | 0    | 0            | 0          |           |         | 210             | 58                  |      |         |            | 38.6       | 0.0        | 2.9       | 46.6  |
| Dec 10 |               |        | 1    | 0            | 0          |           |         | 180             | 56                  |      |         |            | 30.2       | 0.0        | 2.8       | 46.2  |
| Dec 11 |               |        | 0    | 0            | 0          |           |         | 104             | 35                  |      |         |            | 37.0       | 0.0        |           |       |
| Dec 12 |               |        | 1    | 0            | 0          |           |         | 101             | 32                  |      |         |            | 31.0       | 0.0        |           |       |
| Dec 13 |               |        | 0    | 0            | 0          |           |         | 54              | 17                  |      |         |            | 32.5       | 0.0        |           |       |
| Dec 14 |               |        | 0    | 0            | 0          |           |         | 77              | 24                  |      |         |            | 33.0       | 0.0        | 4.2       | 45.4  |
| Dec 15 |               |        | 0    | 0            | 0          |           |         | 78              | 31                  |      |         |            | 24.8       | 0.0        |           |       |
| Dec 16 |               |        |      |              |            |           |         |                 |                     |      |         |            | 27.3       | 0.0        |           |       |
| Dec 17 |               |        |      |              |            |           |         |                 |                     |      |         |            | 30.1       | 0.0        |           |       |
| Dec 18 |               |        |      |              |            |           |         |                 |                     |      |         |            | 30.0       | 0.0        |           |       |
| Dec 19 |               |        |      |              |            |           |         |                 |                     |      |         |            | 22.6       | 0.0        |           |       |
| Dec 20 |               |        |      |              |            |           |         |                 |                     |      |         |            | 25.1       | 0.0        |           |       |
| Dec 21 |               |        |      |              |            |           |         |                 |                     |      |         |            | 26.8       | 0.0        |           |       |
| Dec 22 |               |        |      |              |            |           |         |                 |                     |      |         |            | 28.1       | 0.0        |           |       |
| Dec 23 |               |        |      |              |            |           |         |                 |                     |      |         |            | 30.4       | 0.0        |           |       |
| Dec 24 |               |        |      |              |            |           |         |                 |                     |      |         |            | 24.5       | 0.0        |           |       |
| Dec 25 |               |        |      |              |            |           |         |                 |                     |      |         |            | 19.4       | 0.0        |           |       |
| Dec 26 |               |        |      |              |            |           |         |                 |                     |      |         |            | 23.1       | 0.0        |           |       |
| Dec 27 |               |        |      |              |            |           |         |                 |                     |      |         |            | 26.1       | 0.0        |           |       |
| Dec 28 |               |        |      |              |            |           |         |                 |                     |      |         |            | 25.3       | 0.0        |           |       |
| Dec 29 |               |        |      |              |            |           |         |                 |                     |      |         |            | 28.9       | 0.0        |           |       |
| Dec 30 |               |        |      |              |            |           |         |                 |                     |      |         |            | 24.2       | 0.0        |           |       |
| Dec 31 |               |        |      |              |            |           |         |                 |                     |      |         |            | 27.7       | 0.0        |           |       |

|              |   |   |   |  |  |  |  |       |     |  |  |  |      |     |     |      |  |
|--------------|---|---|---|--|--|--|--|-------|-----|--|--|--|------|-----|-----|------|--|
| <b>TOTAL</b> | 8 | 3 | 1 |  |  |  |  | 2,104 | 681 |  |  |  |      |     |     |      |  |
| <b>AVG.</b>  | 1 | 0 | 0 |  |  |  |  | 140   | 45  |  |  |  | 30.4 | 0.0 | 3.9 | 46.9 |  |

**RUN YEAR**

| TOTALS TO DATE | CHINOOK ADULT  | CHINOOK JACK  | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | unclipped STEELHEAD | SHAD  | LAMPREY | BULL TROUT |
|----------------|----------------|---------------|------------|-----------|---------|-----------|---------------------|-------|---------|------------|
| SPRING         | 66,366         | 3,525         | 2,433      | 202       | 470     | 110,675   | 31,426              | 7,413 | 48      | 2          |
| SUMMER         | 13,163         | 1,717         |            |           |         |           |                     |       |         |            |
| FALL           | 34,688         | 21,990        |            |           |         |           |                     |       |         |            |
| <b>TOTAL</b>   | <b>114,217</b> | <b>27,232</b> |            |           |         |           |                     |       |         |            |

Note: From November 1 to December 31, counts were from video tape. The counts are 10-hour counts and occurred between 0600-1600 PST. Official Fall Chinook run ended December 15.



TABLE 126

YEARLY TOTALS OF SALMONIDS COUNTED OVER  
LOWER GRANITE DAM  
1975 - 2012

| YEAR                       | CHINOOK*         | STEELHEAD        | SOCKEYE      | COHO*         | TOTALS           |
|----------------------------|------------------|------------------|--------------|---------------|------------------|
| 1975                       | 28,460           | 17,311           | 209          | 921           | 46,901           |
| 1976                       | 31,667           | 23,017           | 531          | 900           | 56,115           |
| 1977                       | 49,123           | 53,037           | 458          | 268           | 102,886          |
| 1978                       | 54,246           | 30,068           | 123          | 152           | 84,589           |
| 1979                       | 12,548           | 25,046           | 25           | 158           | 37,777           |
| 1980                       | 10,986           | 40,454           | 96           | 43            | 51,579           |
| 1981                       | 19,198           | 40,234           | 218          | 17            | 59,667           |
| 1982                       | 19,476           | 72,840           | 211          | 59            | 92,586           |
| 1983                       | 16,200           | 86,234           | 122          | 51            | 102,607          |
| 1984                       | 16,517           | 98,923           | 49           | 0             | 115,489          |
| 1985                       | 36,567           | 118,463          | 35           | 2             | 155,067          |
| 1986                       | 43,023           | 134,519          | 15           | 1             | 177,558          |
| 1987                       | 37,677           | 70,151           | 29           | 0             | 107,857          |
| 1988                       | 37,882           | 87,040           | 23           | 0             | 124,945          |
| 1989                       | 19,557           | 132,579          | 2            | 0             | 152,138          |
| 1990                       | 23,345           | 56,859           | 0            | 0             | 80,204           |
| 1991                       | 13,618           | 100,381          | 8            | 0             | 114,007          |
| 1992                       | 26,193           | 121,459          | 15           | 0             | 147,667          |
| 1993                       | 30,446           | 66,699           | 12           | 0             | 97,157           |
| 1994                       | 5,077            | 47,550           | 5            | 0             | 52,632           |
| 1995                       | 3,702            | 80,853           | 3            | 0             | 84,558           |
| 1996                       | 11,129           | 86,072           | 3            | 0             | 97,204           |
| 1997                       | 46,727           | 85,917           | 11           | 92            | 132,747          |
| 1998                       | 18,557           | 72,017           | 2            | 12            | 90,588           |
| 1999                       | 15,884           | 74,370           | 14           | 262           | 90,530           |
| 2000                       | 62,659           | 113,211          | 299          | 925           | 177,094          |
| 2001                       | 210,381          | 262,568          | 36           | 1,087         | 474,072          |
| 2002                       | 119,304          | 218,718          | 55           | 395           | 338,472          |
| 2003                       | 119,676          | 180,672          | 11           | 1,265         | 301,624          |
| 2004                       | 109,061          | 154,389          | 113          | 3,904         | 267,467          |
| 2005                       | 49,530           | 155,783          | 18           | 2,183         | 207,514          |
| 2006                       | 45,992           | 145,991          | 17           | 1,434         | 193,434          |
| 2007                       | 62,530           | 157,345          | 52           | 2,798         | 222,725          |
| 2008                       | 115,632          | 175,481          | 909          | 4,770         | 296,792          |
| 2009                       | 168,032          | 323,697          | 1,219        | 4,912         | 497,860          |
| 2010                       | 189,394          | 206,885          | 2,201        | 1,902         | 400,382          |
| 2011                       | 179,497          | 183,648          | 1,502        | 5,351         | 369,998          |
| 2012                       | 141,449          | 110,675          | 470          | 2,635         | 255,229          |
| <b>Total</b>               | <b>2,200,942</b> | <b>4,211,156</b> | <b>9,121</b> | <b>36,499</b> | <b>6,457,718</b> |
| <b>10-Year<br/>Average</b> | <b>118,079</b>   | <b>179,457</b>   | <b>651</b>   | <b>3,115</b>  | <b>301,303</b>   |

\*Jacks included

TABLE 127

**MONTHLY COUNT OF CHINOOK SALMON  
LOWER GRANITE DAM  
1975 - 2012**

| YEAR                       | JAN | FEB | MAR       | APR            | MAY            | JUN            | JUL            | AUG           | SEP            | OCT            | NOV          | DEC       | TOTALS*          |
|----------------------------|-----|-----|-----------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|--------------|-----------|------------------|
| 1975                       |     |     |           | 1              | 11,693         | 8,722          | 4,854          | 1,183         | 1,462          | 474            | 71           |           | 28,460           |
| 1976                       |     |     |           | 149            | 14,358         | 10,438         | 5,074          | 428           | 605            | 535            | 80           |           | 31,667           |
| 1977                       |     |     |           | 12,824         | 22,892         | 6,718          | 4,622          | 203           | 961            | 776            | 125          | 2         | 49,123           |
| 1978                       |     |     |           | 3,329          | 29,983         | 11,464         | 6,976          | 1,234         | 698            | 519            | 42           | 1         | 54,246           |
| 1979                       |     |     |           | 234            | 4,461          | 4,455          | 1,794          | 256           | 1,003          | 302            | 43           |           | 12,548           |
| 1980                       |     |     |           | 328            | 5,227          | 2,558          | 1,916          | 241           | 345            | 343            | 28           |           | 10,986           |
| 1981                       |     |     |           | 1,380          | 10,730         | 2,713          | 2,561          | 92            | 1,008          | 677            | 37           |           | 19,198           |
| 1982                       |     |     |           | 42             | 9,121          | 4,650          | 3,217          | 329           | 1,399          | 650            | 62           | 6         | 19,476           |
| 1983                       |     |     |           | 113            | 7,676          | 3,551          | 3,167          | 234           | 828            | 552            | 79           |           | 16,200           |
| 1984                       |     |     |           | 134            | 4,915          | 5,602          | 4,274          | 303           | 719            | 522            | 48           |           | 16,517           |
| 1985                       |     |     |           | 1,429          | 20,384         | 10,466         | 1,971          | 281           | 1,285          | 697            | 53           | 1         | 36,567           |
| 1986                       |     |     |           | 3,623          | 26,434         | 7,472          | 2,796          | 137           | 1,250          | 1,136          | 172          | 3         | 43,023           |
| 1987                       |     |     | 1         | 4,836          | 22,217         | 5,578          | 3,532          | 216           | 664            | 508            | 116          | 9         | 37,677           |
| 1988                       |     |     |           | 4,722          | 20,615         | 8,771          | 2,654          | 212           | 429            | 371            | 104          | 4         | 37,882           |
| 1989                       |     |     |           | 577            | 10,597         | 5,771          | 1,511          | 225           | 478            | 338            | 60           |           | 19,557           |
| 1990                       |     |     |           | 2,808          | 12,925         | 4,902          | 2,094          | 64            | 248            | 264            | 40           |           | 23,345           |
| 1991                       |     |     |           | 250            | 4,698          | 5,177          | 2,397          | 72            | 524            | 465            | 35           |           | 13,618           |
| 1992                       |     |     |           | 6,205          | 12,170         | 4,783          | 1,998          | 110           | 576            | 288            | 63           |           | 26,193           |
| 1993                       |     |     |           | 638            | 15,627         | 9,728          | 3,095          | 281           | 736            | 300            | 41           |           | 30,446           |
| 1994                       |     |     |           | 99             | 2,283          | 1,180          | 436            | 73            | 422            | 539            | 45           |           | 5,077            |
| 1995                       |     |     |           | 22             | 870            | 936            | 438            | 113           | 757            | 539            | 27           |           | 3,702            |
| 1996                       |     |     |           | 38             | 3,415          | 4,260          | 1,557          | 210           | 1,133          | 471            | 45           |           | 11,129           |
| 1997                       |     |     |           | 222            | 22,323         | 18,376         | 3,690          | 274           | 1,159          | 631            | 52           |           | 46,727           |
| 1998                       |     |     | 1         | 942            | 6,330          | 5,398          | 1,877          | 175           | 1,495          | 2,200          | 138          | 1         | 18,557           |
| 1999                       |     |     |           | 36             | 3,358          | 4,886          | 2,214          | 396           | 3,017          | 1,832          | 143          | 2         | 15,884           |
| 2000                       |     |     |           | 5,984          | 30,609         | 12,074         | 3,032          | 564           | 5,719          | 4,435          | 240          | 2         | 62,659           |
| 2001                       |     |     |           | 90,165         | 63,007         | 31,721         | 7,392          | 760           | 11,596         | 5,319          | 414          | 7         | 210,381          |
| 2002                       |     |     | 1         | 1,050          | 56,456         | 35,129         | 8,223          | 1,102         | 12,774         | 4,336          | 229          | 4         | 119,304          |
| 2003                       |     |     | 10        | 29,379         | 30,358         | 31,808         | 7,467          | 817           | 12,616         | 6,990          | 228          | 3         | 119,676          |
| 2004                       |     |     | 1         | 20,189         | 42,777         | 19,382         | 3,991          | 410           | 17,277         | 4,512          | 522          | 0         | 109,061          |
| 2005                       |     |     |           | 327            | 17,557         | 11,709         | 5,320          | 445           | 11,295         | 2,767          | 105          | 5         | 49,530           |
| 2006                       |     |     |           | 4              | 14,325         | 12,477         | 3,927          | 1,053         | 8,630          | 5,332          | 240          | 4         | 45,992           |
| 2007                       |     |     | 1         | 531            | 19,516         | 16,994         | 4,921          | 1,200         | 12,720         | 6,428          | 217          | 2         | 62,530           |
| 2008                       |     |     |           | 1,019          | 36,995         | 40,654         | 9,513          | 1,819         | 20,570         | 4,725          | 335          | 2         | 115,632          |
| 2009                       |     |     |           | 95             | 52,614         | 45,565         | 12,404         | 2,871         | 44,432         | 9,630          | 419          | 2         | 168,032          |
| 2010                       |     |     | 1         | 9,432          | 75,785         | 36,788         | 11,810         | 2,078         | 38,806         | 14,025         | 668          | 1         | 189,394          |
| 2011                       |     |     |           | 71             | 52,580         | 56,837         | 23,502         | 3,837         | 30,091         | 12,011         | 557          | 11        | 179,497          |
| 2012                       |     |     |           | 36             | 53,549         | 24,743         | 5,607          | 2,353         | 45,341         | 9,016          | 793          | 11        | 141,449          |
| <b>Total</b>               |     |     | <b>16</b> | <b>203,263</b> | <b>851,430</b> | <b>534,436</b> | <b>177,824</b> | <b>26,651</b> | <b>295,068</b> | <b>105,455</b> | <b>6,716</b> | <b>83</b> | <b>2,200,942</b> |
| <b>10-Year<br/>Average</b> |     |     |           | <b>6,108</b>   | <b>39,606</b>  | <b>29,696</b>  | <b>8,846</b>   | <b>1,688</b>  | <b>24,178</b>  | <b>7,544</b>   | <b>408</b>   |           | <b>118,079</b>   |

\*Jacks included

TABLE 128

## MONTHLY COUNT OF STEELHEAD

## LOWER GRANITE DAM

1975 - 2012

| YEAR          | JAN | FEB | MAR     | APR     | MAY    | JUN   | JUL    | AUG     | SEP       | OCT       | NOV     | DEC    | TOTAL     |
|---------------|-----|-----|---------|---------|--------|-------|--------|---------|-----------|-----------|---------|--------|-----------|
| 1975          |     |     |         | 1,724   | 1,065  | 104   | 102    | 3,337   | 6,396     | 3,584     | 703     | 296    | 17,311    |
| 1976          | 173 | 21  | 181     | 1,120   | 575    | 120   | 527    | 3,816   | 8,720     | 6,837     | 860     | 67     | 23,017    |
| 1977          |     | 9   | 142     | 1,235   | 229    | 59    | 1,538  | 2,652   | 16,296    | 27,492    | 2,950   | 435    | 53,037    |
| 1978          | 354 | 716 | 2,276   | 2,009   | 252    | 9     | 478    | 2,721   | 10,829    | 9,528     | 788     | 108    | 30,068    |
| 1979          | 12  | 44  | 802     | 962     | 192    | 16    | 1,197  | 2,602   | 5,143     | 11,323    | 2,487   | 266    | 25,046    |
| 1980          |     |     | 1,149   | 3,403   | 1,172  | 36    | 517    | 3,378   | 13,291    | 15,455    | 2,053   |        | 40,454    |
| 1981          |     |     | 1,052   | 1,610   | 604    | 98    | 1,422  | 1,609   | 9,391     | 20,714    | 3,096   | 638    | 40,234    |
| 1982          |     |     | 1,778   | 2,202   | 1,472  | 66    | 817    | 9,118   | 20,219    | 32,850    | 3,945   | 373    | 72,840    |
| 1983          |     |     | 3,336   | 1,416   | 244    | 7     | 1,676  | 8,899   | 32,063    | 34,028    | 4,425   | 140    | 86,234    |
| 1984          |     |     | 2,647   | 3,914   | 961    | 40    | 1,886  | 3,458   | 34,709    | 46,445    | 4,841   | 22     | 98,923    |
| 1985          |     |     | 2,474   | 9,686   | 856    | 146   | 706    | 5,027   | 63,074    | 33,137    | 3,230   | 127    | 118,463   |
| 1986          |     |     | 8,179   | 2,358   | 163    | 62    | 3,031  | 2,323   | 39,780    | 71,426    | 6,671   | 526    | 134,519   |
| 1987          |     |     | 2,962   | 2,951   | 251    | 51    | 783    | 2,342   | 16,644    | 34,235    | 8,809   | 1,123  | 70,151    |
| 1988          |     |     | 2,108   | 4,562   | 623    | 173   | 768    | 1,806   | 27,071    | 43,066    | 6,307   | 556    | 87,040    |
| 1989          |     |     | 2,172   | 4,789   | 429    | 99    | 2,026  | 4,199   | 49,256    | 55,766    | 13,308  | 535    | 132,579   |
| 1990          |     |     | 2,728   | 3,329   | 174    | 27    | 444    | 364     | 8,250     | 26,117    | 13,872  | 1,554  | 56,859    |
| 1991          |     |     | 2,422   | 3,530   | 285    | 43    | 1,009  | 454     | 24,610    | 58,803    | 7,892   | 1,333  | 100,381   |
| 1992          |     |     | 1,925   | 2,789   | 194    | 76    | 725    | 2,009   | 47,058    | 56,284    | 9,709   | 690    | 121,459   |
| 1993          |     |     | 3,232   | 8,118   | 364    | 191   | 2,621  | 5,298   | 10,374    | 32,618    | 3,702   | 181    | 66,699    |
| 1994          |     |     | 1,644   | 3,007   | 132    | 97    | 888    | 1,693   | 7,089     | 25,913    | 6,772   | 315    | 47,550    |
| 1995          |     |     | 3,176   | 1,166   | 193    | 33    | 1,216  | 3,540   | 27,585    | 37,260    | 5,176   | 1,508  | 80,853    |
| 1996          |     |     | 1,720   | 1,017   | 71     | 52    | 1,068  | 4,218   | 38,109    | 34,267    | 4,607   | 943    | 86,072    |
| 1997          |     |     | 2,043   | 1,408   | 183    | 65    | 1,423  | 5,975   | 22,424    | 42,544    | 9,305   | 547    | 85,917    |
| 1998          |     |     | 2,390   | 1,837   | 107    | 94    | 1,001  | 731     | 10,295    | 46,326    | 7,071   | 2,165  | 72,017    |
| 1999          |     |     | 2,091   | 855     | 92     | 35    | 1,333  | 5,577   | 35,954    | 23,694    | 4,044   | 695    | 74,370    |
| 2000          |     |     | 1,453   | 932     | 94     | 275   | 2,907  | 5,081   | 57,412    | 39,501    | 5,217   | 339    | 113,211   |
| 2001          |     |     | 3,200   | 2,365   | 193    | 1,087 | 6,772  | 11,315  | 101,289   | 105,685   | 24,287  | 6,375  | 262,568   |
| 2002          |     |     | 4,064   | 7,992   | 415    | 272   | 4,866  | 14,234  | 83,239    | 93,223    | 9,360   | 1,053  | 218,718   |
| 2003          |     |     | 13,038  | 2,583   | 182    | 398   | 3,169  | 5,108   | 71,337    | 77,100    | 7,157   | 600    | 180,672   |
| 2004          |     |     | 4,802   | 2,662   | 154    | 421   | 2,492  | 3,227   | 78,020    | 55,626    | 6,480   | 505    | 154,389   |
| 2005          |     |     | 3,479   | 1,204   | 180    | 433   | 2,156  | 3,315   | 57,231    | 79,926    | 6,882   | 977    | 155,783   |
| 2006          |     |     | 3,467   | 3,924   | 200    | 87    | 691    | 2,063   | 50,958    | 68,063    | 14,958  | 1,580  | 145,991   |
| 2007          |     |     | 6,894   | 3,477   | 211    | 271   | 1,504  | 3,792   | 58,983    | 71,535    | 8,269   | 2,409  | 157,345   |
| 2008          |     |     | 3,812   | 3,412   | 547    | 107   | 4,301  | 13,596  | 83,413    | 56,851    | 8,322   | 1,120  | 175,481   |
| 2009          |     |     | 4,313   | 5,918   | 550    | 486   | 3,806  | 8,978   | 154,804   | 129,599   | 14,574  | 669    | 323,697   |
| 2010          |     |     | 5,934   | 3,986   | 542    | 490   | 8,939  | 16,337  | 98,690    | 63,325    | 7,620   | 1,022  | 206,885   |
| 2011          |     |     | 5,017   | 6,443   | 830    | 73    | 3,309  | 21,163  | 84,732    | 58,065    | 3,355   | 661    | 183,648   |
| 2012          |     |     | 4,451   | 3,863   | 613    | 108   | 1,202  | 2,374   | 46,049    | 40,984    | 8,927   | 2,104  | 110,675   |
| Total         | 539 | 790 | 118,553 | 119,758 | 15,594 | 6,307 | 75,316 | 197,729 | 1,610,787 | 1,769,195 | 262,031 | 34,557 | 4,211,156 |
| 10-Yr Average |     |     | 5,521   | 3,747   | 401    | 287   | 3,157  | 7,995   | 78,422    | 70,107    | 8,654   | 1,165  | 179,457   |

TABLE 129

Night Count of Sockeye at Lower Granite Dam

| 2009          |           |            |          |          | 2010          |           |            |          | 2011          |          |            |          | 2012          |          |           |          |   |
|---------------|-----------|------------|----------|----------|---------------|-----------|------------|----------|---------------|----------|------------|----------|---------------|----------|-----------|----------|---|
| Day           | JUN       | JUL        | AUG      | SEP      | Day           | JUN       | JUL        | AUG      | Day           | JUN      | JUL        | AUG      | Day           | JUN      | JUL       | AUG      |   |
| 1             |           | 7          | 0        | 0        | 1             |           | 6          | 3        | 1             |          | 0          | 4        | 1             |          | 2         | 1        |   |
| 2             |           | 9          | 0        | 0        | 2             |           | 14         | 0        | 2             |          | 0          | 1        | 2             |          | 3         | 1        |   |
| 3             |           | 11         | 0        | 0        | 3             |           | 6          | 1        | 3             |          | 0          | 0        | 3             |          | 5         | 0        |   |
| 4             |           | 14         | 0        | 0        | 4             |           | 12         | 0        | 4             |          | 1          | 2        | 4             |          | 1         | 0        |   |
| 5             |           | 13         | 0        | 0        | 5             |           | 9          | 0        | 5             |          | 2          | 1        | 5             |          | 2         | 0        |   |
| 6             |           | 14         | 0        | 0        | 6             |           | 9          | 0        | 6             |          | 1          | 0        | 6             |          | 8         | 0        |   |
| 7             |           | 13         | 0        | 0        | 7             |           | 5          | 0        | 7             |          | 0          | 0        | 7             |          | 7         | 0        |   |
| 8             |           | 12         | 0        | 0        | 8             |           | 8          | 0        | 8             |          | 1          | 0        | 8             |          | 3         | 0        |   |
| 9             |           | 8          | 0        | 0        | 9             |           | 9          | 0        | 9             |          | 3          | 0        | 9             |          | 4         | 0        |   |
| 10            |           | 8          | 0        | 0        | 10            |           | 3          | 0        | 10            |          | 6          | 0        | 10            |          | 6         | 0        |   |
| 11            |           | 7          | 0        | 0        | 11            |           | 8          | *        | 11            |          | 1          | 0        | 11            |          | 3         | 0        |   |
| 12            |           | 6          | 0        | 0        | 12            |           | 6          | *        | 12            |          | 6          | 0        | 12            |          | 3         | 0        |   |
| 13            |           | 4          | 0        | 0        | 13            |           | 11         | *        | 13            |          | 12         | 0        | 13            |          | 0         | 0        |   |
| 14            |           | 3          | 0        | 0        | 14            |           | 11         | *        | 14            |          | 11         | 0        | 14            |          | 4         | 0        |   |
| 15            |           | 3          | 0        | 0        | 15            |           | 0          | 12       | *             | 15       |            | 0        | 15            |          | 0         | 3        | 0 |
| 16            |           | 2          | 0        | 0        | 16            |           | 0          | 9        | 0             | 16       |            | 0        | 16            |          | 0         | 4        | 0 |
| 17            |           | 6          | 0        | 0        | 17            |           | 0          | 4        | 0             | 17       |            | 0        | 17            |          | 0         | 2        | 0 |
| 18            |           | 5          | 0        | 0        | 18            |           | 0          | 7        | 0             | 18       |            | 0        | 18            |          | 0         | 1        | 0 |
| 19            | 0         | 6          | 0        | 0        | 19            |           | 0          | 7        | 1             | 19       |            | 0        | 19            |          | 0         | 3        | 0 |
| 20            | 0         | 4          | 0        | 0        | 20            |           | 0          | 4        | 0             | 20       |            | 0        | 20            |          | 0         | 3        | 0 |
| 21            | 0         | 2          | 2        | 0        | 21            |           | 0          | 9        | 0             | 21       |            | 0        | 21            |          | 0         | 2        | 0 |
| 22            | 0         | 0          | 0        | 0        | 22            |           | 2          | 6        | 0             | 22       |            | 0        | 22            |          | 0         | 1        | 0 |
| 23            | 1         | 0          | 0        | 0        | 23            |           | 0          | 3        | 0             | 23       |            | 0        | 23            |          | 0         | 3        | 0 |
| 24            | 0         | 1          | 0        | 0        | 24            |           | 0          | 0        | 0             | 24       |            | 0        | 24            |          | 0         | 1        | 0 |
| 25            | 0         | 1          | 0        | 0        | 25            |           | 0          | 1        | 0             | 25       |            | 0        | 25            |          | 1         | 0        | 0 |
| 26            | 3         | 0          | 0        | 0        | 26            |           | 1          | 3        | 0             | 26       |            | 0        | 26            |          | 0         | 1        | 0 |
| 27            | 4         | 0          | 0        | 0        | 27            |           | 2          | 2        | 0             | 27       |            | 0        | 27            |          | 0         | 0        | 0 |
| 28            | 6         | 0          | 0        | 0        | 28            |           | 1          | 2        | 0             | 28       |            | 0        | 28            |          | 0         | 3        | 0 |
| 29            | 7         | 0          | 0        | 0        | 29            |           | 3          | 0        | 0             | 29       |            | 0        | 29            |          | 1         | 0        | 0 |
| 30            | 5         | 0          | 0        | 0        | 30            |           | 4          | 0        | 0             | 30       |            | 0        | 30            |          | 1         | 1        | 0 |
| 31            |           | 0          | 0        |          | 31            |           |            | 1        |               | 31       |            | 1        | 0             |          | 0         | 1        |   |
| <b>TOTALS</b> | <b>26</b> | <b>159</b> | <b>2</b> | <b>0</b> | <b>TOTALS</b> | <b>13</b> | <b>187</b> | <b>5</b> | <b>TOTALS</b> | <b>0</b> | <b>168</b> | <b>8</b> | <b>TOTALS</b> | <b>3</b> | <b>79</b> | <b>3</b> |   |

Note: video counting for night sockeye passage at Lower Granite June 19 - September 30  
 Not included with the Daytime total sockeye counts.

TABLE 130

Night Count of Lamprey at Lower Granite Dam

| 2009          |          |           |           |           | 2010          |          |          |           |           | 2011          |          |          |            |            | 2012          |          |           |            |           |   |
|---------------|----------|-----------|-----------|-----------|---------------|----------|----------|-----------|-----------|---------------|----------|----------|------------|------------|---------------|----------|-----------|------------|-----------|---|
| Day           | JUN      | JUL       | AUG       | SEP       | Day           | JUN      | JUL      | AUG       | SEP       | Day           | JUN      | JUL      | AUG        | SEP        | Day           | JUN      | JUL       | AUG        | SEP       |   |
| 1             |          | 0         | 0         | 0         | 1             |          | 0        | 0         | 2         | 1             |          | 0        | 0          | 2          | 1             |          | 0         | 2          | 9         |   |
| 2             |          | 0         | 1         | 1         | 2             |          | 0        | 1         | 4         | 2             |          | 0        | 0          | 8          | 2             |          | 0         | 5          | 6         |   |
| 3             |          | 0         | 1         | 1         | 3             |          | 0        | 1         | 0         | 3             |          | 0        | 0          | 5          | 3             |          | 0         | 5          | 1         |   |
| 4             |          | 0         | 1         | 1         | 4             |          | 0        | 0         | 1         | 4             |          | 0        | 0          | 8          | 4             |          | 0         | 4          | 5         |   |
| 5             |          | 1         | 2         | 0         | 5             |          | 0        | 3         | 1         | 5             |          | 0        | 1          | 3          | 5             |          | 0         | 4          | 2         |   |
| 6             |          | 0         | 0         | 1         | 6             |          | 0        | 1         | -1        | 6             |          | 0        | 0          | 3          | 6             |          | 0         | 8          | 5         |   |
| 7             |          | 0         | 2         | 0         | 7             |          | 0        | 0         | 1         | 7             |          | 0        | 0          | 2          | 7             |          | 1         | 1          | 5         |   |
| 8             |          | 0         | 0         | -1        | 8             |          | 0        | 2         | 1         | 8             |          | 0        | 1          | 1          | 8             |          | 0         | 10         | 1         |   |
| 9             |          | 0         | 1         | 2         | 9             |          | 0        | 1         | 3         | 9             |          | -1       | 6          | 4          | 9             |          | 0         | 4          | 5         |   |
| 10            |          | 1         | 0         | 1         | 10            |          | 0        | 2         | 0         | 10            |          | 0        | 7          | 4          | 10            |          | 0         | 3          | 4         |   |
| 11            |          | 0         | 2         | 0         | 11            |          | 0        | *         | 1         | 11            |          | 0        | 3          | 2          | 11            |          | 1         | 7          | 3         |   |
| 12            |          | 0         | 2         | 0         | 12            |          | 0        | *         | 2         | 12            |          | 0        | 1          | 5          | 12            |          | 0         | 11         | 4         |   |
| 13            |          | 0         | 3         | 0         | 13            |          | 0        | *         | 0         | 13            |          | 0        | 5          | 6          | 13            |          | 0         | 6          | 2         |   |
| 14            |          | 0         | 0         | 1         | 14            |          | 0        | *         | 0         | 14            |          | 0        | 3          | 9          | 14            |          | 0         | 6          | 4         |   |
| 15            |          | 0         | 3         | 0         | 15            |          | 0        | *         | 1         | 15            |          | 0        | 0          | 2          | 5             |          | 0         | 7          | 0         |   |
| 16            |          | 0         | 0         | 1         | 16            |          | 0        | 0         | 9         | 0             |          | 0        | 0          | 4          | 9             |          | 0         | 0          | 5         | 3 |
| 17            |          | 4         | 0         | 2         | 17            |          | 0        | 1         | 3         | 1             |          | 0        | 0          | 8          | 7             |          | 0         | 0          | 5         | 2 |
| 18            | 0        | 0         | 1         | 1         | 18            |          | 0        | 0         | 4         | 0             |          | 0        | 0          | 4          | 3             |          | 0         | 1          | 4         | 0 |
| 19            | 0        | 0         | 2         | 0         | 19            |          | 0        | 0         | 8         | 0             |          | 0        | 0          | 2          | 10            |          | 0         | 0          | 0         | 2 |
| 20            | 0        | 1         | 1         | 1         | 20            |          | 0        | 0         | 0         | 1             |          | 0        | 0          | 3          | 5             |          | 0         | 2          | 4         | 2 |
| 21            | 0        | 1         | 1         | 0         | 21            |          | 0        | 0         | 3         | 0             |          | 0        | 0          | 1          | 1             |          | 0         | 2          | 6         | 1 |
| 22            | 0        | 3         | 0         | 0         | 22            |          | 0        | 0         | 1         | 2             |          | 0        | 0          | 6          | 4             |          | 0         | 0          | 11        | 2 |
| 23            | 0        | 1         | 1         | 2         | 23            |          | 0        | 1         | 0         | 0             |          | 0        | 0          | 5          | 8             |          | 0         | 0          | 13        | 2 |
| 24            | 0        | 1         | 1         | -1        | 24            |          | 0        | 0         | 2         | 0             |          | 0        | 0          | 7          | 10            |          | 0         | 0          | 6         | 1 |
| 25            | 0        | 3         | 1         | 0         | 25            |          | 0        | 0         | 0         | 0             |          | 0        | 0          | 6          | 1             |          | 0         | 0          | 3         | 0 |
| 26            | 0        | 1         | 0         | 0         | 26            |          | 0        | 0         | 7         | 0             |          | 0        | 0          | 5          | 1             |          | 0         | 2          | 3         | 0 |
| 27            | 1        | 0         | 2         | 0         | 27            |          | 0        | 0         | 1         | 1             |          | 0        | 0          | 5          | 5             |          | 0         | 4          | 8         | 0 |
| 28            | 0        | 0         | 0         | 0         | 28            |          | 0        | 0         | 3         | 0             |          | 0        | 0          | 13         | 4             |          | 0         | 4          | 4         | 2 |
| 29            | 0        | 1         | 1         | 0         | 29            |          | 0        | 0         | -1        | 0             |          | 0        | 0          | 6          | 1             |          | 0         | 6          | 7         | 0 |
| 30            | 0        | 3         | 0         | 0         | 30            |          | 0        | 0         | 2         | 0             |          | 0        | 0          | 6          | 1             |          | 0         | 4          | 2         | 0 |
| 31            |          | 2         | 1         |           | 31            |          | 0        | 1         |           |               |          |          | 1          | 12         |               |          |           | 5          | 4         |   |
| <b>TOTALS</b> | <b>1</b> | <b>23</b> | <b>30</b> | <b>13</b> | <b>TOTALS</b> | <b>0</b> | <b>2</b> | <b>54</b> | <b>21</b> | <b>TOTALS</b> | <b>0</b> | <b>0</b> | <b>122</b> | <b>137</b> | <b>TOTALS</b> | <b>1</b> | <b>32</b> | <b>168</b> | <b>73</b> |   |

\*Data unavailable

Note: video counting for night lamprey passage at Lower Granite from June 18 - September 30  
 Not included with the Daytime total lamprey counts.

## PRIEST RAPIDS AND WANAPUM DAMS

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### FISH COUNTING SCHEDULE – PRIEST RAPIDS DAM

|                 |   |
|-----------------|---|
| Jan 1 – Apr 14  | No adult fish counting.                             |
| Apr 15 – Nov 15 | Daily fish counting via video fish-counting system. |
| Nov 16 – Dec 31 | No adult fish counting.                             |

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### FISH COUNTING SCHEDULE – WANAPUM DAM

|                 |   |
|-----------------|---|
| Jan 1 – Apr 14  | No adult fish counting.                             |
| Apr 15 – Nov 15 | Daily fish counting via video fish-counting system. |
| Nov 16 – Dec 31 | No adult fish counting.                             |

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### FISH LADDER OPERATING AND MAINTENANCE SCHEDULE – PRIEST RAPIDS DAM

#### *Left Bank Ladder*

|                 |  |
|-----------------|--|
| 01 Jan – 23 Feb | Out of criteria for annual inspection, maintenance, and repairs. |
| 23 Feb – 20 Nov | In service.  |
| 20 Nov – 27 Dec | Out of criteria for annual inspection, maintenance, and repairs. |
| 27 Dec – 31 Dec | In service.  |

#### *Right Bank Ladder*

|                 |   |
|-----------------|---|
| 01 Jan – 23 Feb | Out of criteria (fish passage at Ladder Flow due to LB shutdown). |
| 23 Feb – 15 Mar | Out of criteria for annual inspection, maintenance, and repairs.  |
| 15 Mar – 20 Nov | In service.   |
| 20 Nov – 27 Dec | Out of criteria (fish passage at Ladder Flow due to LB shutdown). |
| 27 Dec – 31 Dec | Out of criteria for annual inspection, maintenance, and repairs.  |

### FISH LADDER OPERATING AND MAINTENANCE SCHEDULE – WANAPUM DAM

#### *Left Bank Ladder*

|                 |  |
|-----------------|--|
| 01 Jan – 09 Feb | Out of criteria for annual inspection, maintenance, and repairs. |
| 09 Feb – 31 Dec | In service.  |

#### *Right Bank Ladder*

|                 |  |
|-----------------|--|
| 01 Jan – 10 Feb | In service.  |
| 10 Feb – 11 Apr | Out of criteria for annual inspection, maintenance, and repairs. |
| 11 Apr – 23 Nov | In service.  |
| 23 Nov – 31 Dec | Out of criteria for annual inspection, maintenance, and repairs. |

Note: Out of criteria dates provided above reflect those periods of time when the adult fishway was out of operational flow and/or head differential criteria. Upstream fish passage is possible for one to several days before and after the indicated dates. “Ladder flow” are periods of reduced fishway flow that still allow fish passage.

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## FISHWAY ACTIVITIES

### Adult Fish Counting

The video fish-counting system uses digital video cameras installed in the fishways to assist with counting migrating fish at Priest Rapids and Wanapum Dams. Digital video images are streamed 24 hours per day to digital video recorders at each dam. The fish counting staff then playback these images on computers in a fast-forward mode to identify when fish are passing and then slowed to identify and count fish. At the end of each day all counts are electronically tallied and a fish-count report is generated for each dam and posted on Grant County PUD’s Fish, Wildlife, and Water Quality’s website: <http://www.gcpud.org/naturalResources/fishWaterWildlife/fishCounts.php>. This site provides several years of fish counts and a Priest Rapids Dam fish count summary. The fish-counting season for both hydroelectric projects run from April 15 through November 15, annually.

### Adult PIT- Tag Detection

The PIT-tag detection array in both ladders of Priest Rapids Dam are operated continuously when the adult fishways are operational. PIT tag reader upgrades and minor relocation to the arrays are planned during the 2013 – 2014 winter outage period. There are no adult passage PIT-tag arrays at Wanapum Dam.

### Off Ladder Adult Fish Trap (OLAFT)

The adult fish trap is located off the left bank fish ladder at Priest Rapids Dam. The Yakama Nation trapped adult sockeye salmon for a total of 11 days from June 25 to July 12 for the Lake Cle Elum and Cooper Lake sockeye reintroduction program. Washington Department of Fish and Wildlife operated the trap for 38 days from July 10 November 14 as part of its steelhead stock assessment, for 21 days between September 5 and November 14 as part of its fall Chinook salmon age composition and spawning site location studies, and 21 days from September 5 to November 14 for Priest Rapids Hatchery broodstock collection feasibility program.

### Adult Lamprey Passage Study

Grant County PUD continued the study to identify and address hydro project impacts to upstream migrating adult Pacific lamprey. Priest Rapids Dam video cameras are used to assess lamprey passage at ladder weir orifices, installed aluminum plating and fish counting stations. Strategically placed HDX-PIT arrays are used to evaluate passage success and travel time within the Priest Rapids and Wanapum Dam fish ladders.

TABLE 131

MONTHLY TOTALS OF SALMONIDS, SHAD, AND LAMPREY COUNTED OVER PRIEST RAPIDS DAM  
2012

| SPECIES        | JAN | FEB | MAR | APR       | MAY           | JUN           | JUL            | AUG           | SEP           | OCT           | NOV          | DEC | TOTAL          |
|----------------|-----|-----|-----|-----------|---------------|---------------|----------------|---------------|---------------|---------------|--------------|-----|----------------|
| CHINOOK*       |     |     |     | 22        | 16,698        | 11,152        | 38,537         | 12,321        | 35,012        | 22,971        | 1,774        |     | 138,487        |
| STEELHEAD      |     |     |     | 64        | 26            | 149           | 1,879          | 6,586         | 7,024         | 1,364         | 138          |     | 17,230         |
| SOCKEYE        |     |     |     |           |               | 23,801        | 383,089        | 1,367         |               |               |              |     | 408,257        |
| COHO*          |     |     |     |           |               |               |                | 3             | 8,733         | 1,198         | 23           |     | 9,957          |
| PINK           |     |     |     |           |               |               |                |               |               |               |              |     |                |
| <b>TOTAL</b>   |     |     |     | <b>86</b> | <b>16,724</b> | <b>35,102</b> | <b>423,505</b> | <b>20,277</b> | <b>50,769</b> | <b>25,533</b> | <b>1,935</b> |     | <b>573,931</b> |
| <b>SHAD</b>    |     |     |     |           |               | <b>70</b>     | <b>1,545</b>   | <b>284</b>    | <b>37</b>     | <b>4</b>      | <b>-1</b>    |     | <b>1,939</b>   |
| <b>LAMPREY</b> |     |     |     |           | <b>3</b>      | <b>32</b>     | <b>127</b>     | <b>2,134</b>  | <b>1,465</b>  | <b>245</b>    | <b>19</b>    |     | <b>4,025</b>   |

\*Jacks included



TABLE 132

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| PRIEST RAPIDS PROJECT- FISH COUNTS |                         |        |      |              |            |           |         |           |              |         | APRIL 2012 |             |             |       |      |
|------------------------------------|-------------------------|--------|------|--------------|------------|-----------|---------|-----------|--------------|---------|------------|-------------|-------------|-------|------|
| DATE                               | CHINOOK ADULT           |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | SHAD         | LAMPREY | DISCH      | SPILL       | DEG F       |       |      |
|                                    | SPRING                  | SUMMER | FALL |              |            |           |         |           |              |         | KCFS       | KCFS        |             |       |      |
| Apr 1                              | BEGIN COUNTING APRIL 15 |        |      |              |            |           |         |           |              |         |            | 156.2       | 5.8         | 40.1  |      |
| Apr 2                              |                         |        |      |              |            |           |         |           |              |         |            | 133.6       | 0.3         | 40.3  |      |
| Apr 3                              |                         |        |      |              |            |           |         |           |              |         |            | 175.3       | 54.6        | 40.5  |      |
| Apr 4                              |                         |        |      |              |            |           |         |           |              |         |            | 162.4       | 61.8        | 40.6  |      |
| Apr 5                              |                         |        |      |              |            |           |         |           |              |         |            | 167.2       | 60.0        | 40.8  |      |
| Apr 6                              |                         |        |      |              |            |           |         |           |              |         |            | 180.2       | 60.6        | 41.0  |      |
| Apr 7                              |                         |        |      |              |            |           |         |           |              |         |            | 176.1       | 53.3        | 41.0  |      |
| Apr 8                              |                         |        |      |              |            |           |         |           |              |         |            | 169.8       | 68.9        | 41.4  |      |
| Apr 9                              |                         |        |      |              |            |           |         |           |              |         |            | 183.6       | 91.7        | 41.5  |      |
| Apr 10                             |                         |        |      |              |            |           |         |           |              |         |            | 203.3       | 97.4        | 41.5  |      |
| Apr 11                             |                         |        |      |              |            |           |         |           |              |         |            | 172.1       | 69.0        | 41.7  |      |
| Apr 12                             |                         |        |      |              |            |           |         |           |              |         |            | 169.1       | 63.1        | 42.3  |      |
| Apr 13                             |                         |        |      |              |            |           |         |           |              |         |            | 186.2       | 62.8        | 42.6  |      |
| Apr 14                             |                         |        |      |              |            |           |         |           |              |         |            | 173.7       | 47.2        | 42.8  |      |
| Apr 15                             | 0                       |        |      |              |            |           | 4       |           |              |         |            |             | 155.5       | 71.7  | 43.0 |
| Apr 16                             | 0                       |        |      |              |            |           | 6       |           |              |         |            |             | 169.2       | 52.7  | 43.5 |
| Apr 17                             | 0                       |        |      |              |            |           | 2       |           |              |         |            |             | 155.1       | 65.2  | 43.7 |
| Apr 18                             | 0                       |        |      |              |            |           | 3       |           |              |         |            |             | 180.0       | 56.5  | 43.7 |
| Apr 19                             | 1                       |        |      |              |            |           | 2       |           |              |         |            |             | 178.4       | 73.1  | 43.9 |
| Apr 20                             | 1                       |        |      |              |            |           | 6       |           |              |         |            |             | 208.9       | 85.1  | 44.1 |
| Apr 21                             | 1                       |        |      |              |            |           | 5       |           |              |         |            |             | 188.5       | 69.3  | 44.6 |
| Apr 22                             | 0                       |        |      |              |            |           | 5       |           |              |         |            |             | 205.4       | 85.8  | 44.8 |
| Apr 23                             | 0                       |        |      |              |            |           | 4       |           |              |         |            |             | 208.1       | 93.0  | 45.3 |
| Apr 24                             | 4                       |        |      |              |            |           | 9       |           |              |         |            |             | 227.9       | 126.9 | 46.2 |
| Apr 25                             | 2                       |        |      |              |            |           | 7       |           |              |         |            |             | 185.9       | 93.3  | 46.4 |
| Apr 26                             | 1                       |        |      |              |            |           | 1       |           |              |         |            |             | 187.0       | 80.2  | 46.4 |
| Apr 27                             | 1                       |        |      |              |            |           | 4       |           |              |         |            |             | 204.1       | 88.7  | 46.4 |
| Apr 28                             | 2                       |        |      |              |            |           | 3       |           |              |         |            |             | 178.1       | 58.5  | 46.6 |
| Apr 29                             | 3                       |        |      |              |            |           | 1       |           |              |         |            |             | 208.0       | 122.2 | 46.9 |
| Apr 30                             | 6                       |        |      |              |            |           | 2       |           |              |         |            |             | 241.4       | 155.9 | 47.3 |
| <b>TOTAL</b>                       | <b>22</b>               |        |      | <b>64</b>    |            |           |         |           | <b>183.0</b> |         |            | <b>72.5</b> | <b>43.4</b> |       |      |
| AVG.                               | 1                       |        |      | 4            |            |           |         |           | 183.0        |         |            | 72.5        | 43.4        |       |      |

TABLE 133

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

| PRIEST RAPIDS PROJECT- FISH COUNTS |               |                      |                     |              |            |           |         |                  |      | MAY 2012       |              |              |             |
|------------------------------------|---------------|----------------------|---------------------|--------------|------------|-----------|---------|------------------|------|----------------|--------------|--------------|-------------|
| DATE                               | CHINOOK ADULT |                      |                     | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD        | SHAD | LAMPREY        | DISCH KCFS   | SPILL KCFS   | DEG F       |
|                                    | SPRING        | SUMMER               | FALL                |              |            |           |         |                  |      |                |              |              |             |
| May 1                              | 13            |                      |                     | 0            |            |           |         | 2                |      | 0              | 251.1        | 131.6        | 47.3        |
| May 2                              | 15            |                      |                     | 0            |            |           |         | 2                |      | 0              | 280.2        | 165.9        | 47.5        |
| May 3                              | 24            |                      |                     | 0            |            |           |         | 1                |      | 0              | 271.7        | 176.1        | 47.7        |
| May 4                              | 33            |                      |                     | 0            |            |           |         | 0                |      | 0              | 260.4        | 155.9        | 47.8        |
| May 5                              | 36            |                      |                     | 0            |            |           |         | 2                |      | 0              | 247.8        | 131.6        | 47.7        |
| May 6                              | 90            |                      |                     | 0            |            |           |         | 0                |      | 0              | 241.6        | 140.6        | 47.8        |
| May 7                              | 83            |                      |                     | 0            |            |           |         | 1                |      | 0              | 226.6        | 102.3        | 48.6        |
| May 8                              | 100           |                      |                     | 3            |            |           |         | 3                |      | 0              | 236.5        | 134.0        | 49.3        |
| May 9                              | 248           |                      |                     | 2            |            |           |         | 0                |      | 0              | 255.7        | 156.3        | 49.5        |
| May 10                             | 216           |                      |                     | 1            |            |           |         | 0                |      | 0              | 258.1        | 141.3        | 49.8        |
| May 11                             | 161           |                      |                     | 1            |            |           |         | 0                |      | 0              | 235.0        | 99.8         | 50.4        |
| May 12                             | 261           |                      |                     | 12           |            |           |         | 0                |      | 0              | 210.7        | 65.7         | 51.1        |
| May 13                             | 363           |                      |                     | 5            |            |           |         | 2                |      | 0              | 193.1        | 88.8         | 50.9        |
| May 14                             | 211           |                      |                     | 3            |            |           |         | 0                |      | 0              | 219.8        | 121.7        | 51.6        |
| May 15                             | 471           |                      |                     | 8            |            |           |         | 1                |      | 0              | 212.8        | 84.6         | 52.0        |
| May 16                             | 1,375         |                      |                     | 17           |            |           |         | 3                |      | 0              | 203.5        | 110.0        | 52.3        |
| May 17                             | 772           |                      |                     | 28           |            |           |         | 0                |      | 0              | 227.0        | 113.3        | 52.3        |
| May 18                             | 2,212         |                      |                     | 32           |            |           |         | 0                |      | 0              | 238.4        | 120.4        | 52.2        |
| May 19                             | 2,097         |                      |                     | 54           |            |           |         | 0                |      | 0              | 236.0        | 143.7        | 52.2        |
| May 20                             | 694           |                      |                     | 34           |            |           |         | 1                |      | 1              | 253.0        | 151.8        | 51.8        |
| May 21                             | 443           |                      |                     | 19           |            |           |         | 0                |      | 0              | 241.8        | 132.5        | 51.4        |
| May 22                             | 718           |                      |                     | 26           |            |           |         | 0                |      | 0              | 245.2        | 118.5        | 51.1        |
| May 23                             | 876           |                      |                     | 51           |            |           |         | 0                |      | 0              | 216.7        | 122.3        | 50.9        |
| May 24                             | 947           |                      |                     | 67           |            |           |         | 1                |      | 1              | 236.2        | 130.5        | 51.1        |
| May 25                             | 1,244         |                      |                     | 90           |            |           |         | 2                |      | 0              | 230.7        | 124.9        | 51.3        |
| May 26                             | 627           |                      |                     | 64           |            |           |         | 0                |      | 0              | 249.4        | 144.2        | 51.8        |
| May 27                             | 630           |                      |                     | 65           |            |           |         | 2                |      | 0              | 220.1        | 142.8        | 52.2        |
| May 28                             | 427           |                      |                     | 38           |            |           |         | 2                |      | 1              | 194.9        | 99.5         | 52.7        |
| May 29                             | 105           |                      |                     | 46           |            |           |         | 0                |      | 0              | 214.3        | 100.9        | 52.7        |
| May 30                             | 109           |                      |                     | 19           |            |           |         | 0                |      | 0              | 215.9        | 116.3        | 53.4        |
| May 31                             | 374           |                      |                     | 38           |            |           |         | 1                |      | 0              | 209.9        | 97.4         | 53.8        |
| <b>TOTAL</b>                       | <b>15,975</b> |                      |                     | <b>723</b>   |            |           |         | <b>26</b>        |      | <b>3</b>       |              |              |             |
| <b>AVG.</b>                        | <b>515</b>    |                      |                     | <b>23</b>    |            |           |         | <b>1</b>         |      | <b>0</b>       | <b>233.4</b> | <b>124.7</b> | <b>50.7</b> |
| <b>RUN YEAR</b>                    |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |            |           |         | <b>STEELHEAD</b> |      | <b>LAMPREY</b> |              |              |             |
| <b>TOTALS TO DATE</b>              |               |                      |                     |              |            |           |         |                  |      |                |              |              |             |
| <b>SPRING</b>                      |               | <b>15,997</b>        | <b>723</b>          |              |            |           |         | <b>90</b>        |      | <b>3</b>       |              |              |             |

TABLE 134

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE       | STEELHEAD  | SHAD      | LAMPREY   | DISCH KCFS   | SPILL KCFS   | DEG F       |
|--------------|---------------|--------------|------|--------------|------------|-----------|---------------|------------|-----------|-----------|--------------|--------------|-------------|
|              | SPRING        | SUMMER       | FALL | JACK         | ADULT      | JACK      |               |            |           |           |              |              |             |
| Jun 1        | 294           |              |      | 36           |            |           | 0             | 2          | 0         | 0         | 193.7        | 86.0         | 54.3        |
| Jun 2        | 789           |              |      | 84           |            |           | 0             | 1          | 0         | 0         | 178.1        | 52.3         | 54.7        |
| Jun 3        | 281           |              |      | 36           |            |           | 0             | 5          | 0         | 3         | 169.5        | 55.6         | 55.0        |
| Jun 4        | 59            |              |      | 4            |            |           | 0             | 0          | 0         | 2         | 205.1        | 75.7         | 54.9        |
| Jun 5        | 178           |              |      | 17           |            |           | 0             | 1          | 0         | 2         | 161.7        | 48.4         | 54.5        |
| Jun 6        | 111           |              |      | 19           |            |           | 0             | 3          | 0         | 2         | 198.2        | 97.1         | 54.1        |
| Jun 7        | 158           |              |      | 8            |            |           | 0             | 2          | 0         | 0         | 257.0        | 142.4        | 54.1        |
| Jun 8        | 131           |              |      | 11           |            |           | 1             | 2          | 0         | 0         | 259.8        | 137.5        | 54.0        |
| Jun 9        | 445           |              |      | 11           |            |           | 4             | 2          | 0         | 0         | 250.8        | 160.9        | 53.1        |
| Jun 10       | 119           |              |      | 15           |            |           | 1             | 2          | 0         | 0         | 240.6        | 168.2        | 53.2        |
| Jun 11       | 88            |              |      | 4            |            |           | 3             | 6          | 0         | 1         | 244.6        | 142.3        | 54.0        |
| Jun 12       | 181           |              |      | 10           |            |           | 8             | 3          | 0         | 1         | 251.1        | 144.0        | 54.7        |
| Jun 13       | 664           |              |      | 37           |            |           | 9             | 9          | 0         | 3         | 249.7        | 148.9        | 55.2        |
| Jun 14       |               | 220          |      | 14           |            |           | 36            | 9          | 0         | 2         | 237.6        | 184.6        | 55.4        |
| Jun 15       |               | 132          |      | 13           |            |           | 68            | 2          | 0         | 0         | 242.5        | 136.0        | 55.8        |
| Jun 16       |               | 750          |      | 30           |            |           | 152           | 3          | 0         | 1         | 240.6        | 160.1        | 56.1        |
| Jun 17       |               | 439          |      | 19           |            |           | 300           | 5          | 0         | 0         | 256.3        | 183.8        | 56.8        |
| Jun 18       |               | 177          |      | 9            |            |           | 284           | 2          | 0         | 2         | 247.0        | 157.0        | 56.5        |
| Jun 19       |               | 165          |      | 17           |            |           | 275           | 3          | 0         | 0         | 244.3        | 138.5        | 56.1        |
| Jun 20       |               | 484          |      | 13           |            |           | 701           | 4          | 0         | 1         | 295.2        | 176.0        | 56.5        |
| Jun 21       |               | 856          |      | 24           |            |           | 1,064         | 4          | 4         | 2         | 242.6        | 126.5        | 56.7        |
| Jun 22       |               | 436          |      | 12           |            |           | 1,274         | 4          | 6         | 3         | 283.0        | 181.5        | 56.8        |
| Jun 23       |               | 540          |      | 7            |            |           | 1,957         | 5          | 8         | 3         | 270.4        | 157.4        | 56.5        |
| Jun 24       |               | 545          |      | 16           |            |           | 2,563         | 19         | 6         | 1         | 302.3        | 220.3        | 56.5        |
| Jun 25       |               | 231          |      | 4            |            |           | 1,666         | 9          | 1         | 0         | 308.1        | 179.5        | 56.3        |
| Jun 26       |               | 225          |      | 9            |            |           | 2,419         | 3          | 4         | 1         | 354.0        | 244.8        | 55.9        |
| Jun 27       |               | 41           |      | 0            |            |           | 1,163         | 1          | 2         | 0         | 326.5        | 204.0        | 55.6        |
| Jun 28       |               | 171          |      | 12           |            |           | 1,833         | 9          | 16        | 0         | 335.5        | 217.2        | 55.8        |
| Jun 29       |               | 434          |      | 6            |            |           | 2,270         | 7          | 12        | 1         | 338.9        | 221.8        | 55.9        |
| Jun 30       |               | 1,298        |      | 13           |            |           | 5,750         | 22         | 11        | 1         | 339.4        | 212.6        | 56.1        |
| <b>TOTAL</b> | <b>3,498</b>  | <b>7,144</b> |      | <b>510</b>   |            |           | <b>23,801</b> | <b>149</b> | <b>70</b> | <b>32</b> |              |              |             |
| <b>AVG.</b>  |               | <b>420</b>   |      | <b>17</b>    |            |           | <b>793</b>    | <b>5</b>   | <b>2</b>  | <b>1</b>  | <b>257.5</b> | <b>152.0</b> | <b>55.4</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 19,495        | 1,015        |
| SUMMER         | 7,144         | 218          |
| <b>TOTAL</b>   | <b>26,639</b> | <b>1,233</b> |

| SOCKEYE | STEELHEAD | SHAD | LAMPREY |
|---------|-----------|------|---------|
| 23,801  | 239       | 70   | 35      |

TABLE 135

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK    | COHO  | COHO | SOCKEYE        | STEELHEAD    | SHAD         | LAMPREY    | DISCH<br>KCFS | SPILL<br>KCFS | DEG F       |
|--------------|---------------|---------------|------|------------|-------|------|----------------|--------------|--------------|------------|---------------|---------------|-------------|
|              | SPRING        | SUMMER        | FALL | JACK       | ADULT | JACK |                |              |              |            |               |               |             |
| Jul 1        |               | 412           |      | 2          |       |      | 6,671          | 9            | 1            | 0          | 326.6         | 209.5         | 56.8        |
| Jul 2        |               | 1,192         |      | 24         |       |      | 9,752          | 22           | 23           | 0          | 298.6         | 173.9         | 57.4        |
| Jul 3        |               | 2,362         |      | 53         |       |      | 24,234         | 15           | 17           | 2          | 279.6         | 179.2         | 57.2        |
| Jul 4        |               | 2,909         |      | 22         |       |      | 36,227         | 35           | 16           | 7          | 329.8         | 206.0         | 57.2        |
| Jul 5        |               | 2,019         |      | 52         |       |      | 27,065         | 57           | 15           | 1          | 306.5         | 170.6         | 57.6        |
| Jul 6        |               | 2,035         |      | 7          |       |      | 31,621         | 46           | 24           | 1          | 279.8         | 155.1         | 57.9        |
| Jul 7        |               | 2,141         |      | 43         |       |      | 46,202         | 52           | 34           | 3          | 291.5         | 161.3         | 58.1        |
| Jul 8        |               | 2,016         |      | 8          |       |      | 35,205         | 50           | 38           | 1          | 281.5         | 162.1         | 58.5        |
| Jul 9        |               | 1,471         |      | 48         |       |      | 22,454         | 44           | 41           | 4          | 278.3         | 171.6         | 59.2        |
| Jul 10       |               | 1,109         |      | 0          |       |      | 17,723         | 36           | 105          | 3          | 293.8         | 184.1         | 60.1        |
| Jul 11       |               | 839           |      | 30         |       |      | 12,080         | 41           | 58           | 3          | 290.5         | 163.6         | 60.3        |
| Jul 12       |               | 1,167         |      | 2          |       |      | 12,314         | 38           | 77           | 4          | 275.3         | 147.3         | 60.3        |
| Jul 13       |               | 713           |      | 13         |       |      | 6,959          | 33           | 144          | 2          | 285.6         | 166.5         | 60.4        |
| Jul 14       |               | 1,595         |      | 2          |       |      | 20,074         | 66           | 119          | 1          | 302.9         | 205.7         | 60.6        |
| Jul 15       |               | 1,299         |      | 43         |       |      | 17,577         | 73           | 86           | 3          | 319.9         | 235.2         | 60.8        |
| Jul 16       |               | 1,041         |      | 1          |       |      | 10,338         | 95           | 76           | 0          | 281.1         | 186.7         | 61.0        |
| Jul 17       |               | 1,231         |      | 24         |       |      | 9,872          | 74           | 59           | 4          | 268.3         | 161.5         | 61.5        |
| Jul 18       |               | 1,169         |      | 0          |       |      | 7,539          | 43           | 77           | 4          | 257.2         | 153.3         | 61.5        |
| Jul 19       |               | 1,307         |      | 10         |       |      | 7,088          | 65           | 38           | 0          | 271.1         | 166.0         | 61.5        |
| Jul 20       |               | 602           |      | 1          |       |      | 3,290          | 44           | 81           | 8          | 288.2         | 197.8         | 61.7        |
| Jul 21       |               | 1,754         |      | 50         |       |      | 4,639          | 94           | 59           | 6          | 293.0         | 205.2         | 61.7        |
| Jul 22       |               | 997           |      | 24         |       |      | 4,230          | 76           | 83           | 1          | 285.4         | 187.9         | 61.5        |
| Jul 23       |               | 813           |      | 19         |       |      | 2,085          | 58           | 31           | 2          | 281.5         | 165.4         | 61.5        |
| Jul 24       |               | 227           |      | 2          |       |      | 1,358          | 36           | 17           | 7          | 265.5         | 151.6         | 61.9        |
| Jul 25       |               | 1,080         |      | 16         |       |      | 1,536          | 82           | 24           | 6          | 265.8         | 146.0         | 62.2        |
| Jul 26       |               | 950           |      | 7          |       |      | 1,512          | 88           | 12           | 17         | 251.3         | 128.2         | 62.6        |
| Jul 27       |               | 925           |      | 22         |       |      | 835            | 64           | 21           | 6          | 229.8         | 99.1          | 63.1        |
| Jul 28       |               | 1,016         |      | 29         |       |      | 879            | 151          | 9            | 5          | 237.9         | 99.7          | 63.1        |
| Jul 29       |               | 349           |      | 9          |       |      | 836            | 75           | 54           | 5          | 204.0         | 92.1          | 63.5        |
| Jul 30       |               | 846           |      | 20         |       |      | 405            | 135          | 59           | 10         | 221.9         | 87.6          | 63.7        |
| Jul 31       |               | 367           |      | 1          |       |      | 489            | 82           | 47           | 11         | 212.9         | 87.5          | 64.0        |
| <b>TOTAL</b> |               | <b>37,953</b> |      | <b>584</b> |       |      | <b>383,089</b> | <b>1,879</b> | <b>1,545</b> | <b>127</b> | <b>276.0</b>  | <b>161.5</b>  | <b>60.6</b> |
| <b>AVG.</b>  |               | <b>1,224</b>  |      | <b>19</b>  |       |      | <b>12,358</b>  | <b>61</b>    | <b>50</b>    | <b>4</b>   | <b>276.0</b>  | <b>161.5</b>  | <b>60.6</b> |

| RUN YEAR       | CHINOOK<br>ADULT | CHINOOK<br>JACK |
|----------------|------------------|-----------------|
| TOTALS TO DATE |                  |                 |
| SPRING         | 19,495           | 1,015           |
| SUMMER         | 45,097           | 802             |
| <b>TOTAL</b>   | <b>64,592</b>    | <b>1,817</b>    |

| SOCKEYE | STEELHEAD | SHAD  | LAMPREY |
|---------|-----------|-------|---------|
| 406,890 | 2,118     | 1,615 | 162     |

TABLE 136

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |              | CHINOOK      | COHO         | COHO     | SOCKEYE  | STEELHEAD    | SHAD         | LAMPREY    | DISCH<br>KCFS | SPILL<br>KCFS | DEG F       |             |
|--------------|---------------|--------------|--------------|--------------|----------|----------|--------------|--------------|------------|---------------|---------------|-------------|-------------|
|              | SPRING        | SUMMER       | FALL         | JACK         | ADULT    |          |              |              |            |               |               |             | JACK        |
| Aug 1        |               | 570          |              | 55           | 1        |          | 286          | 176          | 29         | 13            | 215.3         | 95.4        | 64.0        |
| Aug 2        |               | 699          |              | 51           | 0        |          | 210          | 137          | 23         | 13            | 200.7         | 76.2        | 64.0        |
| Aug 3        |               | 492          |              | 57           | 0        |          | 187          | 173          | 21         | 9             | 185.9         | 51.7        | 64.4        |
| Aug 4        |               | 661          |              | 108          | 0        |          | 92           | 208          | 41         | 14            | 191.8         | 74.1        | 64.8        |
| Aug 5        |               | 504          |              | 42           | 0        |          | 227          | 203          | 14         | 18            | 202.9         | 77.9        | 65.3        |
| Aug 6        |               | 302          |              | 85           | 0        |          | 55           | 144          | 14         | 24            | 187.1         | 72.1        | 65.3        |
| Aug 7        |               | 356          |              | 69           | 0        |          | 72           | 271          | 12         | 25            | 191.4         | 104.9       | 65.7        |
| Aug 8        |               | 341          |              | 79           | 0        |          | 32           | 260          | 15         | 28            | 195.7         | 69.1        | 65.5        |
| Aug 9        |               | 462          |              | 62           | 0        |          | 26           | 276          | 9          | 57            | 165.6         | 40.5        | 65.1        |
| Aug 10       |               | 368          |              | 119          | 0        |          | 6            | 194          | 18         | 43            | 199.5         | 97.5        | 64.9        |
| Aug 11       |               | 320          |              | 116          | 1        |          | 34           | 208          | 6          | 47            | 167.2         | 57.1        | 65.1        |
| Aug 12       |               | 310          |              | 108          | 0        |          | 8            | 248          | 6          | 71            | 187.1         | 65.1        | 65.3        |
| Aug 13       |               | 185          |              | 241          | 0        |          | 18           | 182          | 4          | 109           | 169.0         | 48.2        | 65.8        |
| Aug 14       |               |              | 457          | 191          | 0        |          | 20           | 236          | 2          | 91            | 169.4         | 48.6        | 65.5        |
| Aug 15       |               |              | 139          | 94           | 0        |          | 29           | 127          | 13         | 72            | 159.2         | 28.1        | 65.8        |
| Aug 16       |               |              | 494          | 81           | 0        |          | 27           | 310          | 3          | 92            | 149.9         | 42.6        | 66.2        |
| Aug 17       |               |              | 167          | 130          | 0        |          | 3            | 206          | 4          | 69            | 166.7         | 36.7        | 66.7        |
| Aug 18       |               |              | 238          | 180          | 0        |          | 12           | 378          | 2          | 82            | 157.8         | 49.7        | 66.4        |
| Aug 19       |               |              | 251          | 63           | 0        |          | 10           | 339          | 9          | 71            | 182.9         | 56.0        | 66.9        |
| Aug 20       |               |              | 171          | 59           | 0        |          | 1            | 303          | 3          | 148           | 160.2         | 45.1        | 66.6        |
| Aug 21       |               |              | 130          | 51           | 0        |          | 4            | 239          | 10         | 126           | 163.0         | 56.8        | 66.2        |
| Aug 22       |               |              | 133          | 90           | 0        |          | 0            | 229          | 3          | 64            | 159.0         | 50.9        | 65.7        |
| Aug 23       |               |              | 136          | 381          | 0        |          | 2            | 218          | 1          | 79            | 158.5         | 43.1        | 65.5        |
| Aug 24       |               |              | 149          | 168          | 0        |          | 0            | 202          | 3          | 77            | 151.6         | 17.3        | 64.9        |
| Aug 25       |               |              | 87           | 99           | 0        |          | 1            | 116          | 3          | 88            | 147.2         | 7.4         | 65.3        |
| Aug 26       |               |              | 154          | 102          | 0        |          | 3            | 230          | 1          | 127           | 143.3         | 7.4         | 65.8        |
| Aug 27       |               |              | 63           | 70           | 0        |          | 1            | 118          | 2          | 117           | 137.0         | 6.3         | 65.7        |
| Aug 28       |               |              | 123          | 229          | 0        |          | 0            | 167          | 4          | 108           | 127.7         | 6.9         | 65.8        |
| Aug 29       |               |              | 124          | 70           | 0        |          | 0            | 212          | 4          | 110           | 132.1         | 7.0         | 65.7        |
| Aug 30       |               |              | 178          | 97           | 0        |          | 0            | 111          | 0          | 77            | 144.1         | 7.5         | 65.8        |
| Aug 31       |               |              | 165          | 45           | 1        |          | 1            | 165          | 5          | 65            | 154.9         | 12.1        | 65.8        |
| <b>TOTAL</b> |               | <b>5,570</b> | <b>3,359</b> | <b>3,392</b> | <b>3</b> | <b>0</b> | <b>1,367</b> | <b>6,586</b> | <b>284</b> | <b>2,134</b>  |               |             |             |
| <b>AVG.</b>  |               | <b>428</b>   | <b>187</b>   | <b>109</b>   |          |          | <b>44</b>    | <b>212</b>   | <b>9</b>   | <b>69</b>     | <b>168.5</b>  | <b>47.1</b> | <b>65.5</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 19,495        | 1,015        |
| SUMMER         | 50,667        | 1,994        |
| FALL           | 3,359         | 2,200        |
| <b>TOTAL</b>   | <b>73,521</b> | <b>5,209</b> |

| COHO ADULT |
|------------|
| 3          |

| SOCKEYE | STEELHEAD | SHAD  | LAMPREY |
|---------|-----------|-------|---------|
| 408,257 | 8,704     | 1,899 | 2,296   |

TABLE 137

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |               | CHINOOK      | COHO         | COHO         | SOCKEYE | STEELHEAD    | SHAD      | LAMPREY      | DISCH |      | SPILL |       |
|--------------|---------------|---------------|--------------|--------------|--------------|---------|--------------|-----------|--------------|-------|------|-------|-------|
|              | SPRING        | SUMMER        | JACK         | ADULT        | JACK         |         |              |           |              | KCFS  | KCFS | DEG F | DEG F |
| Sep 1        |               | 300           | 92           | 0            | 0            |         | 262          | 5         | 51           | 94.4  | 7.5  | 65.8  |       |
| Sep 2        |               | 245           | 97           | 7            | 1            |         | 157          | 2         | 75           | 61.0  | 7.5  | 65.5  |       |
| Sep 3        |               | 422           | 111          | 2            | 2            |         | 256          | 3         | 62           | 95.3  | 7.7  | 65.3  |       |
| Sep 4        |               | 244           | 99           | 13           | 4            |         | 138          | 3         | 50           | 112.0 | 7.6  | 65.3  |       |
| Sep 5        |               | 287           | 186          | 60           | 10           |         | 242          | 3         | 40           | 123.7 | 16.4 | 66.0  |       |
| Sep 6        |               | 294           | 235          | 94           | 12           |         | 246          | 0         | 36           | 103.6 | 7.0  | 66.0  |       |
| Sep 7        |               | 582           | 119          | 120          | 16           |         | 332          | 3         | 36           | 84.1  | 8.6  | 66.4  |       |
| Sep 8        |               | 693           | 73           | 146          | 71           |         | 404          | 6         | 65           | 92.7  | 8.0  | 66.4  |       |
| Sep 9        |               | 1,000         | 62           | 478          | 87           |         | 353          | 4         | 72           | 67.5  | 7.0  | 66.0  |       |
| Sep 10       |               | 487           | 54           | 285          | 104          |         | 243          | 0         | 84           | 75.9  | 7.1  | 65.8  |       |
| Sep 11       |               | 397           | 93           | 465          | 130          |         | 299          | -3        | 63           | 100.1 | 7.4  | 65.3  |       |
| Sep 12       |               | 409           | 31           | 270          | 72           |         | 194          | 0         | 78           | 85.4  | 7.5  | 65.3  |       |
| Sep 13       |               | 714           | 58           | 457          | 44           |         | 256          | 1         | 120          | 81.1  | 6.5  | 65.1  |       |
| Sep 14       |               | 861           | 64           | 375          | 48           |         | 267          | 1         | 58           | 106.1 | 7.3  | 65.1  |       |
| Sep 15       |               | 851           | 151          | 520          | 46           |         | 300          | 3         | 62           | 80.8  | 7.7  | 64.9  |       |
| Sep 16       |               | 836           | 41           | 771          | 140          |         | 295          | 1         | 45           | 74.5  | 7.2  | 64.9  |       |
| Sep 17       |               | 661           | 28           | 695          | 183          |         | 188          | 3         | 39           | 87.2  | 6.7  | 64.8  |       |
| Sep 18       |               | 1,143         | 161          | 181          | 11           |         | 233          | 0         | 42           | 108.1 | 7.4  | 64.6  |       |
| Sep 19       |               | 1,420         | 291          | 318          | 35           |         | 237          | 3         | 44           | 90.9  | 8.2  | 64.9  |       |
| Sep 20       |               | 1,312         | 192          | 431          | 89           |         | 184          | 0         | 59           | 77.0  | 7.0  | 64.8  |       |
| Sep 21       |               | 1,618         | 205          | 145          | 22           |         | 290          | 0         | 44           | 95.0  | 7.4  | 64.8  |       |
| Sep 22       |               | 2,468         | 251          | 222          | 13           |         | 201          | 1         | 55           | 79.9  | 7.4  | 64.4  |       |
| Sep 23       |               | 2,262         | 283          | 216          | 4            |         | 292          | 1         | 25           | 92.4  | 7.3  | 64.0  |       |
| Sep 24       |               | 1,201         | 207          | 216          | 88           |         | 177          | 0         | 23           | 92.9  | 7.0  | 63.9  |       |
| Sep 25       |               | 1,736         | 180          | 45           | 4            |         | 195          | 1         | 33           | 108.0 | 6.7  | 63.9  |       |
| Sep 26       |               | 1,437         | 231          | 213          | 89           |         | 133          | -1        | 15           | 91.4  | 6.2  | 63.7  |       |
| Sep 27       |               | 2,099         | 290          | 84           | 10           |         | 189          | 0         | 20           | 84.0  | 6.7  | 64.2  |       |
| Sep 28       |               | 1,748         | 339          | 133          | 42           |         | 193          | 0         | 13           | 97.3  | 6.0  | 64.4  |       |
| Sep 29       |               | 1,342         | 300          | 204          | 53           |         | 164          | 0         | 15           | 66.7  | 5.7  | 64.0  |       |
| Sep 30       |               | 1,210         | 209          | 114          | 23           |         | 104          | -3        | 41           | 41.8  | 5.4  | 64.0  |       |
| <b>TOTAL</b> |               | <b>30,279</b> | <b>4,733</b> | <b>7,280</b> | <b>1,453</b> |         | <b>7,024</b> | <b>37</b> | <b>1,465</b> |       |      |       |       |

|      |      |     |     |    |  |     |   |    |      |     |      |
|------|------|-----|-----|----|--|-----|---|----|------|-----|------|
| AVG. | 1009 | 158 | 243 | 48 |  | 234 | 1 | 49 | 88.4 | 7.4 | 65.0 |
|------|------|-----|-----|----|--|-----|---|----|------|-----|------|

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK |
|----------------|----------------|--------------|
| TOTALS TO DATE |                |              |
| SPRING         | 19,495         | 1,015        |
| SUMMER         | 50,667         | 1,994        |
| FALL           | 33,638         | 6,933        |
| <b>TOTAL</b>   | <b>103,800</b> | <b>9,942</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | SHAD  | LAMPREY |
|------------|-----------|---------|-----------|-------|---------|
| 7,283      | 1,453     | 408,257 | 15,728    | 1,936 | 3,761   |

TABLE 138

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

OCTOBER 2012

| DATE          | CHINOOK ADULT |        | CHINOOK       | COHO         | COHO         | SOCKEYE    | STEELHEAD | SHAD         | LAMPREY  | DISCH      | SPILL       | DEG F      |             |
|---------------|---------------|--------|---------------|--------------|--------------|------------|-----------|--------------|----------|------------|-------------|------------|-------------|
|               | SPRING        | SUMMER | FALL          | JACK         | ADULT        |            |           |              |          |            |             |            | JACK        |
| Oct 1         |               |        | 2,185         | 237          | 138          | 11         |           | 136          | 1        | 26         | 71.9        | 6.3        | 63.9        |
| Oct 2         |               |        | 2,093         | 320          | 134          | 19         |           | 222          | 1        | 35         | 73.9        | 6.4        | 63.7        |
| Oct 3         |               |        | 1,116         | 155          | 69           | 11         |           | 120          | 0        | 9          | 74.3        | 6.5        | 63.3        |
| Oct 4         |               |        | 1,069         | 172          | 23           | 0          |           | 81           | 0        | 6          | 72.6        | 6.3        | 63.0        |
| Oct 5         |               |        | 575           | 127          | 104          | 14         |           | 62           | 0        | 11         | 65.1        | 7.2        | 62.6        |
| Oct 6         |               |        | 517           | 113          | 50           | 6          |           | 44           | 2        | 10         | 64.0        | 6.5        | 62.4        |
| Oct 7         |               |        | 448           | 107          | 30           | 10         |           | 45           | 1        | 13         | 50.1        | 6.0        | 62.1        |
| Oct 8         |               |        | 473           | 113          | 88           | 19         |           | 41           | -1       | 12         | 73.5        | 3.6        | 61.9        |
| Oct 9         |               |        | 468           | 118          | 41           | 12         |           | 34           | 0        | 7          | 83.8        | 3.7        | 61.7        |
| Oct 10        |               |        | 354           | 94           | 39           | 9          |           | 39           | 1        | 15         | 74.1        | 4.1        | 61.7        |
| Oct 11        |               |        | 424           | 63           | 54           | 1          |           | 16           | 0        | 9          | 76.2        | 3.4        | 61.7        |
| Oct 12        |               |        | 456           | 63           | 21           | 1          |           | 25           | 3        | 4          | 61.5        | 6.2        | 61.3        |
| Oct 13        |               |        | 412           | 79           | 12           | 0          |           | 26           | 0        | 16         | 43.2        | 5.9        | 61.0        |
| Oct 14        |               |        | 610           | 113          | 29           | 1          |           | 54           | 0        | 22         | 41.1        | 5.9        | 60.8        |
| Oct 15        |               |        | 593           | 136          | 10           | 0          |           | 32           | -1       | 10         | 63.9        | 6.1        | 60.6        |
| Oct 16        |               |        | 2,008         | 155          | 32           | 0          |           | 36           | 0        | 14         | 56.1        | 5.3        | 60.6        |
| Oct 17        |               |        | 647           | 113          | 29           | 0          |           | 32           | -1       | 5          | 56.4        | 5.6        | 60.3        |
| Oct 18        |               |        | 294           | 51           | 11           | 0          |           | 20           | 0        | 6          | 56.1        | 5.5        | 59.7        |
| Oct 19        |               |        | 537           | 85           | 9            | 0          |           | 23           | 0        | 2          | 51.9        | 5.9        | 59.5        |
| Oct 20        |               |        | 344           | 44           | 3            | 2          |           | 23           | 0        | 1          | 51.2        | 8.5        | 59.4        |
| Oct 21        |               |        | 281           | 56           | 12           | 0          |           | 17           | -1       | 1          | 52.7        | 6.2        | 59.0        |
| Oct 22        |               |        | 461           | 116          | 30           | 6          |           | 17           | 0        | 1          | 73.5        | 7.7        | 58.5        |
| Oct 23        |               |        | 345           | 55           | 13           | 0          |           | 26           | 0        | 4          | 90.8        | 7.1        | 58.3        |
| Oct 24        |               |        | 536           | 91           | 10           | 0          |           | 25           | -1       | 1          | 101.8       | 8.0        | 57.7        |
| Oct 25        |               |        | 352           | 50           | 18           | 0          |           | 23           | 0        | 0          | 99.8        | 6.8        | 57.2        |
| Oct 26        |               |        | 650           | 171          | 12           | 0          |           | 35           | 1        | 2          | 98.2        | 6.5        | 56.8        |
| Oct 27        |               |        | 388           | 69           | 12           | 0          |           | 25           | 0        | 0          | 97.0        | 6.4        | 56.7        |
| Oct 28        |               |        | 255           | 63           | 6            | 0          |           | 34           | 0        | 1          | 77.0        | 5.8        | 56.7        |
| Oct 29        |               |        | 321           | 46           | 19           | 0          |           | 22           | 0        | 1          | 66.5        | 5.5        | 56.8        |
| Oct 30        |               |        | 276           | 45           | 11           | 0          |           | 18           | -1       | 0          | 81.3        | 6.7        | 56.8        |
| Oct 31        |               |        | 224           | 39           | 6            | 1          |           | 11           | 0        | 1          | 67.8        | 6.0        | 56.8        |
| <b>TOTALS</b> |               |        | <b>19,712</b> | <b>3,259</b> | <b>1,075</b> | <b>123</b> |           | <b>1,364</b> | <b>4</b> | <b>245</b> |             |            |             |
| <b>AVG.</b>   |               |        | <b>636</b>    | <b>105</b>   | <b>35</b>    | <b>4</b>   |           | <b>44</b>    | <b>0</b> | <b>8</b>   | <b>69.9</b> | <b>6.1</b> | <b>60.1</b> |

| RUN YEAR       | CHINOOK ADULT  | CHINOOK JACK  |
|----------------|----------------|---------------|
| TOTALS TO DATE |                |               |
| SPRING         | 19,495         | 1,015         |
| SUMMER         | 50,667         | 1,994         |
| FALL           | 53,350         | 10,192        |
| <b>TOTAL</b>   | <b>123,512</b> | <b>13,201</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | SHAD  | LAMPREY |
|------------|-----------|---------|-----------|-------|---------|
| 8,358      | 1,576     | 408,257 | 17,092    | 1,940 | 4,006   |

TABLE 139

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

PRIEST RAPIDS PROJECT- FISH COUNTS

NOVEMBER 2012

| DATE          | CHINOOK ADULT |        |       | CHINOOK | COHO  | COHO | SOCKEYE | STEELHEAD | SHAD | LAMPREY | DISCH<br>KCFS | SPILL<br>KCFS | DEG F |
|---------------|---------------|--------|-------|---------|-------|------|---------|-----------|------|---------|---------------|---------------|-------|
|               | SPRING        | SUMMER | FALL  | JACK    | ADULT | JACK |         |           |      |         |               |               |       |
| Nov 1         |               |        | 233   | 41      | 6     | 1    |         | 14        | 0    | 2       | 90.5          | 6.1           | 56.8  |
| Nov 2         |               |        | 239   | 67      | 0     | 0    |         | 5         | 0    | 3       | 87.0          | 5.1           | 56.8  |
| Nov 3         |               |        | 118   | 16      | 4     | 0    |         | 5         | 0    | 3       | 100.6         | 6.1           | 57.0  |
| Nov 4         |               |        | 137   | 39      | 0     | 0    |         | 14        | 0    | 3       | 61.4          | 5.5           | 57.0  |
| Nov 5         |               |        | 206   | 34      | 2     | 0    |         | 10        | 0    | 3       | 78.4          | 4.2           | 56.8  |
| Nov 6         |               |        | 163   | 32      | 5     | 0    |         | 16        | 0    | 3       | 99.4          | 6.8           | 56.8  |
| Nov 7         |               |        | 141   | 10      | 1     | 0    |         | 21        | 0    | 1       | 103.1         | 13.6          | 56.7  |
| Nov 8         |               |        | 91    | 25      | 6     | 0    |         | 14        | 0    | 0       | 96.1          | 4.0           | 56.3  |
| Nov 9         |               |        | 54    | 6       | 0     | 0    |         | 8         | 0    | 0       | 89.5          | 4.0           | 55.8  |
| Nov 10        |               |        | 41    | 10      | 0     | 0    |         | 10        | 1    | 0       | 102.6         | 6.3           | 55.6  |
| Nov 11        |               |        | 26    | 2       | 0     | 0    |         | 6         | 0    | 0       | 97.9          | 6.5           | 55.0  |
| Nov 12        |               |        | 10    | 10      | 0     | 0    |         | 3         | -1   | 1       | 108.2         | 6.1           | 54.5  |
| Nov 13        |               |        | 3     | 2       | -1    | 0    |         | 6         | -1   | 1       | 97.0          | 3.7           | 54.3  |
| Nov 14        |               |        | 2     | 4       | -1    | 0    |         | 3         | 0    | 0       | 89.9          | 3.5           | 54.0  |
| Nov 15        |               |        | 11    | 1       | 0     | 0    |         | 3         | 0    | -1      | 97.7          | 2.5           | 53.6  |
| Nov 16        |               |        |       |         |       |      |         |           |      |         | 106.9         | 4.7           |       |
| Nov 17        |               |        |       |         |       |      |         |           |      |         | 114.0         | 16.9          |       |
| Nov 18        |               |        |       |         |       |      |         |           |      |         | 99.5          | 2.3           |       |
| Nov 19        |               |        |       |         |       |      |         |           |      |         | 107.2         | 0.0           |       |
| Nov 20        |               |        |       |         |       |      |         |           |      |         | 126.4         | 0.0           |       |
| Nov 21        |               |        |       |         |       |      |         |           |      |         | 76.7          | 0.0           |       |
| Nov 22        |               |        |       |         |       |      |         |           |      |         | 73.4          | 0.0           |       |
| Nov 23        |               |        |       |         |       |      |         |           |      |         | 81.8          | 0.0           |       |
| Nov 24        |               |        |       |         |       |      |         |           |      |         | 79.8          | 0.0           |       |
| Nov 25        |               |        |       |         |       |      |         |           |      |         | 100.9         | 0.0           |       |
| Nov 26        |               |        |       |         |       |      |         |           |      |         | 116.5         | 0.0           |       |
| Nov 27        |               |        |       |         |       |      |         |           |      |         | 106.5         | 0.0           |       |
| Nov 28        |               |        |       |         |       |      |         |           |      |         | 86.0          | 0.0           |       |
| Nov 29        |               |        |       |         |       |      |         |           |      |         | 115.5         | 0.0           |       |
| Nov 30        |               |        |       |         |       |      |         |           |      |         | 117.2         | 1.4           |       |
| <b>TOTALS</b> |               |        | 1,475 | 299     | 22    | 1    |         | 138       | -1   | 19      |               |               |       |
| <b>AVG.</b>   |               |        | 98    | 20      | 1     | 0    |         | 9         | 0    | 1       | 96.9          | 3.6           | 55.8  |

| RUN YEAR       | CHINOOK<br>ADULT | CHINOOK<br>JACK |
|----------------|------------------|-----------------|
| TOTALS TO DATE |                  |                 |
| SPRING         | 19,495           | 1,015           |
| SUMMER         | 50,667           | 1,994           |
| FALL           | 54,825           | 10,491          |
| <b>TOTAL</b>   | <b>124,987</b>   | <b>13,500</b>   |

| COHO<br>ADULT | COHO<br>JACK | SOCKEYE | STEELHEAD | SHAD  | LAMPREY |
|---------------|--------------|---------|-----------|-------|---------|
| 8,380         | 1,577        | 408,257 | 17,230    | 1,939 | 4,025   |



TABLE 140

**YEARLY TOTALS OF SALMONIDS COUNTED OVER PRIEST RAPIDS DAM  
1982 - 2012**

| <b>YEAR</b>                | <b>CHINOOK*</b>  | <b>STEELHEAD</b> | <b>SOCKEYE</b>   | <b>COHO*</b>  | <b>TOTALS</b>    |
|----------------------------|------------------|------------------|------------------|---------------|------------------|
| 1982                       | 32,051           | 11,160           | 40,461           | 1,810         | 85,482           |
| 1983                       | 31,008           | 31,809           | 90,008           | 502           | 153,327          |
| 1984                       | 41,425           | 26,213           | 114,761          | 173           | 182,572          |
| 1985                       | 62,164           | 34,589           | 118,542          | 219           | 215,514          |
| 1986                       | 68,703           | 22,401           | 43,084           | 83            | 134,271          |
| 1987                       | 73,214           | 14,011           | 76,578           | 108           | 163,911          |
| 1988                       | 53,963           | 10,208           | 51,135           | 68            | 115,374          |
| 1989                       | 49,246           | 10,730           | 45,301           | 32            | 105,309          |
| 1990                       | 36,257           | 7,830            | 46,331           | 31            | 90,449           |
| 1991                       | 31,482           | 13,939           | 71,245           | 22            | 116,688          |
| 1992                       | 37,752           | 13,733           | 80,857           | 1             | 132,343          |
| 1993                       | 54,552           | 5,460            | 82,963           | 0             | 142,975          |
| 1994                       | 32,892           | 6,706            | 12,385           | 0             | 51,983           |
| 1995                       | 30,548           | 4,358            | 9,186            | 3             | 44,095           |
| 1996                       | 27,325           | 8,324            | 29,422           | 5             | 65,076           |
| 1997                       | 33,036           | 8,948            | 45,412           | 26            | 87,422           |
| 1998                       | 29,415           | 5,837            | 10,769           | 18            | 46,039           |
| 1999                       | 57,054           | 8,277            | 16,432           | 55            | 81,818           |
| 2000                       | 91,223           | 11,331           | 89,547           | 378           | 192,479          |
| 2001                       | 139,929          | 30,090           | 111,326          | 11,189        | 292,534          |
| 2002                       | 161,510          | 15,895           | 47,883           | 1,555         | 226,843          |
| 2003                       | 160,433          | 17,652           | 36,551           | 5,216         | 219,852          |
| 2004                       | 134,620          | 18,727           | 124,943          | 5,624         | 283,914          |
| 2005                       | 109,429          | 12,472           | 74,563           | 1,260         | 197,724          |
| 2006                       | 87,086           | 10,408           | 26,710           | 3,813         | 128,017          |
| 2007                       | 65,962           | 15,183           | 24,645           | 12,310        | 118,100          |
| 2008                       | 104,001          | 16,725           | 196,835          | 6,022         | 323,583          |
| 2009                       | 114,137          | 40,093           | 153,466          | 11,293        | 318,989          |
| 2010                       | 123,576          | 26,476           | 357,058          | 2,655         | 509,765          |
| 2011                       | 116,914          | 20,757           | 145,070          | 23,392        | 306,133          |
| 2012                       | 138,487          | 17,230           | 408,257          | 9,957         | 573,931          |
| <b>Totals</b>              | <b>2,329,394</b> | <b>497,572</b>   | <b>2,781,726</b> | <b>97,820</b> | <b>4,826,448</b> |
| <b>10-Year<br/>Average</b> | <b>115,465</b>   | <b>19,572</b>    | <b>154,810</b>   | <b>8,154</b>  | <b>298,001</b>   |

\*Jacks included

TABLE 141

MONTHLY COUNT OF STEELHEAD  
PRIEST RAPIDS DAM: 1960 - 2012

| YEAR               | JAN | FEB | MAR | APR   | MAY   | JUN   | JUL    | AUG     | SEP     | OCT    | NOV   | DEC | TOTAL   |
|--------------------|-----|-----|-----|-------|-------|-------|--------|---------|---------|--------|-------|-----|---------|
| 1960               |     |     |     | 159   | 651   | 25    | 318    | 2,255   | 3,190   | 1,229  |       |     | 7,827   |
| 1961               |     |     |     | 52    | 208   | 43    | 381    | 1,480   | 4,650   | 1,753  |       |     | 8,567   |
| 1962               |     |     |     | 133   | 530   | 74    | 329    | 2,027   | 4,925   | 1,306  |       |     | 9,324   |
| 1963               |     |     |     | 183   | 564   | 109   | 336    | 2,922   | 3,344   | 1,816  |       |     | 9,274   |
| 1964               |     |     |     | 85    | 196   | 44    | 261    | 1,986   | 2,649   | 770    |       |     | 5,991   |
| 1965               |     |     |     | 129   | 298   | 91    | 649    | 2,498   | 3,868   | 1,508  |       |     | 9,041   |
| 1966               |     |     |     | 189   | 252   | 296   | 1,194  | 2,775   | 5,549   | 2,751  |       |     | 13,006  |
| 1967               |     |     |     | 213   | 381   | 62    | 411    | 1,686   | 2,109   | 2,492  |       |     | 7,354   |
| 1968               |     |     |     | 530   | 1,112 | 24    | 185    | 1,954   | 4,950   | 1,769  |       |     | 10,524  |
| 1969               |     |     |     | 120   | 670   | 105   | 566    | 1,598   | 2,544   | 1,047  |       |     | 6,650   |
| 1970               |     |     |     | 85    | 195   | 27    | 197    | 1,129   | 3,053   | 872    |       |     | 5,558   |
| 1971               |     |     |     | 46    | 440   | 61    | 185    | 2,043   | 6,241   | 2,086  |       |     | 11,102  |
| 1972               |     |     |     | 163   | 552   | 42    | 318    | 1,992   | 2,190   | 1,172  |       |     | 6,429   |
| 1973               |     |     |     | 132   | 160   | 56    | 788    | 1,738   | 3,254   | 871    |       |     | 6,999   |
| 1974               |     |     |     | 45    | 129   | 229   | 504    | 845     | 945     | 392    |       |     | 3,089   |
| 1975               |     |     |     | 3     | 37    | 99    | 214    | 670     | 1,187   | 252    |       |     | 2,462   |
| 1976               |     |     |     | 3     | 133   | 246   | 531    | 1,873   | 5,462   | 1,000  |       |     | 9,248   |
| 1977               |     |     |     | 178   | 200   | 209   | 1,029  | 1,963   | 4,519   | 1,706  |       |     | 9,804   |
| 1978               |     |     |     | 72    | 134   | 214   | 532    | 1,143   | 1,869   | 581    |       |     | 4,545   |
| 1979               |     |     |     | 13    | 127   | 30    | 585    | 3,082   | 3,174   | 1,398  |       |     | 8,409   |
| 1980               |     |     |     | 232   | 203   | 17    | 179    | 1,815   | 4,721   | 1,263  | 94    |     | 8,524   |
| 1981               |     |     |     | 75    | 144   | 105   | 445    | 2,414   | 4,127   | 1,545  | 133   | 24  | 9,012   |
| 1982               |     | 5   | 32  | 70    | 136   | 86    | 331    | 3,126   | 5,345   | 1,805  | 163   | 15  | 11,160  |
| 1983               |     | 5   | 9   | 52    | 40    | 11    | 12     | 599     | 8,660   | 18,272 | 602   | 13  | 31,809  |
| 1984               |     | 28  | 4   | 92    | 142   | 145   | 224    | 2,534   | 8,840   | 11,907 | 2,030 | 256 | 26,213  |
| 1985               |     | 2   | 11  | 74    | 351   | 326   | 856    | 5,319   | 11,063  | 14,693 | 1,659 | 235 | 34,589  |
| 1986               |     |     |     | 82    | 100   | 262   | 3,637  | 10,584  | 5,647   | 1,856  | 233   |     | 22,401  |
| 1987               |     |     |     | 42    | 71    | 124   | 1,954  | 5,741   | 4,311   | 1,495  | 273   |     | 14,011  |
| 1988               |     |     |     | 48    | 108   | 239   | 1,234  | 3,119   | 4,016   | 1,176  | 268   |     | 10,208  |
| 1989               |     |     |     | 36    | 50    | 133   | 1,361  | 3,499   | 4,581   | 872    | 198   |     | 10,730  |
| 1990               |     |     |     | 24    | 52    | 130   | 1,282  | 2,616   | 3,060   | 551    | 115   |     | 7,830   |
| 1991               |     |     |     | 31    | 73    | 66    | 1,406  | 4,041   | 6,301   | 1,768  | 253   |     | 13,939  |
| 1992               |     |     |     | 60    | 152   | 313   | 2,328  | 3,261   | 6,265   | 1,227  | 127   |     | 13,733  |
| 1993               |     |     |     | 34    | 41    | 125   | 993    | 1,733   | 2,013   | 471    | 40    |     | 5,450   |
| 1994               |     |     |     | 7     | 13    | 78    | 902    | 1,286   | 3,087   | 1,269  | 64    |     | 6,706   |
| 1995               |     |     |     | 4     | 20    | 30    | 540    | 1,316   | 2,062   | 363    | 23    |     | 4,358   |
| 1996               |     |     |     | 9     | 14    | 35    | 546    | 3,234   | 3,810   | 627    | 49    |     | 8,324   |
| 1997               |     |     |     | 5     | 17    | 39    | 574    | 2,822   | 4,176   | 1,224  | 91    |     | 8,948   |
| 1998               |     |     |     | 7     | 9     | 40    | 806    | 935     | 2,976   | 1,005  | 59    |     | 5,837   |
| 1999               |     |     |     | 6     | 19    | 72    | 588    | 3,361   | 3,543   | 633    | 55    |     | 8,277   |
| 2000               |     |     |     | 2     | 13    | 155   | 1,895  | 3,786   | 4,825   | 598    | 57    |     | 11,331  |
| 2001               |     |     |     | 14    | 11    | 326   | 4,426  | 10,368  | 12,136  | 2,607  | 202   |     | 30,090  |
| 2002               |     |     |     | 22    | 15    | 134   | 3,225  | 7,442   | 4,101   | 874    | 82    |     | 15,895  |
| 2003               |     |     |     | 7     | 2     | 95    | 2,924  | 5,198   | 8,009   | 1,362  | 55    |     | 17,652  |
| 2004               |     |     |     | 7     | 79    | 516   | 3,438  | 2,687   | 10,905  | 1,042  | 53    |     | 18,727  |
| 2005               |     |     |     | 7     | 7     | 150   | 1,691  | 2,986   | 5,715   | 1,805  | 111   |     | 12,472  |
| 2006               |     |     |     | 18    | 26    | 87    | 983    | 2,934   | 5,583   | 723    | 54    |     | 10,408  |
| 2007               |     |     |     | 10    | 41    | 51    | 1,217  | 5,201   | 6,581   | 1,960  | 122   |     | 15,183  |
| 2008               |     |     |     | 25    | 100   | 452   | 3,572  | 5,409   | 6,004   | 1,038  | 125   |     | 16,725  |
| 2009               |     |     |     | 24    | 34    | 78    | 2,330  | 13,537  | 19,965  | 4,034  | 91    |     | 40,093  |
| 2010               |     |     |     | 63    | 23    | 229   | 6,634  | 9,933   | 8,150   | 1,333  | 111   |     | 26,476  |
| 2011               |     |     |     | 14    | 27    | 29    | 1,089  | 10,012  | 7,780   | 1,740  | 66    |     | 20,757  |
| 2012               |     |     |     | 64    | 26    | 149   | 1,879  | 6,586   | 7,024   | 1,364  | 138   |     | 17,230  |
| TOTAL              | 40  | 56  | 288 | 4,181 | 9,027 | 7,483 | 72,374 | 207,204 | 291,363 | 73,624 | 4,598 | 63  | 670,301 |
| 10-Year<br>Average |     |     |     | 24    | 37    | 184   | 2,576  | 6,448   | 8,572   | 1,640  | 93    |     | 19,572  |

## ROCK ISLAND DAM

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### Fish Counting Schedule

|                 |  |
|-----------------|--|
| Jan 1 – Apr 13  | No video recording or fish counting during this period.  |
| Apr 14 – Nov 15 | Video recording 24 hours per day/7 days a week.<br>Video counting daily from 0700 to 1530 hours Pacific Standard Time. |
| Nov 16 – Dec 31 | No video recording or fish counting during this period.  |

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### Fish Ladder Operating Schedule

#### *Left Bank Ladder*

|                |   |
|----------------|---|
| Jan 1 – Jan 4  | Fishway in service.   |
| Jan 5 – Feb 2  | Fishway out of service for 2011/2012 annual maintenance period. |
| Feb 3 – Dec 2  | Fishway in service.   |
| Dec 3 – Dec 31 | Fishway out of service for 2012/2013 annual maintenance period. |

#### *Middle Ladder*

|                 |   |
|-----------------|---|
| Jan 1 – Jan 11  | Fishway in service.   |
| Jan 12 – Feb 29 | Fishway out of service for 2011/2012 annual maintenance period. |
| Mar 1 – Dec 9   | Fishway in service.   |
| Dec 10 – Dec 31 | Fishway out of service for 2012/2013 annual maintenance period. |

#### *Right Bank Ladder*

|                 |   |
|-----------------|---|
| Jan 1 – Feb 6   | Fishway in service.   |
| Feb 7 – Feb 22  | Fishway out of service for 2011/2012 annual maintenance period. |
| Feb 23 – Dec 31 | Fishway in service.   |

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### Fish Facility Activities

The Rock Island Bypass Trap was operated by Chelan County PUD Natural Resource Department employees from 1 April through 31 August 2012. Juvenile fish were sampled daily during that time period.

The adult fish PIT tag system was operational throughout the 2012 adult fish migration. PIT tag detections from all three fishways were uploaded daily to PTAGIS.

TABLE 142

MONTHLY TOTALS OF SALMONIDS AND LAMPREY COUNTED OVER ROCK ISLAND DAM  
2012

| SPECIES      | JAN | FEB | MAR | APR        | MAY           | JUN           | JUL            | AUG           | SEP           | OCT          | NOV          | DEC | TOTAL          |
|--------------|-----|-----|-----|------------|---------------|---------------|----------------|---------------|---------------|--------------|--------------|-----|----------------|
| CHINOOK*     |     |     |     | 4          | 15,047        | 8,535         | 42,123         | 13,516        | 6,690         | 5,392        | 767          |     | 92,074         |
| STEELHEAD    |     |     |     | 98         | 75            | 108           | 1,410          | 6,186         | 5,959         | 1,464        | 154          |     | 15,454         |
| SOCKEYE      |     |     |     |            |               | 5,584         | 401,812        | 3,173         | 46            | 5            |              |     | 410,620        |
| COHO         |     |     |     |            |               |               |                | 2             | 5,308         | 2,875        | 92           |     | 8,277          |
| PINK         |     |     |     |            |               |               |                |               |               |              |              |     | 0              |
| <b>TOTAL</b> |     |     |     | <b>102</b> | <b>15,122</b> | <b>14,227</b> | <b>445,345</b> | <b>22,877</b> | <b>18,003</b> | <b>9,736</b> | <b>1,013</b> |     | <b>526,425</b> |
| LAMPREY      |     |     |     |            |               |               | 9              | 329           | 662           |              |              |     | 1,000          |
| BULL TROUT   |     |     |     |            | 16            | 20            | 10             | 3             |               |              |              |     | 49             |

TABLE 143

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

| ROCK ISLAND PROJECT- FISH COUNTS |               |        |              |           |            |           |         |           |                |            | APRIL 2012 |              |             |             |
|----------------------------------|---------------|--------|--------------|-----------|------------|-----------|---------|-----------|----------------|------------|------------|--------------|-------------|-------------|
| DATE                             | CHINOOK ADULT |        | CHINOOK FALL | COHO JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY    | DISCH KCFS   | SPILL KCFS  | DEG F       |
|                                  | SPRING        | SUMMER |              |           |            |           |         |           |                |            |            |              |             |             |
| Apr 1                            |               |        |              |           |            |           |         |           |                |            |            | 126.2        | 0.0         |             |
| Apr 2                            |               |        |              |           |            |           |         |           |                |            |            | 145.2        | 0.0         |             |
| Apr 3                            |               |        |              |           |            |           |         |           |                |            |            | 162.1        | 3.2         |             |
| Apr 4                            |               |        |              |           |            |           |         |           |                |            |            | 153.8        | 0.0         |             |
| Apr 5                            |               |        |              |           |            |           |         |           |                |            |            | 162.3        | 0.3         |             |
| Apr 6                            |               |        |              |           |            |           |         |           |                |            |            | 166.3        | 4.4         |             |
| Apr 7                            |               |        |              |           |            |           |         |           |                |            |            | 163.0        | 7.6         |             |
| Apr 8                            |               |        |              |           |            |           |         |           |                |            |            | 155.7        | 6.4         |             |
| Apr 9                            |               |        |              |           |            |           |         |           |                |            |            | 172.2        | 6.9         |             |
| Apr 10                           |               |        |              |           |            |           |         |           |                |            |            | 173.7        | 3.5         |             |
| Apr 11                           |               |        |              |           |            |           |         |           |                |            |            | 158.5        | 8.0         |             |
| Apr 12                           |               |        |              |           |            |           |         |           |                |            |            | 168.5        | 17.1        |             |
| Apr 13                           |               |        |              |           |            |           |         |           |                |            |            | 169.3        | 20.0        |             |
| Apr 14                           | 0             |        |              |           |            |           |         | 7         | 4              |            |            | 145.9        | 3.7         | 42.6        |
| Apr 15                           | 0             |        |              |           |            |           |         | 4         | 3              |            |            | 169.2        | 11.4        | 39.6        |
| Apr 16                           | 0             |        |              |           |            |           |         | 7         | 4              |            |            | 162.0        | 21.3        | 42.6        |
| Apr 17                           | 0             |        |              |           |            |           |         | 3         | 2              |            |            | 180.9        | 28.4        | 43.0        |
| Apr 18                           | 0             |        |              |           |            |           |         | 3         | 2              |            |            | 171.4        | 21.9        | 43.0        |
| Apr 19                           | 0             |        |              |           |            |           |         | 11        | 8              |            |            | 184.1        | 30.9        | 43.2        |
| Apr 20                           | 0             |        |              |           |            |           |         | 5         | 1              |            |            | 190.9        | 39.5        | 43.0        |
| Apr 21                           | 0             |        |              |           |            |           |         | 4         | 3              |            |            | 183.0        | 18.4        | 43.3        |
| Apr 22                           | 0             |        |              |           |            |           |         | 4         | 1              |            |            | 192.3        | 29.9        | 44.6        |
| Apr 23                           | 0             |        |              |           |            |           |         | 5         | 3              |            |            | 194.6        | 25.7        | 44.2        |
| Apr 24                           | 1             |        |              |           |            |           |         | 9         | 7              |            |            | 209.3        | 27.5        | 45.3        |
| Apr 25                           | 0             |        |              |           |            |           |         | 10        | 8              |            |            | 188.1        | 25.2        | 45.0        |
| Apr 26                           | 0             |        |              |           |            |           |         | 8         | 5              |            |            | 167.3        | 22.5        | 45.3        |
| Apr 27                           | 0             |        |              |           |            |           |         | 5         | 5              |            |            | 188.3        | 23.1        | 45.7        |
| Apr 28                           | 1             |        |              |           |            |           |         | 2         | 2              |            |            | 160.3        | 21.5        | 46.2        |
| Apr 29                           | 2             |        |              |           |            |           |         | 7         | 3              |            |            | 199.6        | 21.7        | 46.0        |
| Apr 30                           | 0             |        |              |           |            |           |         | 4         | 3              |            |            | 232.2        | 54.6        | 46.9        |
| <b>TOTAL</b>                     | <b>4</b>      |        |              |           |            |           |         | <b>98</b> | <b>64</b>      |            |            | <b>173.2</b> | <b>16.8</b> | <b>44.1</b> |
| <b>AVG.</b>                      | <b>0</b>      |        |              |           |            |           |         | <b>6</b>  | <b>4</b>       |            |            | <b>173.2</b> | <b>16.8</b> | <b>44.1</b> |

TABLE 144

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

MAY 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|-----------|----------------|------------|---------|------------|------------|-------|
|              | SPRING        | SUMMER | FALL |              |            |           |         |           |                |            |         |            |            |       |
| May 1        | 2             |        |      | 0            |            |           |         | 5         | 5              | 0          |         | 232.7      | 50.4       | 46.8  |
| May 2        | 4             |        |      | 0            |            |           |         | 2         | 1              | 0          |         | 242.9      | 54.8       | 46.9  |
| May 3        | 3             |        |      | 0            |            |           |         | 2         | 2              | 0          |         | 240.5      | 51.8       | 47.3  |
| May 4        | 7             |        |      | 0            |            |           |         | 6         | 4              | 0          |         | 239.1      | 45.4       | 46.9  |
| May 5        | 8             |        |      | 0            |            |           |         | 4         | 3              | 0          |         | 224.7      | 31.0       | 47.7  |
| May 6        | 10            |        |      | 0            |            |           |         | 2         | 1              | 0          |         | 228.4      | 36.4       | 48.0  |
| May 7        | 18            |        |      | 0            |            |           |         | 3         | 3              | 0          |         | 217.9      | 38.0       | 48.0  |
| May 8        | 31            |        |      | 0            |            |           |         | 3         | 3              | 0          |         | 218.8      | 46.5       | 49.1  |
| May 9        | 52            |        |      | 1            |            |           |         | 3         | 1              | 0          |         | 228.8      | 56.2       | 49.6  |
| May 10       | 96            |        |      | 0            |            |           |         | 2         | 2              | 0          |         | 237.6      | 58.8       | 49.8  |
| May 11       | 81            |        |      | 0            |            |           |         | 2         | 2              | 0          |         | 213.6      | 33.2       | 49.8  |
| May 12       | 186           |        |      | 0            |            |           |         | 2         | 2              | 0          |         | 192.8      | 23.0       | 49.8  |
| May 13       | 181           |        |      | 2            |            |           |         | 2         |                | 0          |         | 186.1      | 22.3       | 50.4  |
| May 14       | 181           |        |      | 0            |            |           |         | 4         | 2              | 0          |         | 204.8      | 24.2       | 50.2  |
| May 15       | 289           |        |      | 1            |            |           |         | 1         | 0              | 1          |         | 212.5      | 26.0       | 50.9  |
| May 16       | 356           |        |      | 6            |            |           |         | 2         | 2              | 0          |         | 193.0      | 22.9       | 51.3  |
| May 17       | 439           |        |      | 7            |            |           |         | 1         | 1              | 0          |         | 216.2      | 26.7       | 51.1  |
| May 18       | 648           |        |      | 6            |            |           |         | 2         | 1              | 0          |         | 220.2      | 40.2       | 50.7  |
| May 19       | 910           |        |      | 13           |            |           |         | 0         | 0              | 0          |         | 226.3      | 43.1       | 50.4  |
| May 20       | 1,442         |        |      | 20           |            |           |         | 3         | 1              | 0          |         | 229.3      | 47.0       | 50.2  |
| May 21       | 1,320         |        |      | 26           |            |           |         | 3         | 2              | 1          |         | 225.9      | 43.1       | 50.2  |
| May 22       | 910           |        |      | 17           |            |           |         | 0         | 0              | 1          |         | 216.3      | 41.3       | 50.0  |
| May 23       | 1,067         |        |      | 24           |            |           |         | 3         | 3              | 0          |         | 203.2      | 30.1       | 49.8  |
| May 24       | 754           |        |      | 22           |            |           |         | 3         | 3              | 0          |         | 224.4      | 33.0       | 50.5  |
| May 25       | 757           |        |      | 25           |            |           |         | 0         | 0              | 0          |         | 220.2      | 28.3       | 50.7  |
| May 26       | 1,414         |        |      | 75           |            |           |         | 1         | 1              | 4          |         | 228.5      | 38.3       | 51.1  |
| May 27       | 898           |        |      | 40           |            |           |         | 1         | 0              | 3          |         | 193.1      | 20.2       | 51.3  |
| May 28       | 739           |        |      | 90           |            |           |         | 2         | 2              | 0          |         | 187.0      | 38.6       | 51.3  |
| May 29       | 652           |        |      | 62           |            |           |         | 1         | 1              | 3          |         | 203.2      | 41.6       | 51.8  |
| May 30       | 530           |        |      | 60           |            |           |         | 6         | 3              | 2          |         | 199.1      | 39.8       | 52.0  |
| May 31       | 525           |        |      | 40           |            |           |         | 4         | 3              | 1          |         | 195.8      | 36.4       | 52.0  |
| <b>TOTAL</b> | <b>14,510</b> |        |      | <b>537</b>   |            |           |         | <b>75</b> | <b>54</b>      | <b>16</b>  |         |            |            |       |

AVG. 468

17

2

2

1

216.2 37.7 49.9

RUN YEAR

TOTALS TO DATE

CHINOOK ADULT

CHINOOK JACK

SPRING

14,514

537

SOCKEYE

STEELHEAD

WILD STEELHEAD

BULL TROUT

0

173

118

16

TABLE 145

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |              |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE      | STEELHEAD  | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS   | SPILL KCFS  | DEG F       |
|--------------|---------------|--------------|------|--------------|------------|-----------|--------------|------------|----------------|------------|---------|--------------|-------------|-------------|
|              | SPRING        | SUMMER       | FALL |              |            |           |              |            |                |            |         |              |             |             |
| Jun 1        | 213           |              |      | 27           |            |           | 0            | 2          | 1              | 1          |         | 194.5        | 32.3        | 53.1        |
| Jun 2        | 170           |              |      | 26           |            |           | 0            | 2          | 1              | 1          |         | 164.2        | 33.1        | 53.6        |
| Jun 3        | 498           |              |      | 52           |            |           | 0            | 3          | 3              | 0          |         | 166.2        | 33.1        | 53.6        |
| Jun 4        | 615           |              |      | 34           |            |           | 0            | 7          | 6              | 0          |         | 183.1        | 37.1        | 54.0        |
| Jun 5        | 167           |              |      | 7            |            |           | 0            | 1          | 1              | 0          |         | 143.9        | 36.1        | 53.6        |
| Jun 6        | 316           |              |      | 6            |            |           | 0            | 3          | 2              | 2          |         | 218.6        | 46.8        | 53.6        |
| Jun 7        | 170           |              |      | 10           |            |           | 0            | 0          | 0              | 0          |         | 234.1        | 51.5        | 52.7        |
| Jun 8        | 157           |              |      | 20           |            |           | 0            | 0          | 0              | 0          |         | 241.4        | 55.0        | 52.3        |
| Jun 9        | 186           |              |      | 3            |            |           | 0            | 4          | 1              | 1          |         | 226.3        | 47.0        | 52.7        |
| Jun 10       | 139           |              |      | 5            |            |           | 0            | 3          | 2              | 1          |         | 221.6        | 46.9        | 52.9        |
| Jun 11       | 305           |              |      | 18           |            |           | 0            | 1          | 1              | 0          |         | 225.6        | 47.0        | 53.4        |
| Jun 12       | 226           |              |      | 9            |            |           | 2            | 1          | 0              | 1          |         | 229.7        | 49.2        | 54.3        |
| Jun 13       | 140           |              |      | 4            |            |           | 1            | 3          | 1              | 1          |         | 227.0        | 50.3        | 53.4        |
| Jun 14       | 150           |              |      | 2            |            |           | 2            | 3          | 1              | 0          |         | 219.1        | 47.7        | 54.3        |
| Jun 15       | 478           |              |      | 3            |            |           | 6            | 7          | 2              | 1          |         | 225.0        | 54.8        | 54.7        |
| Jun 16       | 414           |              |      | 7            |            |           | 4            | 6          | 2              | 1          |         | 219.7        | 47.4        | 55.0        |
| Jun 17       | 269           |              |      | 8            |            |           | 22           | 6          | 2              | 1          |         | 222.4        | 48.1        | 55.2        |
| Jun 18       | 481           |              |      | 15           |            |           | 26           | 4          | 2              | 1          |         | 226.1        | 48.9        | 55.0        |
| Jun 19       | 357           |              |      | 6            |            |           | 78           | 3          | 0              | 0          |         | 220.2        | 48.1        | 54.9        |
| Jun 20       | 279           |              |      | 0            |            |           | 97           | 4          | 2              | 0          |         | 261.3        | 76.6        | 55.2        |
| Jun 21       | 210           |              |      | 9            |            |           | 182          | 3          | 2              | 2          |         | 252.1        | 78.7        | 55.2        |
| Jun 22       | 277           |              |      | 11           |            |           | 211          | 1          | 0              | 3          |         | 261.4        | 75.4        | 55.4        |
| Jun 23       | 332           |              |      | 7            |            |           | 222          | 2          | 0              | 1          |         | 229.6        | 66.4        | 55.4        |
| Jun 24       |               | 543          |      | 9            |            |           | 518          | 3          | 2              | 0          |         | 263.6        | 72.8        | 55.4        |
| Jun 25       |               | 191          |      | 5            |            |           | 647          | 6          | 5              | 0          |         | 308.9        | 119.4       | 55.4        |
| Jun 26       |               | 69           |      | 3            |            |           | 348          | 2          | 1              | 1          |         | 323.1        | 137.1       | 54.9        |
| Jun 27       |               | 79           |      | 3            |            |           | 449          | 4          | 3              | 0          |         | 302.9        | 112.8       | 54.1        |
| Jun 28       |               | 172          |      | 9            |            |           | 650          | 5          | 2              | 0          |         | 318.9        | 135.2       | 54.5        |
| Jun 29       |               | 245          |      | 7            |            |           | 852          | 7          | 6              | 1          |         | 307.3        | 123.0       | 54.5        |
| Jun 30       |               | 351          |      | 11           |            |           | 1,267        | 12         | 9              | 0          |         | 311.4        | 121.7       | 55.6        |
| <b>TOTAL</b> | <b>6,549</b>  | <b>1,650</b> |      | <b>336</b>   |            |           | <b>5,584</b> | <b>108</b> | <b>60</b>      | <b>20</b>  |         |              |             |             |
| <b>AVG.</b>  | <b>285</b>    | <b>236</b>   |      | <b>11</b>    |            |           | <b>186</b>   | <b>4</b>   | <b>2</b>       | <b>1</b>   |         | <b>238.3</b> | <b>66.0</b> | <b>54.3</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE | 21,063        | 826          |
| SPRING         | 1,650         | 47           |
| SUMMER         |               |              |
| <b>TOTALS</b>  | <b>22,713</b> | <b>873</b>   |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT |
|---------|-----------|----------------|------------|
| 5,584   | 281       | 178            | 36         |

TABLE 146

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

JULY 2012

| DATE         | CHINOOK ADULT |               |       | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE        | STEELHEAD    | WILD STEELHEAD | BULL TROUT | LAMPREY  | DISCH KCFS   | SPILL KCFS  | DEG F       |
|--------------|---------------|---------------|-------|--------------|------------|-----------|----------------|--------------|----------------|------------|----------|--------------|-------------|-------------|
|              | SPRING        | SUMMER        | FALL  |              |            |           |                |              |                |            |          |              |             |             |
| Jul 1        |               | 331           |       | 10           |            |           | 1,693          | 9            | 6              | 1          | 0        | 298.1        | 111.7       | 55.8        |
| Jul 2        |               | 312           |       | 2            |            |           | 1,839          | 3            | 1              | 1          | 0        | 288.1        | 99.0        | 56.1        |
| Jul 3        |               | 1,023         |       | 10           |            |           | 2,509          | 3            | 2              | 0          | 0        | 291.5        | 105.1       | 56.3        |
| Jul 4        |               | 1,582         |       | 16           |            |           | 8,455          | 10           | 7              | 1          | 0        | 285.6        | 99.8        | 56.1        |
| Jul 5        |               | 1,498         |       | 19           |            |           | 12,749         | 14           | 7              | 0          | 0        | 292.9        | 107.4       | 56.8        |
| Jul 6        |               | 2,021         |       | 53           |            |           | 19,261         | 22           | 14             | 0          | 0        | 286.6        | 104.1       | 56.5        |
| Jul 7        |               | 2,480         |       | 63           |            |           | 30,928         | 12           | 4              | 0          | 0        | 264.1        | 85.2        | 57.0        |
| Jul 8        |               | 2,374         |       | 49           |            |           | 31,850         | 28           | 18             | 1          | 0        | 262.9        | 76.9        | 57.7        |
| Jul 9        |               | 2,158         |       | 42           |            |           | 28,861         | 37           | 28             | 1          | 0        | 268.2        | 80.6        | 58.5        |
| Jul 10       |               | 2,018         |       | 43           |            |           | 34,690         | 29           | 19             | 0          | 0        | 266.2        | 76.6        | 58.5        |
| Jul 11       |               | 2,157         |       | 75           |            |           | 38,766         | 47           | 27             | 0          | 1        | 260.0        | 73.2        | 58.8        |
| Jul 12       |               | 1,417         | 1,417 | 92           |            |           | 30,333         | 35           | 18             | 0          | 0        | 255.5        | 65.6        | 58.8        |
| Jul 13       |               | 991           |       | 47           |            |           | 19,246         | 24           | 10             | 0          | 0        | 263.2        | 70.3        | 59.4        |
| Jul 14       |               | 1,057         |       | 29           |            |           | 13,655         | 39           | 23             | 1          | 0        | 268.2        | 66.7        | 59.5        |
| Jul 15       |               | 1,517         |       | 27           |            |           | 15,382         | 34           | 16             | 1          | 1        | 264.7        | 72.2        | 59.7        |
| Jul 16       |               | 1,141         |       | 31           |            |           | 13,865         | 33           | 17             | 0          | 1        | 262.5        | 60.1        | 59.5        |
| Jul 17       |               | 2,049         |       | 78           |            |           | 20,914         | 60           | 30             | 0          | 0        | 254.7        | 57.1        | 59.9        |
| Jul 18       |               | 1,011         |       | 50           |            |           | 13,860         | 50           | 29             | 1          | 0        | 248.0        | 55.8        | 60.3        |
| Jul 19       |               | 1,153         |       | 59           |            |           | 10,437         | 61           | 36             | 0          | 0        | 264.6        | 58.6        | 59.7        |
| Jul 20       |               | 1,379         |       | 64           |            |           | 9,856          | 60           | 23             | 0          | 0        | 272.9        | 68.1        | 62.2        |
| Jul 21       |               | 1,086         |       | 52           |            |           | 8,893          | 56           | 29             | 0          | 0        | 272.6        | 66.1        | 63.0        |
| Jul 22       |               | 1,332         |       | 56           |            |           | 8,815          | 71           | 34             | 0          | 0        | 265.8        | 63.2        | 63.7        |
| Jul 23       |               | 890           |       | 21           |            |           | 5,174          | 62           | 29             | 0          | 0        | 264.0        | 65.8        | 63.5        |
| Jul 24       |               | 1,346         |       | 60           |            |           | 4,943          | 61           | 31             | 0          | 0        | 249.5        | 61.7        | 61.0        |
| Jul 25       |               | 1,002         |       | 47           |            |           | 4,628          | 71           | 40             | 0          | 0        | 239.0        | 57.0        | 61.5        |
| Jul 26       |               | 647           |       | 56           |            |           | 2,991          | 64           | 37             | 1          | 0        | 219.3        | 47.5        | 61.7        |
| Jul 27       |               | 937           |       | 54           |            |           | 1,995          | 70           | 33             | 0          | 2        | 218.8        | 47.3        | 62.2        |
| Jul 28       |               | 1,229         |       | 62           |            |           | 2,084          | 81           | 45             | 1          | 1        | 213.7        | 42.2        | 63.0        |
| Jul 29       |               | 723           |       | 49           |            |           | 1,270          | 63           | 36             | 0          | 0        | 196.4        | 41.0        | 62.4        |
| Jul 30       |               | 1,099         |       | 55           |            |           | 963            | 86           | 44             | 0          | 1        | 205.2        | 39.7        | 63.3        |
| Jul 31       |               | 727           |       | 65           |            |           | 907            | 115          | 64             | 0          | 2        | 199.4        | 40.9        | 63.1        |
| <b>TOTAL</b> |               | <b>40,687</b> |       | <b>1,436</b> |            |           | <b>401,812</b> | <b>1,410</b> | <b>757</b>     | <b>10</b>  | <b>9</b> |              |             |             |
| <b>AVG.</b>  |               | <b>1,312</b>  |       | <b>46</b>    |            |           | <b>12,962</b>  | <b>45</b>    | <b>24</b>      | <b>0</b>   | <b>0</b> | <b>256.8</b> | <b>69.9</b> | <b>59.9</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 21,063        | 826          |
| SUMMER         | 42,337        | 1,483        |
| <b>TOTALS</b>  | <b>63,400</b> | <b>2,309</b> |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|---------|-----------|----------------|------------|---------|
| 407,396 | 1,691     | 935            | 46         | 9       |



TABLE 147

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE      | STEELHEAD    | WILD STEELHEAD | BULL TROUT | LAMPREY    | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|---------------|------|--------------|------------|-----------|--------------|--------------|----------------|------------|------------|------------|------------|-------|
|              | SPRING        | SUMMER        | FALL |              |            |           |              |              |                |            |            |            |            |       |
| Aug 1        |               | 801           |      | 52           | 0          |           | 625          | 128          | 68             | 0          | 1          | 197.7      | 38.8       | 63.1  |
| Aug 2        |               | 700           |      | 67           | 0          |           | 428          | 109          | 55             | 0          | 1          | 189.3      | 40.1       | 64.0  |
| Aug 3        |               | 482           |      | 92           | 0          |           | 352          | 128          | 67             | 0          | 2          | 179.6      | 38.4       | 63.3  |
| Aug 4        |               | 582           |      | 79           | 0          |           | 262          | 144          | 75             | 0          | 0          | 186.8      | 38.3       | 64.2  |
| Aug 5        |               | 592           |      | 74           | 0          |           | 235          | 146          | 77             | 0          | 0          | 187.8      | 37.5       | 63.9  |
| Aug 6        |               | 571           |      | 86           | 0          |           | 196          | 186          | 107            | 0          | 6          | 180.6      | 38.0       | 64.0  |
| Aug 7        |               | 497           |      | 125          | 0          |           | 188          | 199          | 109            | 1          | 2          | 181.4      | 37.9       | 63.7  |
| Aug 8        |               | 447           |      | 96           | 0          |           | 160          | 184          | 94             | 0          | 3          | 182.2      | 37.0       | 64.2  |
| Aug 9        |               | 315           |      | 46           | 0          |           | 126          | 183          | 84             | 0          | 8          | 166.9      | 34.9       | 64.2  |
| Aug 10       |               | 280           |      | 42           | 0          |           | 76           | 137          | 66             | 0          | 4          | 185.6      | 33.0       | 63.5  |
| Aug 11       |               | 620           |      | 134          | 0          |           | 107          | 271          | 129            | 0          | 4          | 163.9      | 32.8       | 64.2  |
| Aug 12       |               | 375           |      | 121          | 0          |           | 54           | 188          | 80             | 0          | 1          | 174.9      | 31.5       | 64.0  |
| Aug 13       |               | 419           |      | 121          | 0          |           | 46           | 214          | 88             | 0          | 13         | 164.0      | 31.7       | 64.2  |
| Aug 14       |               | 315           |      | 117          | 0          |           | 44           | 212          | 104            | 0          | 8          | 161.6      | 32.2       | 64.2  |
| Aug 15       |               | 282           |      | 150          | 0          |           | 47           | 225          | 80             | 0          | 12         | 144.8      | 30.1       | 64.4  |
| Aug 16       |               | 382           |      | 142          | 0          |           | 31           | 239          | 108            | 0          | 7          | 157.4      | 29.2       | 64.6  |
| Aug 17       |               | 251           |      | 268          | 0          |           | 40           | 263          | 127            | 0          | 14         | 157.4      | 28.6       | 64.9  |
| Aug 18       |               | 261           |      | 205          | 0          |           | 23           | 226          | 87             | 1          | 4          | 149.7      | 26.8       | 64.8  |
| Aug 19       |               | 395           |      | 70           | 0          |           | 35           | 260          | 115            | 0          | 8          | 168.5      | 0.5        | 64.6  |
| Aug 20       |               | 240           |      | 78           | 0          |           | 27           | 204          | 54             | 0          | 20         | 152.2      | 0.0        | 64.6  |
| Aug 21       |               | 196           |      | 123          | 0          |           | 12           | 233          | 74             | 0          | 13         | 152.1      | 0.0        | 64.8  |
| Aug 22       |               | 175           |      | 112          | 0          |           | 11           | 204          | 94             | 0          | 26         | 154.1      | 0.0        | 64.8  |
| Aug 23       |               | 190           |      | 165          | 0          |           | 10           | 299          | 131            | 0          | 23         | 151.1      | 0.0        | 64.4  |
| Aug 24       |               | 143           |      | 87           | 0          |           | 5            | 311          | 132            | 0          | 24         | 145.3      | 0.0        | 64.6  |
| Aug 25       |               | 137           |      | 56           | 0          |           | 1            | 240          | 43             | 0          | 19         | 138.9      | 0.0        | 64.4  |
| Aug 26       |               | 125           |      | 58           | 0          |           | 3            | 202          | 85             | 0          | 24         | 126.1      | 0.0        | 64.6  |
| Aug 27       |               | 105           |      | 58           | 0          |           | 7            | 150          | 41             | 0          | 22         | 120.2      | 0.0        | 64.2  |
| Aug 28       |               | 101           |      | 136          | 0          |           | 7            | 191          | 75             | 1          | 17         | 135.5      | 0.0        | 69.1  |
| Aug 29       |               | 106           |      | 107          | 0          |           | 4            | 162          | 77             | 0          | 12         | 138.3      | 0.0        | 67.8  |
| Aug 30       |               | 74            |      | 83           | 0          |           | 7            | 180          | 60             | 0          | 19         | 147.0      | 0.0        | 64.4  |
| Aug 31       |               | 66            |      | 141          | 2          |           | 4            | 168          | 71             | 0          | 12         | 139.4      | 0.0        | 64.6  |
| <b>TOTAL</b> |               | <b>10,225</b> |      | <b>3,291</b> | <b>2</b>   |           | <b>3,173</b> | <b>6,186</b> | <b>2,657</b>   | <b>3</b>   | <b>329</b> |            |            |       |

|      |  |     |  |     |   |  |     |     |    |   |    |       |      |      |
|------|--|-----|--|-----|---|--|-----|-----|----|---|----|-------|------|------|
| AVG. |  | 330 |  | 106 | 0 |  | 102 | 200 | 86 | 0 | 11 | 160.7 | 19.9 | 64.5 |
|------|--|-----|--|-----|---|--|-----|-----|----|---|----|-------|------|------|

|                            |               |               |              |         |           |                |            |         |     |
|----------------------------|---------------|---------------|--------------|---------|-----------|----------------|------------|---------|-----|
| RUN YEAR<br>TOTALS TO DATE | CHINOOK ADULT | CHINOOK JACK  | COHO ADULT   | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |     |
|                            | SPRING        | 21,063        | 826          | 2       | 410,569   | 7,877          | 3,592      | 49      | 338 |
|                            | SUMMER        | 52,562        | 4,774        |         |           |                |            |         |     |
|                            | <b>TOTALS</b> | <b>73,625</b> | <b>5,600</b> |         |           |                |            |         |     |

TABLE 148

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|--------|--------------|------------|-----------|---------|-----------|----------------|------------|---------|------------|------------|-------|
|              | SPRING        | SUMMER |              |            |           |         |           |                |            |         |            |            |       |
| Sep 1        |               | 61     | 88           | 0          | 0         | 5       | 134       | 47             |            | 11      | 87.2       | 0.0        | 64.4  |
| Sep 2        |               |        | 77           | 33         | 1         | 0       | 9         | 100            | 42         | 24      | 66.8       | 0.0        | 65.5  |
| Sep 3        |               |        | 102          | 52         | 0         | 0       | 5         | 111            | 36         | 22      | 91.5       | 0.0        | 64.8  |
| Sep 4        |               |        | 93           | 87         | 1         | 0       | 3         | 188            | 86         | 24      | 119.2      | 0.0        | 64.6  |
| Sep 5        |               |        | 127          | 90         | 8         | 0       | 3         | 223            | 102        | 19      | 109.2      | 0.0        | 64.8  |
| Sep 6        |               |        | 149          | 64         | 7         | 0       | 3         | 254            | 98         | 39      | 86.8       | 0.0        | 64.9  |
| Sep 7        |               |        | 59           | 96         | 14        | 1       | 3         | 125            | 55         | 28      | 99.1       | 0.0        | 65.3  |
| Sep 8        |               |        | 96           | 50         | 21        | 0       | 5         | 180            | 87         | 41      | 87.3       | 0.0        | 65.1  |
| Sep 9        |               |        | 102          | 138        | 25        | 1       | 2         | 188            | 86         | 43      | 54.0       | 0.0        | 65.3  |
| Sep 10       |               |        | 97           | 47         | 74        | 0       | 0         | 168            | 36         | 46      | 77.1       | 0.0        | 64.8  |
| Sep 11       |               |        | 273          | 98         | 109       | 1       | 1         | 396            | 188        | 35      | 94.7       | 0.0        | 64.4  |
| Sep 12       |               |        | 168          | 87         | 136       | 14      | 0         | 328            | 126        | 41      | 77.4       | 0.0        | 62.6  |
| Sep 13       |               |        | 97           | 62         | 86        | 0       | 3         | 210            | 86         | 19      | 92.8       | 0.0        | 63.9  |
| Sep 14       |               |        | 119          | 87         | 130       | 4       | 1         | 230            | 95         | 26      | 97.1       | 0.0        | 63.9  |
| Sep 15       |               |        | 76           | 66         | 186       | 0       | 0         | 251            | 103        | 13      | 78.2       | 0.0        | 63.7  |
| Sep 16       |               |        | 97           | 109        | 238       | 6       | 0         | 244            | 81         | 20      | 61.2       | 0.0        | 64.0  |
| Sep 17       |               |        | 98           | 34         | 263       | 11      | 0         | 197            | 30         | 20      | 87.9       | 0.0        | 61.3  |
| Sep 18       |               |        | 187          | 116        | 335       | 5       | 0         | 284            | 140        | 23      | 91.5       | 0.0        | 58.3  |
| Sep 19       |               |        | 87           | 114        | 350       | 3       | 2         | 238            | 86         | 18      | 81.0       | 0.0        | 62.1  |
| Sep 20       |               |        | 204          | 111        | 600       | 1       | 0         | 263            | 121        | 22      | 100.1      | 0.0        | 62.8  |
| Sep 21       |               |        | 169          | 71         | 334       | 2       | 0         | 196            | 36         | 15      | 89.4       | 0.0        | 63.9  |
| Sep 22       |               |        | 166          | 73         | 286       | 3       | 1         | 173            | 67         | 14      | 68.8       | 0.0        | 59.2  |
| Sep 23       |               |        | 109          | 37         | 291       | 16      | 0         | 186            | 45         | 19      | 63.0       | 0.0        | 63.5  |
| Sep 24       |               |        | 161          | 88         | 251       | 7       | 0         | 188            | 76         | 16      | 90.8       | 0.0        | 63.9  |
| Sep 25       |               |        | 262          | 77         | 273       | 2       | 0         | 185            | 72         | 11      | 78.6       | 0.0        | 65.5  |
| Sep 26       |               |        | 202          | 107        | 379       | 5       | 0         | 204            | 69         | 17      | 78.6       | 0.0        | 68.4  |
| Sep 27       |               |        | 203          | 93         | 230       | 2       | 0         | 163            | 60         | 12      | 82.9       | 0.0        | 64.2  |
| Sep 28       |               |        | 232          | 87         | 175       | 2       | 0         | 117            | 33         | 3       | 80.2       | 0.0        | 62.2  |
| Sep 29       |               |        | 164          | 79         | 154       | 1       | 0         | 93             | 23         | 6       | 53.6       | 0.0        | 62.2  |
| Sep 30       |               |        | 188          | 124        | 262       | 2       | 0         | 142            | 52         | 15      | 52.3       | 0.0        | 63.7  |
| <b>TOTAL</b> |               | 61     | 4,164        | 2,465      | 5,219     | 89      | 46        | 5,959          | 2,264      | 662     |            |            |       |
| <b>AVG.</b>  |               |        | 144          | 82         | 174       | 3       | 2         | 199            | 75         | 22      | 82.6       | 0.0        |       |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 21,063        | 826          |
| SUMMER         | 52,623        | 4,862        |
| FALL           | 4,164         | 2,377        |
| <b>TOTALS</b>  | <b>77,850</b> | <b>8,065</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 5,221      | 89        | 410,615 | 13,836    | 5,856          | 49         | 1,000   |

TABLE 149

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK      | COHO         | COHO         | SOCKEYE   | STEELHEAD | STEELHEAD    | WILD       | BULL | LAMPREY   | DISCH       | SPILL      | DEG F       |
|--------------|---------------|--------|--------------|--------------|--------------|-----------|-----------|--------------|------------|------|-----------|-------------|------------|-------------|
|              | SPRING        | SUMMER | FALL         | JACK         | ADULT        |           |           |              |            |      |           |             |            |             |
| Oct 1        |               |        | 181          | 110          | 337          | 6         | 0         | 109          | 32         |      | 6         | 75.7        | 0.0        | 64.0        |
| Oct 2        |               |        | 195          | 94           | 210          | 4         | 0         | 126          | 54         |      | 6         | 66.4        | 0.0        | 63.3        |
| Oct 3        |               |        | 250          | 97           | 248          | 3         | 0         | 143          | 55         |      | 8         | 69.9        | 0.0        | 63.1        |
| Oct 4        |               |        | 227          | 60           | 172          | 5         | 0         | 110          | 47         |      | 4         | 72.4        | 0.0        | 62.8        |
| Oct 5        |               |        | 193          | 71           | 139          | 1         | 0         | 124          | 38         |      | 3         | 67.7        | 0.0        | 61.0        |
| Oct 6        |               |        | 141          | 56           | 159          | 14        | 0         | 116          | 37         |      | 4         | 57.2        | 0.0        | 62.1        |
| Oct 7        |               |        | 108          | 53           | 109          | 6         | 0         | 85           | 24         |      | 0         | 55.9        | 0.0        | 61.3        |
| Oct 8        |               |        | 87           | 54           | 90           | 2         | 0         | 36           | 13         |      | 3         | 74.2        | 0.0        | 61.5        |
| Oct 9        |               |        | 83           | 69           | 118          | 2         | 0         | 44           | 20         |      | 2         | 71.3        | 0.0        | 61.3        |
| Oct 10       |               |        | 141          | 62           | 90           | 2         | 0         | 45           | 21         |      | 2         | 63.8        | 0.0        | 61.3        |
| Oct 11       |               |        | 128          | 40           | 88           | 4         | 0         | 40           | 22         |      | 1         | 72.0        | 0.0        | 61.0        |
| Oct 12       |               |        | 86           | 41           | 77           | 0         | 0         | 35           | 10         |      | 1         | 48.5        | 0.0        | 60.8        |
| Oct 13       |               |        | 71           | 34           | 78           | 0         | 1         | 29           | 17         |      | 2         | 50.8        | 0.0        | 61.0        |
| Oct 14       |               |        | 106          | 30           | 122          | 3         | 0         | 24           | 8          |      | 0         | 40.5        | 0.0        | 61.0        |
| Oct 15       |               |        | 82           | 46           | 75           | 5         | 1         | 29           | 15         |      | 1         | 62.3        | 0.0        | 61.2        |
| Oct 16       |               |        | 142          | 61           | 83           | 2         | 0         | 40           | 21         |      | 1         | 42.2        | 0.0        | 60.8        |
| Oct 17       |               |        | 120          | 23           | 48           | 3         | 0         | 34           | 14         |      | 0         | 52.1        | 0.0        | 60.1        |
| Oct 18       |               |        | 117          | 45           | 84           | 4         | 1         | 21           | 9          |      | 0         | 62.1        | 0.0        | 60.3        |
| Oct 19       |               |        | 77           | 37           | 46           | 0         | 0         | 30           | 14         |      | 2         | 41.6        | 0.0        | 60.3        |
| Oct 20       |               |        | 64           | 36           | 47           | 1         | 1         | 18           | 14         |      | 0         | 42.7        | 0.0        | 59.4        |
| Oct 21       |               |        | 80           | 22           | 44           | 0         | 0         | 25           | 14         |      | 0         | 62.3        | 0.0        | 58.6        |
| Oct 22       |               |        | 143          | 46           | 46           | 0         | 0         | 36           | 12         |      | 0         | 92.0        | 0.0        | 58.8        |
| Oct 23       |               |        | 146          | 53           | 19           | 0         | 0         | 26           | 7          |      | 0         | 96.3        | 0.0        | 57.9        |
| Oct 24       |               |        | 151          | 30           | 43           | 1         | 0         | 20           | 8          |      | 0         | 94.2        | 0.0        | 58.3        |
| Oct 25       |               |        | 81           | 31           | 31           | 0         | 1         | 22           | 8          |      | 0         | 88.7        | 0.0        | 57.7        |
| Oct 26       |               |        | 119          | 24           | 39           | 0         | 0         | 16           | 6          |      | 0         | 95.8        | 0.0        | 57.6        |
| Oct 27       |               |        | 103          | 27           | 37           | 0         | 0         | 10           | 4          |      | 1         | 78.2        | 0.0        | 57.6        |
| Oct 28       |               |        | 109          | 20           | 23           | 1         | 0         | 17           | 5          |      | 0         | 60.5        | 0.0        | 57.6        |
| Oct 29       |               |        | 109          | 24           | 28           | 1         | 0         | 20           | 11         |      | 0         | 65.2        | 0.0        | 54.1        |
| Oct 30       |               |        | 180          | 16           | 48           | 0         | 0         | 13           | 2          |      | 0         | 72.8        | 0.0        | 57.6        |
| Oct 31       |               |        | 135          | 25           | 26           | 1         | 0         | 21           | 10         |      | 1         | 84.1        | 0.0        | 57.6        |
| <b>TOTAL</b> |               |        | <b>3,955</b> | <b>1,437</b> | <b>2,804</b> | <b>71</b> | <b>5</b>  | <b>1,464</b> | <b>572</b> |      | <b>48</b> |             |            |             |
| <b>AVG.</b>  |               |        | <b>128</b>   | <b>46</b>    | <b>90</b>    | <b>2</b>  | <b>0</b>  | <b>47</b>    | <b>18</b>  |      | <b>2</b>  | <b>67.1</b> | <b>0.0</b> | <b>60.0</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 21,063        | 826          |
| SUMMER         | 52,623        | 4,862        |
| FALL           | 8,119         | 3,814        |
| <b>TOTALS</b>  | <b>81,805</b> | <b>9,502</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 8,025      | 160       | 410,620 | 15,300    | 6,428          | 49         | 1,048   |

TABLE 150

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCK ISLAND PROJECT- FISH COUNTS

NOVEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK<br>FALL | CHINOOK<br>JACK | COHO<br>ADULT | COHO<br>JACK | SOCKEYE | STEELHEAD | WILD<br>STEELHEAD | BULL<br>TROUT | LAMPREY | DISCH<br>KCFS | SPILL<br>KCFS | DEG F |
|--------------|---------------|--------|-----------------|-----------------|---------------|--------------|---------|-----------|-------------------|---------------|---------|---------------|---------------|-------|
|              | SPRING        | SUMMER |                 |                 |               |              |         |           |                   |               |         |               |               |       |
| Nov 1        |               |        | 132             | 16              | 26            | 1            |         | 20        | 9                 |               |         | 77.4          | 0.0           | 57.2  |
| Nov 2        |               |        | 66              | 16              | 22            | 0            |         | 8         | 4                 |               |         | 99.0          | 0.0           | 57.2  |
| Nov 3        |               |        | 66              | 16              | 13            | 0            |         | 18        | 10                |               |         | 75.1          | 0.0           | 57.6  |
| Nov 4        |               |        | 64              | 13              | 12            | 0            |         | 10        | 5                 |               |         | 69.1          | 0.0           | 57.6  |
| Nov 5        |               |        | 71              | 12              | 1             | 0            |         | 8         | 3                 |               |         | 84.5          | 0.0           | 57.6  |
| Nov 6        |               |        | 48              | 10              | 6             | 1            |         | 12        | 5                 |               |         | 101.8         | 0.0           | 57.4  |
| Nov 7        |               |        | 38              | 20              | 1             | 0            |         | 9         | 4                 |               |         | 84.8          | 0.0           | 57.0  |
| Nov 8        |               |        | 31              | 9               | 3             | 0            |         | 13        | 8                 |               |         | 90.5          | 0.0           | 56.8  |
| Nov 9        |               |        | 24              | 16              | 1             | 0            |         | 15        | 10                |               |         | 102.2         | 0.0           | 56.1  |
| Nov 10       |               |        | 27              | 8               | 0             | 0            |         | 11        | 3                 |               |         | 101.7         | 0.0           | 55.8  |
| Nov 11       |               |        | 7               | 10              | 0             | 0            |         | 10        | 4                 |               |         | 102.2         | 0.0           | 55.2  |
| Nov 12       |               |        | 4               | 5               | 0             | 0            |         | 3         | 2                 |               |         | 93.2          | 0.0           | 54.7  |
| Nov 13       |               |        | 8               | 4               | 1             | 0            |         | 2         | 2                 |               |         | 83.0          | 0.0           | 54.3  |
| Nov 14       |               |        | 5               | 1               | 0             | 0            |         | 9         | 6                 |               |         | 94.6          | 0.0           | 54.1  |
| Nov 15       |               |        | 17              | 3               | 4             | 0            |         | 6         | 4                 |               |         | 102.6         | 0.0           | 53.6  |
| Nov 16       |               |        |                 |                 |               |              |         |           |                   |               |         | 106.6         | 0.0           |       |
| Nov 17       |               |        |                 |                 |               |              |         |           |                   |               |         | 109.2         | 0.0           |       |
| Nov 18       |               |        |                 |                 |               |              |         |           |                   |               |         | 101.0         | 0.0           |       |
| Nov 19       |               |        |                 |                 |               |              |         |           |                   |               |         | 101.7         | 0.0           |       |
| Nov 20       |               |        |                 |                 |               |              |         |           |                   |               |         | 100.7         | 0.0           |       |
| Nov 21       |               |        |                 |                 |               |              |         |           |                   |               |         | 64.0          | 0.0           |       |
| Nov 22       |               |        |                 |                 |               |              |         |           |                   |               |         | 83.1          | 0.0           |       |
| Nov 23       |               |        |                 |                 |               |              |         |           |                   |               |         | 83.7          | 0.0           |       |
| Nov 24       |               |        |                 |                 |               |              |         |           |                   |               |         | 92.4          | 0.0           |       |
| Nov 25       |               |        |                 |                 |               |              |         |           |                   |               |         | 100.4         | 0.0           |       |
| Nov 26       |               |        |                 |                 |               |              |         |           |                   |               |         | 103.3         | 0.0           |       |
| Nov 27       |               |        |                 |                 |               |              |         |           |                   |               |         | 87.0          | 0.0           |       |
| Nov 28       |               |        |                 |                 |               |              |         |           |                   |               |         | 100.9         | 0.0           |       |
| Nov 29       |               |        |                 |                 |               |              |         |           |                   |               |         | 112.8         | 0.0           |       |
| Nov 30       |               |        |                 |                 |               |              |         |           |                   |               |         | 109.5         | 0.0           |       |
| <b>TOTAL</b> |               |        | 608             | 159             | 90            | 2            |         | 154       | 79                |               |         |               |               |       |
| <b>AVG.</b>  |               |        | 41              | 11              | 6             | 0            |         | 10        | 5                 |               |         | 93.9          | 0.0           | 56.1  |

| RUN YEAR<br>TOTALS TO DATE | CHINOOK       |              | COHO  |      | SOCKEYE | STEELHEAD | WILD<br>STEELHEAD | BULL<br>TROUT | LAMPREY |
|----------------------------|---------------|--------------|-------|------|---------|-----------|-------------------|---------------|---------|
|                            | ADULT         | JACK         | ADULT | JACK |         |           |                   |               |         |
| SPRING                     | 21,063        | 826          | 8,115 | 162  | 410,620 | 15,454    | 6,507             | 49            | 1,048   |
| SUMMER                     | 52,623        | 4,862        |       |      |         |           |                   |               |         |
| FALL                       | 8,727         | 3,973        |       |      |         |           |                   |               |         |
| <b>TOTALS</b>              | <b>82,413</b> | <b>9,661</b> |       |      |         |           |                   |               |         |

TABLE 151

**MONTHLY COUNT OF STEELHEAD  
ROCK ISLAND DAM 1981 - 2012**

| YEAR                       | JAN | FEB | MAR | APR          | MAY          | JUN          | JUL           | AUG            | SEP            | OCT           | NOV          | DEC | TOTAL          |
|----------------------------|-----|-----|-----|--------------|--------------|--------------|---------------|----------------|----------------|---------------|--------------|-----|----------------|
| 1981                       |     |     |     |              |              | 30           | 282           | 1,886          | 2,338          | 2,493         | 347          |     | 7,376          |
| 1982                       |     |     |     | 118          | 113          | 8            | 157           | 2,246          | 4,260          | 2,785         | 192          |     | 9,879          |
| 1983                       |     |     |     | 53           | 36           | 18           | 579           | 5,811          | 16,942         | 5,619         | 608          |     | 29,666         |
| 1984                       |     |     |     | 88           | 220          | 180          | 1,962         | 7,925          | 10,507         | 3,687         | 527          |     | 25,096         |
| 1985                       |     |     |     | 106          | 393          | 729          | 4,886         | 6,588          | 16,089         | 2,889         | 319          |     | 31,999         |
| 1986                       |     |     |     | 145          | 168          | 192          | 3,383         | 10,036         | 5,883          | 2,731         | 347          |     | 22,885         |
| 1987                       |     |     |     | 100          | 94           | 112          | 1,242         | 4,900          | 4,095          | 1,842         | 347          |     | 12,732         |
| 1988                       |     |     |     | 193          | 156          | 173          | 737           | 2,813          | 3,446          | 1,523         | 200          |     | 9,241          |
| 1989                       |     |     |     | 135          | 73           | 66           | 847           | 2,685          | 3,999          | 1,355         | 191          |     | 9,351          |
| 1990                       |     |     |     | 55           | 46           | 99           | 953           | 2,385          | 2,577          | 736           | 93           |     | 6,944          |
| 1991                       |     |     |     | 30           | 51           | 45           | 916           | 3,322          | 4,194          | 2,165         | 204          |     | 10,927         |
| 1992                       |     |     |     | 86           | 193          | 315          | 1,603         | 2,821          | 5,714          | 1,599         | 145          |     | 12,476         |
| 1993                       |     |     |     | 97           | 88           | 87           | 1,427         | 546            | 1,930          | 597           | 57           |     | 4,829          |
| 1994                       |     |     |     | 29           | 16           | 50           | 631           | 1,151          | 2,181          | 1,437         | 125          |     | 5,620          |
| 1995                       |     |     |     | 23           | 35           | 44           | 421           | 951            | 2,153          | 510           | 38           |     | 4,175          |
| 1996                       |     |     |     | 17           | 34           | 27           | 303           | 2,224          | 3,701          | 920           | 79           |     | 7,305          |
| 1997                       |     |     |     | 19           | 22           | 7            | 300           | 2,343          | 3,461          | 1,466         | 108          |     | 7,726          |
| 1998                       |     |     |     | 20           | 13           | 29           | 449           | 726            | 2,486          | 1,141         | 98           |     | 4,962          |
| 1999                       |     |     |     | 17           | 22           | 37           | 377           | 2,429          | 2,900          | 540           | 40           |     | 6,362          |
| 2000                       |     |     |     | 18           | 5            | 74           | 1,356         | 3,299          | 4,974          | 727           | 63           |     | 10,516         |
| 2001                       |     |     |     | 49           | 23           | 185          | 3,094         | 9,380          | 12,129         | 3,461         | 292          |     | 28,613         |
| 2002                       |     |     |     | 53           | 20           | 85           | 2,327         | 6,374          | 5,144          | 1,200         | 79           |     | 15,282         |
| 2003                       |     |     |     | 17           | 17           | 51           | 1,664         | 4,233          | 9,339          | 2,061         | 127          |     | 17,509         |
| 2004                       |     |     |     | 50           | 108          | 363          | 2,518         | 2,983          | 11,794         | 1,658         | 73           |     | 19,547         |
| 2005                       |     |     |     | 30           | 29           | 135          | 1,423         | 3,362          | 5,925          | 1,422         | 83           |     | 12,409         |
| 2006                       |     |     |     | 44           | 19           | 23           | 693           | 2,332          | 5,175          | 1,032         | 64           |     | 9,382          |
| 2007                       |     |     |     | 27           | 25           | 33           | 830           | 4,378          | 5,943          | 1,888         | 172          |     | 13,296         |
| 2008                       |     |     |     | 163          | 109          | 292          | 2,749         | 5,868          | 5,819          | 1,206         | 82           |     | 16,288         |
| 2009                       |     |     |     | 62           | 41           | 47           | 1,502         | 10,229         | 22,154         | 3,565         | 200          |     | 37,800         |
| 2010                       |     |     |     | 103          | 21           | 100          | 3,994         | 8,946          | 7,472          | 1,441         | 102          |     | 22,179         |
| 2011                       |     |     |     | 42           | 32           | 11           | 849           | 8,146          | 8,153          | 1,711         | 80           |     | 19,024         |
| 2012                       |     |     |     | 98           | 75           | 108          | 1,410         | 6,186          | 5,959          | 1,464         | 154          |     | 15,454         |
| <b>Total</b>               |     |     |     | <b>2,087</b> | <b>2,297</b> | <b>3,755</b> | <b>45,864</b> | <b>139,504</b> | <b>208,836</b> | <b>58,871</b> | <b>5,636</b> |     | <b>466,850</b> |
| <b>10-Year<br/>Average</b> |     |     |     | <b>69</b>    | <b>51</b>    | <b>124</b>   | <b>1,774</b>  | <b>5,826</b>   | <b>8,710</b>   | <b>1,710</b>  | <b>112</b>   |     | <b>18,375</b>  |

## ROCKY REACH DAM

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### **Fish Counting Schedule**

|                 |  |
|-----------------|--|
| Jan 1 - Apr 13  | No video recording or fish counting during this period.  |
| Apr 14 - Nov 15 | Video recording 24 hours per day/7 days a week.<br>Video counting daily from 0700 to 1530 hours Pacific Standard Time. |
| Nov 16 - Dec 31 | No video recording or fish counting during this period.  |

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### **Fish Ladder Operating Schedule**

|                 |   |
|-----------------|---|
| Jan 1 - Feb 28  | Fishway out of service for 2011/2012 annual maintenance period. |
| Feb 29 - Dec 16 | Fishway in service.   |
| Dec 17 - Dec 31 | Fishway out of service for 2012/2013 annual maintenance period. |

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### **Fish Facility Activities**

The adult fish PIT tag system was operational throughout the 2012 adult fish migration. PIT tag detections from the fishway were uploaded daily to PTAGIS.

The juvenile fish bypass system was operated for fish passage from 1 April to 31 August 2012. Juvenile fish sampling occurred over the same time frame. The annual bypass (biological) evaluation included the collection of species composition and fish condition data.

TABLE 152

MONTHLY TOTALS OF SALMONIDS AND LAMPREY COUNTED OVER ROCKY REACH DAM  
2012

| SPECIES           | JAN | FEB | MAR | APR        | MAY          | JUN          | JUL            | AUG           | SEP           | OCT          | NOV          | DEC | TOTAL          |
|-------------------|-----|-----|-----|------------|--------------|--------------|----------------|---------------|---------------|--------------|--------------|-----|----------------|
| CHINOOK*          |     |     |     | 2          | 5,143        | 2,044        | 37,061         | 13,423        | 4,286         | 5,075        | 1,025        |     | 68,059         |
| STEELHEAD         |     |     |     | 525        | 203          | 104          | 908            | 4,731         | 4,846         | 1,554        | 229          |     | 13,100         |
| SOCKEYE           |     |     |     |            |              | 1,594        | 357,766        | 3,893         | 48            | 12           | 1            |     | 363,314        |
| COHO              |     |     |     |            |              |              |                |               | 1,252         | 1,146        | 42           |     | 2,440          |
| PINK              |     |     |     |            |              |              |                |               |               |              |              |     | 0              |
| <b>TOTAL</b>      |     |     |     | <b>527</b> | <b>5,346</b> | <b>3,742</b> | <b>395,735</b> | <b>22,047</b> | <b>10,432</b> | <b>7,787</b> | <b>1,297</b> |     | <b>446,913</b> |
| <b>LAMPREY</b>    |     |     |     |            |              |              | <b>5</b>       | <b>251</b>    | <b>496</b>    | <b>53</b>    |              |     | <b>805</b>     |
| <b>BULL TROUT</b> |     |     |     | <b>1</b>   | <b>40</b>    | <b>91</b>    | <b>25</b>      | <b>14</b>     | <b>1</b>      | <b>16</b>    | <b>31</b>    |     | <b>219</b>     |

TABLE 153

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

APRIL 2012

| DATE         | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD  | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS   | SPILL KCFS  | DEG F       |
|--------------|---------------|--------|------|--------------|------------|-----------|---------|------------|----------------|------------|---------|--------------|-------------|-------------|
|              | SPRING        | SUMMER | FALL |              |            |           |         |            |                |            |         |              |             |             |
| Apr 1        |               |        |      |              |            |           |         |            |                |            |         | 118.9        | 0.0         |             |
| Apr 2        |               |        |      |              |            |           |         |            |                |            |         | 144.7        | 1.1         |             |
| Apr 3        |               |        |      |              |            |           |         |            |                |            |         | 161.5        | 6.7         |             |
| Apr 4        |               |        |      |              |            |           |         |            |                |            |         | 151.1        | 0.0         |             |
| Apr 5        |               |        |      |              |            |           |         |            |                |            |         | 161.5        | 1.6         |             |
| Apr 6        |               |        |      |              |            |           |         |            |                |            |         | 166.5        | 10.0        |             |
| Apr 7        |               |        |      |              |            |           |         |            |                |            |         | 162.4        | 11.5        |             |
| Apr 8        |               |        |      |              |            |           |         |            |                |            |         | 152.0        | 11.8        |             |
| Apr 9        |               |        |      |              |            |           |         |            |                |            |         | 173.3        | 35.3        |             |
| Apr 10       |               |        |      |              |            |           |         |            |                |            |         | 172.9        | 2.1         |             |
| Apr 11       |               |        |      |              |            |           |         |            |                |            |         | 159.2        | 5.8         |             |
| Apr 12       |               |        |      |              |            |           |         |            |                |            |         | 167.8        | 14.4        |             |
| Apr 13       |               |        |      |              |            |           |         |            |                |            |         | 167.6        | 17.6        |             |
| Apr 14       | 0             |        |      |              |            |           |         | 34         | 33             | 0          |         | 143.3        | 10.0        | 42.3        |
| Apr 15       | 0             |        |      |              |            |           |         | 52         | 43             | 0          |         | 166.0        | 16.5        | 42.1        |
| Apr 16       | 0             |        |      |              |            |           |         | 30         | 26             | 0          |         | 163.6        | 11.3        | 42.4        |
| Apr 17       | 0             |        |      |              |            |           |         | 24         | 21             | 0          |         | 177.9        | 27.0        | 40.6        |
| Apr 18       | 0             |        |      |              |            |           |         | 19         | 15             | 0          |         | 168.3        | 22.5        | 42.8        |
| Apr 19       | 0             |        |      |              |            |           |         | 8          | 7              | 0          |         | 180.5        | 28.4        | 42.8        |
| Apr 20       | 0             |        |      |              |            |           |         | 24         | 17             | 0          |         | 186.7        | 59.9        | 42.8        |
| Apr 21       | 0             |        |      |              |            |           |         | 23         | 22             | 0          |         | 177.9        | 22.6        | 43.3        |
| Apr 22       | 0             |        |      |              |            |           |         | 45         | 36             | 0          |         | 188.6        | 31.5        | 44.1        |
| Apr 23       | 0             |        |      |              |            |           |         | 39         | 30             | 0          |         | 191.7        | 48.5        | 44.4        |
| Apr 24       | 0             |        |      |              |            |           |         | 32         | 31             | 0          |         | 204.5        | 52.0        | 44.6        |
| Apr 25       | 0             |        |      |              |            |           |         | 48         | 36             | 1          |         | 178.8        | 42.4        | 45.0        |
| Apr 26       | 0             |        |      |              |            |           |         | 43         | 34             | 0          |         | 155.1        | 21.0        | 45.3        |
| Apr 27       | 1             |        |      |              |            |           |         | 24         | 19             | 0          |         | 176.8        | 25.4        | 45.7        |
| Apr 28       | 0             |        |      |              |            |           |         | 31         | 30             | 0          |         | 152.7        | 18.0        | 45.9        |
| Apr 29       | 0             |        |      |              |            |           |         | 27         | 23             | 0          |         | 192.9        | 17.5        | 46.0        |
| Apr 30       | 1             |        |      |              |            |           |         | 22         | 16             | 0          |         | 231.9        | 52.4        | 46.2        |
| <b>TOTAL</b> | <b>2</b>      |        |      |              |            |           |         | <b>525</b> | <b>439</b>     | <b>1</b>   |         |              |             |             |
| <b>AVG.</b>  | <b>0</b>      |        |      |              |            |           |         | <b>31</b>  | <b>26</b>      | <b>0</b>   |         | <b>169.9</b> | <b>20.8</b> | <b>43.9</b> |



TABLE 154

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT |                      |                     | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD        | WILD STEELHEAD        | BULL TROUT        | LAMPREY | DISCH KCFS   | SPILL KCFS  | DEG F       |
|-----------------------|---------------|----------------------|---------------------|--------------|------------|-----------|---------|------------------|-----------------------|-------------------|---------|--------------|-------------|-------------|
|                       | SPRING        | SUMMER               | FALL                |              |            |           |         |                  |                       |                   |         |              |             |             |
| May 1                 | 0             |                      |                     | 0            |            |           |         | 14               | 14                    | 0                 |         | 229.6        | 70.6        | 46.6        |
| May 2                 | 0             |                      |                     | 0            |            |           |         | 22               | 18                    | 0                 |         | 245.5        | 63.3        | 46.8        |
| May 3                 | 1             |                      |                     | 0            |            |           |         | 15               | 15                    | 0                 |         | 244.4        | 54.9        | 46.8        |
| May 4                 | 1             |                      |                     | 0            |            |           |         | 16               | 15                    | 0                 |         | 237.4        | 73.7        | 46.6        |
| May 5                 | 1             |                      |                     | 0            |            |           |         | 10               | 9                     | 0                 |         | 221.6        | 68.0        | 47.1        |
| May 6                 | 1             |                      |                     | 0            |            |           |         | 10               | 7                     | 0                 |         | 227.1        | 55.6        | 47.5        |
| May 7                 | 2             |                      |                     | 0            |            |           |         | 12               | 11                    | 0                 |         | 217.6        | 48.8        | 48.4        |
| May 8                 | 5             |                      |                     | 0            |            |           |         | 7                | 7                     | 1                 |         | 220.0        | 48.3        | 48.6        |
| May 9                 | 10            |                      |                     | 0            |            |           |         | 8                | 8                     | 0                 |         | 232.0        | 67.7        | 49.3        |
| May 10                | 13            |                      |                     | 0            |            |           |         | 6                | 3                     | 0                 |         | 239.9        | 67.3        | 49.5        |
| May 11                | 32            |                      |                     | 0            |            |           |         | 8                | 8                     | 1                 |         | 213.3        | 54.2        | 49.5        |
| May 12                | 27            |                      |                     | 0            |            |           |         | 6                | 5                     | 0                 |         | 186.5        | 25.9        | 49.6        |
| May 13                | 42            |                      |                     | 0            |            |           |         | 6                | 6                     | 0                 |         | 179.8        | 6.7         | 49.8        |
| May 14                | 70            |                      |                     | 1            |            |           |         | 5                | 4                     | 0                 |         | 200.3        | 7.9         | 50.0        |
| May 15                | 46            |                      |                     | 0            |            |           |         | 7                | 6                     | 0                 |         | 204.9        | 61.5        | 50.4        |
| May 16                | 89            |                      |                     | 2            |            |           |         | 5                | 4                     | 2                 |         | 182.1        | 15.6        | 50.9        |
| May 17                | 95            |                      |                     | 1            |            |           |         | 7                | 6                     | 0                 |         | 207.7        | 30.6        | 50.7        |
| May 18                | 130           |                      |                     | 1            |            |           |         | 7                | 5                     | 0                 |         | 213.0        | 40.2        | 50.4        |
| May 19                | 232           |                      |                     | 8            |            |           |         | 0                | 0                     | 0                 |         | 227.8        | 29.8        | 50.4        |
| May 20                | 307           |                      |                     | 7            |            |           |         | 4                | 4                     | 0                 |         | 226.5        | 30.2        | 50.0        |
| May 21                | 473           |                      |                     | 16           |            |           |         | 2                | 1                     | 0                 |         | 221.9        | 38.7        | 49.8        |
| May 22                | 434           |                      |                     | 15           |            |           |         | 1                | 0                     | 0                 |         | 208.5        | 43.0        | 49.8        |
| May 23                | 371           |                      |                     | 6            |            |           |         | 2                | 1                     | 3                 |         | 195.0        | 22.2        | 50.0        |
| May 24                | 405           |                      |                     | 13           |            |           |         | 6                | 5                     | 1                 |         | 220.2        | 31.7        | 50.5        |
| May 25                | 291           |                      |                     | 8            |            |           |         | 4                | 4                     | 3                 |         | 216.1        | 37.6        | 50.9        |
| May 26                | 306           |                      |                     | 11           |            |           |         | 0                | 0                     | 2                 |         | 226.7        | 51.0        | 50.9        |
| May 27                | 448           |                      |                     | 48           |            |           |         | 1                | 1                     | 4                 |         | 185.2        | 22.1        | 50.9        |
| May 28                | 325           |                      |                     | 23           |            |           |         | 5                | 3                     | 6                 |         | 180.9        | 15.8        | 51.8        |
| May 29                | 244           |                      |                     | 29           |            |           |         | 2                | 1                     | 6                 |         | 197.7        | 20.0        | 52.5        |
| May 30                | 274           |                      |                     | 55           |            |           |         | 2                | 1                     | 6                 |         | 191.8        | 19.7        | 52.5        |
| May 31                | 206           |                      |                     | 18           |            |           |         | 3                | 1                     | 5                 |         | 188.3        | 16.0        | 52.7        |
| <b>TOTAL</b>          | <b>4,881</b>  |                      |                     | <b>262</b>   |            |           |         | <b>203</b>       | <b>173</b>            | <b>40</b>         |         |              |             |             |
| <b>AVG.</b>           | <b>157</b>    |                      |                     | <b>8</b>     |            |           |         | <b>7</b>         | <b>6</b>              | <b>1</b>          |         | <b>212.6</b> | <b>40.0</b> | <b>49.7</b> |
| <b>RUN YEAR</b>       |               |                      |                     |              |            |           |         |                  |                       |                   |         |              |             |             |
| <b>TOTALS TO DATE</b> |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |            |           |         | <b>STEELHEAD</b> | <b>WILD STEELHEAD</b> | <b>BULL TROUT</b> |         |              |             |             |
| <b>SPRING</b>         |               | 4,883                | 262                 |              |            |           |         | 728              | 612                   | 41                |         |              |             |             |

TABLE 155

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |            |      | CHINOOK JACK | COHO  |      | SOCKEYE      | STEELHEAD  | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS   | SPILL KCFS  | DEG F       |
|--------------|---------------|------------|------|--------------|-------|------|--------------|------------|----------------|------------|---------|--------------|-------------|-------------|
|              | SPRING        | SUMMER     | FALL |              | ADULT | JACK |              |            |                |            |         |              |             |             |
| Jun 1        | 186           |            |      | 21           |       |      | 0            | 1          | 1              | 3          |         | 185.4        | 13.1        | 53.1        |
| Jun 2        | 91            |            |      | 7            |       |      | 0            | 5          | 4              | 3          |         | 146.9        | 14.4        | 53.4        |
| Jun 3        | 100           |            |      | 6            |       |      | 1            | 6          | 6              | 6          |         | 154.4        | 17.1        | 53.6        |
| Jun 4        | 120           |            |      | 21           |       |      | 0            | 4          | 3              | 8          |         | 169.7        | 17.8        | 54.0        |
| Jun 5        | 88            |            |      | 38           |       |      | 0            | 4          | 4              | 5          |         | 130.8        | 15.3        | 53.6        |
| Jun 6        | 50            |            |      | 10           |       |      | 0            | 0          | 0              | 2          |         | 210.7        | 46.3        | 53.2        |
| Jun 7        | 50            |            |      | 8            |       |      | 0            | 0          | 8              | 5          |         | 232.3        | 68.0        | 52.7        |
| Jun 8        | 60            |            |      | 17           |       |      | 0            | 2          | 1              | 3          |         | 239.1        | 81.1        | 52.2        |
| Jun 9        | 54            |            |      | 7            |       |      | 0            | 2          | 1              | 5          |         | 226.1        | 61.0        | 52.2        |
| Jun 10       | 60            |            |      | 5            |       |      | 0            | 4          | 1              | 4          |         | 223.6        | 42.8        | 52.7        |
| Jun 11       | 21            |            |      | 7            |       |      | 1            | 4          | 3              | 6          |         | 228.5        | 45.3        | 53.4        |
| Jun 12       | 65            |            |      | 9            |       |      | 0            | 3          | 1              | 6          |         | 230.7        | 65.7        | 54.1        |
| Jun 13       | 71            |            |      | 3            |       |      | 1            | 2          | 1              | 6          |         | 226.8        | 55.7        | 53.4        |
| Jun 14       | 31            |            |      | 2            |       |      | 0            | 5          | 5              | 4          |         | 219.1        | 42.6        | 54.3        |
| Jun 15       | 32            |            |      | 0            |       |      | 0            | 2          | 2              | 5          |         | 227.3        | 46.6        | 54.7        |
| Jun 16       | 71            |            |      | 6            |       |      | 3            | 4          | 2              | 6          |         | 225.7        | 32.7        | 54.9        |
| Jun 17       | 84            |            |      | 3            |       |      | 5            | 11         | 6              | 2          |         | 222.2        | 39.6        | 54.9        |
| Jun 18       | 42            |            |      | 5            |       |      | 11           | 3          | 3              | 0          |         | 220.7        | 47.1        | 54.9        |
| Jun 19       | 77            |            |      | 9            |       |      | 10           | 7          | 4              | 2          |         | 216.4        | 31.4        | 54.9        |
| Jun 20       | 57            |            |      | 4            |       |      | 27           | 1          | 1              | 0          |         | 262.4        | 79.0        | 55.0        |
| Jun 21       | 76            |            |      | 1            |       |      | 48           | 5          | 3              | 1          |         | 257.2        | 73.0        | 54.7        |
| Jun 22       | 34            |            |      | 5            |       |      | 80           | 2          | 2              | 3          |         | 267.9        | 91.2        | 54.7        |
| Jun 23       | 148           |            |      | 4            |       |      | 133          | 3          | 2              | 1          |         | 226.3        | 52.9        | 55.2        |
| Jun 24       |               | 36         |      | 6            |       |      | 92           | 6          | 4              | 0          |         | 269.6        | 83.6        | 55.4        |
| Jun 25       |               | 17         |      | 0            |       |      | 81           | 2          | 1              | 2          |         | 310.4        | 142.0       | 54.9        |
| Jun 26       |               | 8          |      | 0            |       |      | 62           | 2          | 1              | 1          |         | 308.7        | 166.0       | 54.5        |
| Jun 27       |               | 7          |      | 2            |       |      | 82           | 1          | 1              | 0          |         | 298.5        | 140.3       | 53.6        |
| Jun 28       |               | 10         |      | 1            |       |      | 158          | 3          | 0              | 1          |         | 311.7        | 163.2       | 54.0        |
| Jun 29       |               | 39         |      | 2            |       |      | 405          | 3          | 1              | 1          |         | 300.2        | 143.0       | 54.5        |
| Jun 30       |               | 47         |      | 3            |       |      | 394          | 7          | 3              | 0          |         | 294.6        | 154.5       | 55.0        |
| <b>TOTAL</b> | <b>1,668</b>  | <b>164</b> |      | <b>212</b>   |       |      | <b>1,594</b> | <b>104</b> | <b>67</b>      | <b>91</b>  |         |              |             |             |
| <b>AVG.</b>  | <b>73</b>     | <b>23</b>  |      | <b>7</b>     |       |      | <b>53</b>    | <b>3</b>   | <b>2</b>       | <b>3</b>   |         | <b>234.8</b> | <b>69.1</b> | <b>54.1</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE | 6,551         | 460          |
| SPRING         | 164           | 14           |
| SUMMER         | 164           | 14           |
| <b>TOTALS</b>  | <b>6,715</b>  | <b>474</b>   |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT |
|---------|-----------|----------------|------------|
| 1,594   | 832       | 679            | 132        |

TABLE 156

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

JULY 2012

| DATE          | CHINOOK ADULT |               |      | CHINOOK JACK | COHO  |      | SOCKEYE        | STEELHEAD  | WILD STEELHEAD | BULL TROUT | LAMPREY  | DISCH KCFS | SPILL KCFS | DEG F |
|---------------|---------------|---------------|------|--------------|-------|------|----------------|------------|----------------|------------|----------|------------|------------|-------|
|               | SPRING        | SUMMER        | FALL |              | ADULT | JACK |                |            |                |            |          |            |            |       |
| Jul 1         |               | 174           |      | 4            |       |      | 855            | 3          | 1              | 5          | 0        | 280.3      | 139.3      | 55.4  |
| Jul 2         |               | 226           |      | 6            |       |      | 1,523          | 7          | 7              | 0          | 0        | 280.0      | 149.7      | 55.4  |
| Jul 3         |               | 283           |      | 8            |       |      | 1,768          | 7          | 5              | 1          | 0        | 285.7      | 164.4      | 53.1  |
| Jul 4         |               | 498           |      | 12           |       |      | 2,030          | 2          | 0              | 5          | 0        | 279.4      | 128.5      | 55.6  |
| Jul 5         |               | 954           |      | 9            |       |      | 3,421          | 7          | 4              | 1          | 0        | 286.0      | 139.1      | 56.3  |
| Jul 6         |               | 1,062         |      | 30           |       |      | 7,832          | 9          | 3              | 1          | 0        | 269.3      | 125.9      | 55.6  |
| Jul 7         |               | 1,041         |      | 18           |       |      | 15,673         | 17         | 9              | 1          | 0        | 254.2      | 124.2      | 56.3  |
| Jul 8         |               | 1,517         |      | 25           |       |      | 27,913         | 16         | 10             | 0          | 0        | 255.3      | 121.2      | 57.4  |
| Jul 9         |               | 1,574         |      | 140          |       |      | 25,526         | 15         | 4              | 0          | 0        | 264.1      | 118.2      | 58.8  |
| Jul 10        |               | 1,413         |      | 68           |       |      | 24,175         | 11         | 6              | 4          | 0        | 268.2      | 119.6      | 57.9  |
| Jul 11        |               | 1,396         |      | 24           |       |      | 29,266         | 16         | 9              | 1          | 0        | 256.7      | 119.9      | 58.3  |
| Jul 12        |               | 1,337         |      | 35           |       |      | 31,714         | 18         | 7              | 0          | 0        | 255.1      | 118.4      | 58.1  |
| Jul 13        |               | 1,250         |      | 40           |       |      | 25,934         | 17         | 10             | 0          | 0        | 265.8      | 118.6      | 58.5  |
| Jul 14        |               | 784           |      | 23           |       |      | 19,489         | 19         | 5              | 0          | 0        | 268.4      | 110.6      | 58.8  |
| Jul 15        |               | 862           |      | 22           |       |      | 19,866         | 15         | 9              | 1          | 0        | 265.0      | 112.0      | 59.0  |
| Jul 16        |               | 2,041         |      | 53           |       |      | 12,896         | 24         | 12             | 1          | 0        | 265.2      | 100.2      | 58.8  |
| Jul 17        |               | 1,011         |      | 34           |       |      | 13,808         | 25         | 7              | 0          | 0        | 252.3      | 100.2      | 59.4  |
| Jul 18        |               | 1,676         |      | 53           |       |      | 17,796         | 27         | 14             | 1          | 1        | 242.7      | 89.2       | 57.6  |
| Jul 19        |               | 1,086         |      | 96           |       |      | 15,875         | 33         | 12             | 1          | 0        | 260.3      | 95.4       | 59.5  |
| Jul 20        |               | 768           |      | 17           |       |      | 8,205          | 39         | 16             | 0          | 0        | 265.9      | 102.8      | 61.2  |
| Jul 21        |               | 1,037         |      | 33           |       |      | 8,021          | 35         | 13             | 0          | 0        | 264.6      | 97.6       | 59.5  |
| Jul 22        |               | 1,158         |      | 72           |       |      | 10,667         | 53         | 27             | 0          | 0        | 259.3      | 96.9       | 61.2  |
| Jul 23        |               | 1,254         |      | 35           |       |      | 7,414          | 41         | 16             | 1          | 0        | 257.1      | 96.1       | 60.1  |
| Jul 24        |               | 1,085         |      | 26           |       |      | 6,214          | 62         | 18             | 0          | 0        | 254.8      | 86.3       | 60.3  |
| Jul 25        |               | 1,601         |      | 74           |       |      | 5,672          | 43         | 16             | 0          | 0        | 248.0      | 90.2       | 61.2  |
| Jul 26        |               | 1,205         |      | 47           |       |      | 4,286          | 55         | 29             | 0          | 0        | 227.7      | 66.1       | 59.7  |
| Jul 27        |               | 1,103         |      | 48           |       |      | 3,217          | 44         | 25             | 0          | 1        | 224.0      | 69.2       | 60.1  |
| Jul 28        |               | 1,218         |      | 60           |       |      | 2,474          | 68         | 35             | 0          | 2        | 215.1      | 71.4       | 60.4  |
| Jul 29        |               | 1,478         |      | 71           |       |      | 1,499          | 48         | 22             | 1          | 0        | 200.4      | 62.2       | 62.4  |
| Jul 30        |               | 2,519         |      | 147          |       |      | 1,618          | 42         | 25             | 0          | 0        | 210.3      | 72.6       | 62.2  |
| Jul 31        |               | 1,075         |      | 45           |       |      | 1,119          | 90         | 52             | 0          | 1        | 199.5      | 44.3       | 63.1  |
| <b>TOTALS</b> |               | <b>35,686</b> |      | <b>1,375</b> |       |      | <b>357,766</b> | <b>908</b> | <b>428</b>     | <b>25</b>  | <b>5</b> |            |            |       |

|      |      |    |        |    |    |   |   |       |       |      |
|------|------|----|--------|----|----|---|---|-------|-------|------|
| AVG. | 1151 | 44 | 11,541 | 29 | 14 | 1 | 0 | 254.2 | 104.8 | 58.7 |
|------|------|----|--------|----|----|---|---|-------|-------|------|

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 6,551         | 460          |
| SUMMER         | 35,850        | 1,389        |
| <b>TOTAL</b>   | <b>42,401</b> | <b>1,849</b> |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|---------|-----------|----------------|------------|---------|
| 359,360 | 1,740     | 1,107          | 157        | 5       |

TABLE 157

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |               |      | CHINOOK JACK | COHO  |      | SOCKEYE      | STEELHEAD    | WILD STEELHEAD | BULL TROUT | LAMPREY    | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|---------------|------|--------------|-------|------|--------------|--------------|----------------|------------|------------|------------|------------|-------|
|              | SPRING        | SUMMER        | FALL |              | ADULT | JACK |              |              |                |            |            |            |            |       |
| Aug 1        |               | 717           |      | 58           |       |      | 876          | 75           | 33             | 0          | 0          | 199.0      | 32.6       | 65.3  |
| Aug 2        |               | 827           |      | 74           |       |      | 790          | 84           | 37             | 1          | 0          | 190.2      | 27.5       | 62.4  |
| Aug 3        |               | 1,067         |      | 116          |       |      | 451          | 84           | 45             | 0          | 0          | 178.8      | 18.9       | 63.0  |
| Aug 4        |               | 457           |      | 20           |       |      | 204          | 60           | 30             | 0          | 0          | 184.3      | 16.5       | 63.1  |
| Aug 5        |               | 604           |      | 67           |       |      | 243          | 84           | 30             | 0          | 3          | 184.3      | 16.3       | 62.4  |
| Aug 6        |               | 715           |      | 49           |       |      | 286          | 124          | 49             | 0          | 1          | 179.4      | 16.8       | 62.4  |
| Aug 7        |               | 695           |      | 76           |       |      | 167          | 120          | 48             | 0          | 0          | 179.2      | 16.9       | 61.5  |
| Aug 8        |               | 513           |      | 78           |       |      | 168          | 134          | 61             | 0          | 1          | 179.3      | 16.4       | 61.9  |
| Aug 9        |               | 437           |      | 48           |       |      | 132          | 169          | 64             | 2          | 3          | 166.9      | 22.3       | 63.3  |
| Aug 10       |               | 433           |      | 85           |       |      | 101          | 171          | 71             | 2          | 4          | 180.6      | 4.7        | 64.2  |
| Aug 11       |               | 343           |      | 49           |       |      | 87           | 142          | 64             | 0          | 0          | 161.6      | 0.0        | 63.0  |
| Aug 12       |               | 530           |      | 64           |       |      | 77           | 167          | 90             | 0          | 4          | 170.5      | 0.0        | 63.3  |
| Aug 13       |               | 310           |      | 43           |       |      | 28           | 189          | 59             | 0          | 2          | 163.2      | 0.0        | 63.7  |
| Aug 14       |               | 356           |      | 76           |       |      | 21           | 163          | 35             | 0          | 5          | 158.3      | 0.0        | 64.2  |
| Aug 15       |               | 299           |      | 88           |       |      | 18           | 136          | 61             | 0          | 7          | 141.1      | 0.0        | 65.1  |
| Aug 16       |               | 245           |      | 152          |       |      | 39           | 149          | 59             | 2          | 7          | 157.7      | 0.7        | 65.1  |
| Aug 17       |               | 367           |      | 65           |       |      | 51           | 188          | 79             | 1          | 16         | 155.2      | 0.0        | 66.2  |
| Aug 18       |               | 195           |      | 78           |       |      | 14           | 155          | 35             | 1          | 5          | 150.0      | 0.0        | 63.0  |
| Aug 19       |               | 253           |      | 86           |       |      | 27           | 212          | 96             | 1          | 13         | 166.1      | 12.3       | 62.8  |
| Aug 20       |               | 339           |      | 99           |       |      | 13           | 201          | 79             | 1          | 8          | 147.9      | 2.5        | 64.0  |
| Aug 21       |               | 173           |      | 62           |       |      | 20           | 202          | 37             | 1          | 9          | 152.0      | 13.5       | 63.9  |
| Aug 22       |               | 251           |      | 61           |       |      | 5            | 167          | 69             | 0          | 15         | 150.7      | 8.8        | 64.0  |
| Aug 23       |               | 187           |      | 116          |       |      | 24           | 215          | 102            | 0          | 17         | 148.9      | 8.7        | 64.0  |
| Aug 24       |               | 191           |      | 53           |       |      | 14           | 189          | 86             | 1          | 13         | 139.4      | 0.7        | 63.9  |
| Aug 25       |               | 128           |      | 54           |       |      | 12           | 192          | 93             | 0          | 21         | 133.1      | 0.0        | 63.9  |
| Aug 26       |               | 161           |      | 48           |       |      | 4            | 234          | 91             | 0          | 18         | 126.5      | 0.0        | 64.6  |
| Aug 27       |               | 101           |      | 52           |       |      | 2            | 129          | 59             | 0          | 16         | 117.2      | 0.0        | 64.9  |
| Aug 28       |               | 108           |      | 60           |       |      | 2            | 172          | 72             | 0          | 13         | 133.0      | 0.0        | 64.2  |
| Aug 29       |               | 94            |      | 80           |       |      | 9            | 129          | 68             | 1          | 10         | 133.7      | 0.0        | 64.6  |
| Aug 30       |               | 99            |      | 21           |       |      | 3            | 184          | 73             | 0          | 17         | 143.8      | 0.0        | 63.9  |
| Aug 31       |               | 80            |      | 70           |       |      | 5            | 111          | 37             | 0          | 23         | 134.4      | 4.3        | 63.7  |
| <b>TOTAL</b> |               | <b>11,275</b> |      | <b>2,148</b> |       |      | <b>3,893</b> | <b>4,731</b> | <b>1,912</b>   | <b>14</b>  | <b>251</b> |            |            |       |

|      |     |    |     |     |    |   |   |       |     |      |
|------|-----|----|-----|-----|----|---|---|-------|-----|------|
| AVG. | 364 | 69 | 126 | 153 | 62 | 0 | 8 | 158.3 | 7.7 | 63.7 |
|------|-----|----|-----|-----|----|---|---|-------|-----|------|

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 6,551         | 460          |
| SUMMER         | 47,125        | 3,537        |
| <b>TOTALS</b>  | <b>53,676</b> | <b>3,997</b> |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|---------|-----------|----------------|------------|---------|
| 363,253 | 6,471     | 3,019          | 171        | 256     |

TABLE 158

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        |       | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|--------|-------|--------------|------------|-----------|---------|-----------|----------------|------------|---------|------------|------------|-------|
|              | SPRING        | SUMMER | FALL  |              |            |           |         |           |                |            |         |            |            |       |
| Sep 1        |               | 42     |       | 44           | 0          | 0         | 5       | 98        | 31             | 0          | 7       | 84.3       | 0.0        | 63.7  |
| Sep 2        |               |        | 45    | 38           | 0          | 0         | 1       | 75        | 18             | 0          | 9       | 65.3       | 0.0        | 64.0  |
| Sep 3        |               |        | 81    | 22           | 0          | 0         | 4       | 138       | 53             | 0          | 15      | 86.6       | 0.7        | 64.2  |
| Sep 4        |               |        | 118   | 51           | 0          | 0         | 5       | 126       | 49             | 0          | 12      | 119.1      | 0.8        | 64.0  |
| Sep 5        |               |        | 85    | 43           | 0          | 0         | 4       | 133       | 29             | 0          | 12      | 102.3      | 0.0        | 64.4  |
| Sep 6        |               |        | 70    | 52           | 0          | 0         | 5       | 106       | 43             | 0          | 11      | 84.4       | 0.0        | 64.9  |
| Sep 7        |               |        | 70    | 29           | 0          | 0         | 6       | 238       | 99             | 0          | 33      | 96.1       | 0.0        | 64.6  |
| Sep 8        |               |        | 41    | 69           | 1          | 0         | 3       | 122       | 63             | 0          | 16      | 83.0       | 0.0        | 64.4  |
| Sep 9        |               |        | 66    | 32           | 3          | 1         | 0       | 130       | 23             | 0          | 34      | 52.9       | 0.0        | 64.2  |
| Sep 10       |               |        | 98    | 42           | 2          | 0         | 1       | 143       | 51             | 0          | 27      | 75.0       | 0.0        | 64.4  |
| Sep 11       |               |        | 131   | 73           | 12         | 1         | 2       | 214       | 82             | 0          | 27      | 90.1       | 0.0        | 64.0  |
| Sep 12       |               |        | 147   | 34           | 22         | 0         | 1       | 205       | 26             | 0          | 12      | 75.2       | 0.0        | 63.5  |
| Sep 13       |               |        | 138   | 41           | 13         | 2         | 0       | 284       | 115            | 0          | 23      | 90.7       | 0.9        | 63.7  |
| Sep 14       |               |        | 37    | 58           | 4          | 0         | 0       | 143       | 53             | 0          | 9       | 93.4       | 0.0        | 63.5  |
| Sep 15       |               |        | 93    | 50           | 31         | 2         | 6       | 196       | 77             | 0          | 23      | 74.8       | 0.0        | 63.5  |
| Sep 16       |               |        | 18    | 16           | 46         | 1         | 1       | 115       | 29             | 0          | 33      | 57.3       | 0.0        | 63.9  |
| Sep 17       |               |        | 77    | 49           | 41         | 0         | 0       | 209       | 70             | 0          | 31      | 86.2       | 0.0        | 63.9  |
| Sep 18       |               |        | 71    | 6            | 65         | 1         | 0       | 244       | 68             | 0          | 10      | 88.6       | 0.0        | 63.3  |
| Sep 19       |               |        | 86    | 148          | 73         | 0         | 0       | 172       | 85             | 0          | 7       | 80.3       | 0.2        | 63.5  |
| Sep 20       |               |        | 62    | 48           | 68         | 0         | 0       | 172       | 53             | 0          | 10      | 94.5       | 0.0        | 63.5  |
| Sep 21       |               |        | 104   | 101          | 68         | 0         | 0       | 235       | 92             | 0          | 4       | 86.8       | 0.0        | 63.7  |
| Sep 22       |               |        | 30    | 7            | 143        | 4         | 0       | 188       | 35             | 0          | 5       | 66.8       | 0.0        | 63.5  |
| Sep 23       |               |        | 105   | 93           | 106        | 3         | 0       | 159       | 59             | 0          | 33      | 63.1       | 0.0        | 63.7  |
| Sep 24       |               |        | 80    | 60           | 74         | 0         | 2       | 173       | 54             | 0          | 10      | 87.5       | 0.0        | 63.5  |
| Sep 25       |               |        | 75    | 81           | 72         | 1         | 0       | 120       | 51             | 0          | 16      | 75.9       | 0.0        | 63.7  |
| Sep 26       |               |        | 94    | 69           | 86         | 1         | 1       | 141       | 58             | 0          | 11      | 76.9       | 0.0        | 64.2  |
| Sep 27       |               |        | 144   | 78           | 79         | 0         | 0       | 175       | 56             | 0          | 13      | 81.4       | 0.0        | 63.7  |
| Sep 28       |               |        | 113   | 84           | 88         | 0         | 1       | 115       | 39             | 1          | 14      | 78.2       | 0.0        | 63.0  |
| Sep 29       |               |        | 94    | 98           | 72         | 0         | 0       | 147       | 57             | 0          | 13      | 50.9       | 0.0        | 63.5  |
| Sep 30       |               |        | 188   | 67           | 63         | 3         | 0       | 130       | 47             | 0          | 16      | 51.8       | 0.0        | 63.7  |
| <b>TOTAL</b> |               | 42     | 2,561 | 1,683        | 1,232      | 20        | 48      | 4,846     | 1,665          | 1          | 496     |            |            |       |
| <b>AVG.</b>  |               |        | 88    | 56           | 41         | 1         | 2       | 162       | 56             | 0          | 17      | 80.0       | 0.1        | 63.8  |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 6,551         | 460          |
| SUMMER         | 47,167        | 3,581        |
| FALL           | 2,561         | 1,639        |
| <b>TOTALS</b>  | <b>56,279</b> | <b>5,680</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 1,232      | 20        | 363,301 | 11,317    | 4,684          | 172        | 752     |

TABLE 159

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

OCTOBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK      | COHO         | COHO         | WILD      |           | BULL         | LAMPREY    | DISCH<br>KCFS | SPILL<br>KCFS | DEG F       |            |             |
|--------------|---------------|--------|--------------|--------------|--------------|-----------|-----------|--------------|------------|---------------|---------------|-------------|------------|-------------|
|              | SPRING        | SUMMER | FALL         | JACK         | ADULT        | JACK      | SOCKEYE   | STEELHEAD    |            |               |               |             | TROUT      |             |
| Oct 1        |               |        | 142          | 73           | 41           | 1         | 0         | 84           | 20         | 0             | 12            | 72.9        | 0.0        | 62.8        |
| Oct 2        |               |        | 122          | 95           | 80           | 1         | 0         | 137          | 46         | 0             | 10            | 64.3        | 0.0        | 64.0        |
| Oct 3        |               |        | 123          | 49           | 40           | 0         | 2         | 107          | 26         | 0             | 11            | 68.1        | 0.0        | 62.8        |
| Oct 4        |               |        | 131          | 71           | 72           | 1         | 0         | 110          | 42         | 0             | 14            | 70.4        | 0.0        | 63.5        |
| Oct 5        |               |        | 129          | 51           | 51           | 0         | 0         | 94           | 27         | 0             | 0             | 65.8        | 0.0        | 62.2        |
| Oct 6        |               |        | 161          | 90           | 68           | 2         | 0         | 87           | 36         | 0             | 1             | 56.2        | 0.0        | 63.0        |
| Oct 7        |               |        | 73           | 85           | 91           | 2         | 0         | 98           | 39         | 0             | 1             | 53.8        | 0.0        | 61.3        |
| Oct 8        |               |        | 89           | 68           | 36           | 2         | 0         | 52           | 16         | 1             | 1             | 72.4        | 0.0        | 61.3        |
| Oct 9        |               |        | 52           | 37           | 43           | 3         | 0         | 41           | 10         | 0             | 1             | 70.1        | 0.0        | 61.2        |
| Oct 10       |               |        | 67           | 36           | 37           | 0         | 1         | 38           | 11         | 0             | 0             | 62.7        | 0.0        | 60.8        |
| Oct 11       |               |        | 49           | 65           | 54           | 2         | 1         | 56           | 21         | 0             | 1             | 70.3        | 0.0        | 61.0        |
| Oct 12       |               |        | 115          | 65           | 47           | 0         | 0         | 57           | 24         | 0             | 1             | 48.9        | 0.0        | 61.3        |
| Oct 13       |               |        | 144          | 34           | 34           | 0         | 0         | 26           | 12         | 0             | 0             | 48.7        | 0.0        | 61.5        |
| Oct 14       |               |        | 113          | 58           | 48           | 1         | 0         | 39           | 22         | 0             | 0             | 39.8        | 0.0        | 60.8        |
| Oct 15       |               |        | 50           | 22           | 38           | 2         | 1         | 32           | 12         | 0             | 0             | 61.3        | 0.0        | 60.8        |
| Oct 16       |               |        | 272          | 59           | 54           | 1         | 0         | 64           | 37         | 0             | 0             | 40.2        | 0.0        | 61.0        |
| Oct 17       |               |        | 114          | 70           | 28           | 0         | 0         | 39           | 19         | 0             | 0             | 50.4        | 0.0        | 60.3        |
| Oct 18       |               |        | 160          | 41           | 36           | 0         | 1         | 81           | 38         | 1             | 0             | 59.9        | 0.0        | 60.1        |
| Oct 19       |               |        | 132          | 43           | 17           | 1         | 1         | 23           | 16         | 0             | 0             | 38.9        | 0.0        | 59.7        |
| Oct 20       |               |        | 99           | 52           | 15           | 1         | 0         | 24           | 10         | 1             | 0             | 40.2        | 0.0        | 59.5        |
| Oct 21       |               |        | 198          | 53           | 30           | 2         | 1         | 38           | 21         | 3             | 0             | 60.5        | 0.9        | 59.7        |
| Oct 22       |               |        | 120          | 35           | 25           | 0         | 1         | 22           | 12         | 1             | 0             | 90.2        | 0.0        | 59.7        |
| Oct 23       |               |        | 77           | 61           | 31           | 0         | 0         | 46           | 18         | 0             | 0             | 92.3        | 0.0        | 58.5        |
| Oct 24       |               |        | 44           | 43           | 10           | 1         | 1         | 19           | 13         | 0             | 0             | 91.1        | 0.0        | 57.9        |
| Oct 25       |               |        | 152          | 45           | 16           | 0         | 0         | 18           | 12         | 0             | 0             | 87.8        | 3.7        | 57.7        |
| Oct 26       |               |        | 77           | 44           | 9            | 0         | 1         | 23           | 4          | 4             | 0             | 93.1        | 0.0        | 57.6        |
| Oct 27       |               |        | 86           | 30           | 5            | 0         | 0         | 20           | 6          | 0             | 0             | 76.8        | 0.0        | 57.7        |
| Oct 28       |               |        | 86           | 18           | 16           | 0         | 0         | 17           | 5          | 0             | 0             | 58.0        | 0.0        | 57.7        |
| Oct 29       |               |        | 105          | 15           | 18           | 0         | 0         | 14           | 5          | 2             | 0             | 63.5        | 0.0        | 57.7        |
| Oct 30       |               |        | 133          | 26           | 20           | 0         | 0         | 23           | 9          | 0             | 0             | 68.4        | 0.0        | 57.9        |
| Oct 31       |               |        | 117          | 9            | 13           | 0         | 1         | 25           | 13         | 3             | 0             | 77.5        | 0.0        | 57.9        |
| <b>TOTAL</b> |               |        | <b>3,532</b> | <b>1,543</b> | <b>1,123</b> | <b>23</b> | <b>12</b> | <b>1,554</b> | <b>602</b> | <b>16</b>     | <b>53</b>     |             |            |             |
| <b>AVG.</b>  |               |        | <b>114</b>   | <b>50</b>    | <b>36</b>    | <b>1</b>  | <b>0</b>  | <b>50</b>    | <b>19</b>  | <b>1</b>      | <b>2</b>      | <b>65.0</b> | <b>0.1</b> | <b>60.3</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 6,551         | 460          |
| SUMMER         | 47,167        | 3,581        |
| FALL           | 6,093         | 3,182        |
| <b>TOTALS</b>  | <b>59,811</b> | <b>7,223</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 2,355      | 43        | 363,313 | 12,871    | 5,286          | 188        | 805     |

TABLE 160

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROCKY REACH PROJECT- FISH COUNTS

NOVEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | SOCKEYE | STEELHEAD | WILD | BULL      | LAMPREY | DISCH<br>KCFS | SPILL<br>KCFS | DEG F |
|--------------|---------------|--------|---------|------|-------|---------|-----------|------|-----------|---------|---------------|---------------|-------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT |         |           | JACK | STEELHEAD |         |               |               |       |
| Nov 1        |               |        | 128     | 45   | 10    | 0       | 48        | 29   | 2         |         | 68.4          | 0.0           | 57.7  |
| Nov 2        |               |        | 153     | 23   | 5     | 0       | 30        | 11   | 1         |         | 91.6          | 3.2           | 57.7  |
| Nov 3        |               |        | 76      | 17   | 10    | 1       | 29        | 10   | 3         |         | 68.1          | 0.0           | 57.7  |
| Nov 4        |               |        | 88      | 37   | 4     | 0       | 16        | 9    | 3         |         | 63.0          | 0.0           | 57.7  |
| Nov 5        |               |        | 68      | 14   | 3     | 0       | 9         | 6    | 2         |         | 78.2          | 0.0           | 57.7  |
| Nov 6        |               |        | 78      | 28   | 0     | 0       | 7         | 4    | 0         |         | 95.8          | 0.0           | 57.6  |
| Nov 7        |               |        | 40      | 11   | 2     | 0       | 17        | 9    | 1         |         | 80.4          | 0.0           | 57.4  |
| Nov 8        |               |        | 53      | 21   | 0     | 0       | 13        | 5    | 0         |         | 85.0          | 0.0           | 56.1  |
| Nov 9        |               |        | 29      | 14   | 2     | 0       | 9         | 5    | 0         |         | 97.6          | 0.0           | 56.5  |
| Nov 10       |               |        | 24      | 4    | 4     | 0       | 13        | 7    | 5         |         | 95.9          | 0.0           | 55.6  |
| Nov 11       |               |        | 17      | 2    | 1     | 0       | 10        | 6    | 5         |         | 100.7         | 0.0           | 55.4  |
| Nov 12       |               |        | 14      | 5    | 0     | 0       | 11        | 2    | 3         |         | 85.9          | 0.0           | 54.1  |
| Nov 13       |               |        | 10      | 11   | 1     | 0       | 5         | 0    | 1         |         | 80.9          | 0.0           | 54.3  |
| Nov 14       |               |        | 8       | 2    | 0     | 0       | 5         | 3    | 4         |         | 93.2          | 0.0           | 54.3  |
| Nov 15       |               |        | 5       | 0    | 0     | 0       | 7         | 3    | 1         |         | 100.0         | 0.0           | 53.6  |
| Nov 16       |               |        |         |      |       |         |           |      |           |         | 104.8         | 0.0           |       |
| Nov 17       |               |        |         |      |       |         |           |      |           |         | 105.7         | 0.0           |       |
| Nov 18       |               |        |         |      |       |         |           |      |           |         | 97.1          | 0.0           |       |
| Nov 19       |               |        |         |      |       |         |           |      |           |         | 97.2          | 0.0           |       |
| Nov 20       |               |        |         |      |       |         |           |      |           |         | 94.9          | 0.0           |       |
| Nov 21       |               |        |         |      |       |         |           |      |           |         | 55.5          | 0.0           |       |
| Nov 22       |               |        |         |      |       |         |           |      |           |         | 78.7          | 0.0           |       |
| Nov 23       |               |        |         |      |       |         |           |      |           |         | 79.8          | 0.0           |       |
| Nov 24       |               |        |         |      |       |         |           |      |           |         | 87.7          | 0.0           |       |
| Nov 25       |               |        |         |      |       |         |           |      |           |         | 95.5          | 0.0           |       |
| Nov 26       |               |        |         |      |       |         |           |      |           |         | 100.8         | 0.0           |       |
| Nov 27       |               |        |         |      |       |         |           |      |           |         | 83.8          | 0.0           |       |
| Nov 28       |               |        |         |      |       |         |           |      |           |         | 98.2          | 0.0           |       |
| Nov 29       |               |        |         |      |       |         |           |      |           |         | 110.4         | 1.3           |       |
| Nov 30       |               |        |         |      |       |         |           |      |           |         | 107.0         | 1.1           |       |
| <b>TOTAL</b> |               |        | 791     | 234  | 42    | 1       | 229       | 109  | 31        |         |               |               |       |
| <b>AVG.</b>  |               |        | 53      | 16   | 3     | 0       | 15        | 7    | 2         |         | 89.4          | 0.2           |       |

| RUN YEAR       | CHINOOK | CHINOOK | COHO  | COHO | SOCKEYE | STEELHEAD | WILD      | BULL  | LAMPREY |
|----------------|---------|---------|-------|------|---------|-----------|-----------|-------|---------|
|                | ADULT   | JACK    | ADULT | JACK |         |           | STEELHEAD | TROUT |         |
| TOTALS TO DATE |         |         |       |      |         |           |           |       |         |
| SPRING         | 6,551   | 460     | 2,397 | 43   | 363,314 | 13,100    | 5,395     | 219   | 805     |
| SUMMER         | 47,167  | 3,581   |       |      |         |           |           |       |         |
| FALL           | 6,884   | 3,416   |       |      |         |           |           |       |         |
| TOTALS         | 60,602  | 7,457   |       |      |         |           |           |       |         |

TABLE 161

MONTHLY COUNT OF STEELHEAD  
ROCKY REACH DAM: 1981 - 2012

| YEAR            | JAN | FEB | MAR | APR   | MAY   | JUN   | JUL    | AUG    | SEP     | OCT    | NOV   | DEC | TOTAL   |
|-----------------|-----|-----|-----|-------|-------|-------|--------|--------|---------|--------|-------|-----|---------|
| 1981            |     |     |     |       |       | 14    | 173    | 1,309  | 1,827   | 1,691  | 300   |     | 5,314   |
| 1982            |     |     |     | 137   | 116   | 5     | 73     | 1,192  | 2,863   | 1,735  | 120   |     | 6,241   |
| 1983            |     |     |     | 31    | 18    | 2     | 334    | 3,525  | 11,329  | 4,048  | 411   |     | 19,698  |
| 1984            |     |     |     | 41    | 174   | 127   | 1,032  | 5,564  | 7,263   | 2,589  | 438   |     | 17,228  |
| 1985            |     |     |     | 63    | 273   | 523   | 3,547  | 4,152  | 11,133  | 2,646  | 381   |     | 22,718  |
| 1986            |     |     |     | 61    | 178   | 160   | 2,003  | 6,072  | 4,225   | 2,222  | 236   |     | 15,157  |
| 1987            |     |     |     | 67    | 75    | 80    | 567    | 2,574  | 2,361   | 1,210  | 244   |     | 7,178   |
| 1988            |     |     |     | 99    | 108   | 108   | 493    | 1,498  | 2,439   | 820    | 112   |     | 5,677   |
| 1989            |     |     |     | 62    | 41    | 30    | 458    | 1,442  | 2,721   | 1,134  | 151   |     | 6,039   |
| 1990            |     |     |     | 24    | 31    | 33    | 534    | 1,809  | 1,889   | 646    | 67    |     | 5,033   |
| 1991            |     |     |     | 19    | 26    | 63    | 584    | 2,346  | 2,996   | 1,473  | 138   |     | 7,645   |
| 1992            |     |     |     | 50    | 138   | 203   | 1,026  | 1,861  | 3,051   | 1,093  | 94    |     | 7,516   |
| 1993            |     |     |     | 49    | 52    | 24    | 346    | 869    | 1,066   | 379    | 31    |     | 2,816   |
| 1994            |     |     |     | 12    | 11    | 30    | 301    | 578    | 1,002   | 821    | 63    |     | 2,818   |
| 1995            |     |     |     | 18    | 12    | 9     | 147    | 398    | 827     | 315    | 32    |     | 1,758   |
| 1996            |     |     |     | 23    | 26    | 12    | 179    | 1,585  | 2,868   | 969    | 112   |     | 5,774   |
| 1997            |     |     |     | 40    | 15    | 1     | 192    | 1,789  | 2,901   | 1,576  | 208   |     | 6,722   |
| 1998            |     |     |     | 71    | 18    | 23    | 281    | 671    | 2,025   | 1,127  | 226   |     | 4,442   |
| 1999            |     |     |     | 35    | 16    | 46    | 198    | 1,518  | 2,361   | 557    | 84    |     | 4,815   |
| 2000            |     |     |     | 62    | 22    | 34    | 679    | 2,276  | 4,289   | 835    | 78    |     | 8,275   |
| 2001            |     |     |     | 83    | 33    | 83    | 1,861  | 6,843  | 9,827   | 3,025  | 290   |     | 22,045  |
| 2002            |     |     |     | 152   | 33    | 49    | 1,441  | 4,631  | 4,103   | 1,332  | 112   |     | 11,853  |
| 2003            |     |     |     | 46    | 4     | 40    | 1,154  | 3,393  | 6,649   | 2,211  | 153   |     | 13,650  |
| 2004            |     |     |     | 177   | 142   | 244   | 1,847  | 2,571  | 7,748   | 1,650  | 201   |     | 14,580  |
| 2005            |     |     |     | 278   | 85    | 60    | 762    | 2,430  | 4,589   | 1,423  | 83    |     | 9,710   |
| 2006            |     |     |     | 117   | 34    | 14    | 401    | 1,774  | 4,557   | 1,028  | 199   |     | 8,124   |
| 2007            |     |     |     | 93    | 75    | 46    | 507    | 2,777  | 4,247   | 2,227  | 174   |     | 10,146  |
| 2008            |     |     |     | 308   | 201   | 303   | 1,882  | 4,429  | 4,776   | 1,406  | 566   |     | 13,871  |
| 2009            |     |     |     | 302   | 134   | 49    | 967    | 7,355  | 17,011  | 3,509  | 220   |     | 29,547  |
| 2010            |     |     |     | 285   | 85    | 49    | 2,318  | 7,265  | 6,024   | 1,511  | 334   |     | 17,871  |
| 2011            |     |     |     | 327   | 263   | 25    | 516    | 5,368  | 6,566   | 2,105  | 110   |     | 15,280  |
| 2012            |     |     |     | 525   | 203   | 104   | 908    | 4,731  | 4,846   | 1,554  | 229   |     | 13,100  |
| Total           |     |     |     | 3,657 | 2,642 | 2,593 | 27,711 | 96,595 | 152,379 | 50,867 | 6,197 |     | 342,641 |
| 10-Year Average |     |     |     | 246   | 123   | 93    | 1,126  | 4,209  | 6,701   | 1,862  | 227   |     | 14,588  |



# WELLS DAM

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## **FISH COUNTING SCHEDULE**

The adult counting schedule at Wells Dam is from May 1 through November 15, though passage data is recorded each day of the year, and that data is available from Douglas PUD upon request. Fish are counted by reviewing digital-video files from previous days. From 1967 through 1997, counts were reported for a 16-hour period (0500-2100 PST). Since 1998, 24-hour counts (0000-2400) have been reported. Chinook are arbitrarily separated into three populations based upon date of passage through the ladders: Spring Chinook – May 1 through June 28, summer Chinook – June 29 through August 28, and fall Chinook – August 29 through November 15.

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## **FISH LADDER OPERATING SCHEDULE**

Other than during routine wintertime inspection and maintenance (performed on only one ladder at a time), the two fishways at Wells Dam operated continuously during 2012.

### **West Ladder Maintenance**

3 January to 14 February 2012 for inspection, maintenance, and installation of HDX/FDX PIT-tag detection in Pool 19.

### **East Ladder Maintenance**

4 December 2012 to 24 January 2013, outage for inspection, maintenance, and installation of HDX/FDX PIT-tag detection in Pool 19.

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## **JUVENILE PASSAGE FACILITIES**

The juvenile bypass system at Wells Dam capitalizes on the hydrocombine design by using flow to the turbines to attract fish to bypass spillways located between turbine silos and above turbine intakes. During the juvenile outmigration, bypass baffles and barriers are installed in spillway intake slots to partially constrict the five even-numbered spillways. This configuration provides up to 11,000 cfs of bypass flow.

During periods when plant discharge exceeds the combined turbine and bypass capacity, excess water is passed through non-bypass spillways and bypass bays as necessary to address Washington Department of Ecology TDG standards and provisions of the Wells Emergency Action Plan. Gates on non-bypass spillways are opened and bypass barriers and baffles on bypass spillways are removed sequentially with increasing flow in a prescribed order that concentrates involuntary spill in the center of the project to minimize TDG. As discharge declines, bypass barriers are reinstalled and non-bypass spill gates closed in the reverse order in which they were removed and opened.

Flows at Wells Dam during the 2012 juvenile migration (April – August) were the third highest on record during that period (behind 1972 and 1997). Average monthly river flows were 151 percent, 145 percent, 142 percent, 192 percent, and 152 percent of the 42-year average flows for the months of April, May, June, July, and August, respectively. Bypass operations began on April 9 at 00:00 hours, and operated continuously until terminated at 24:00 hours on August 19, for a total of 133 days. Douglas PUD provided bypass passage for 99.96 percent of the yearling Chinook migration, 99.84 percent of the steelhead, 100 percent of the sockeye, 99.98 percent of the coho, and 99.86 percent of the sub-yearling Chinook passing Wells Dam in 2012.

TABLE 162

MONTHLY TOTALS OF SALMONIDS AND LAMPREY COUNTED OVER WELLS DAM  
2012

| SPECIES      | JAN | FEB | MAR | APR | MAY          | JUN          | JUL            | AUG           | SEP          | OCT          | NOV        | DEC | TOTAL          |
|--------------|-----|-----|-----|-----|--------------|--------------|----------------|---------------|--------------|--------------|------------|-----|----------------|
| CHINOOK*     |     |     |     |     | 3,710        | 2,370        | 28,190         | 14,135        | 2,541        | 1,616        | 284        |     | 52,846         |
| STEELHEAD    |     |     |     |     | 101          | 56           | 557            | 3,294         | 4,001        | 1,554        | 215        |     | 9,778          |
| SOCKEYE      |     |     |     |     |              | 499          | 317,777        | 7,741         | 83           | 7            | 0          |     | 326,107        |
| COHO         |     |     |     |     |              |              |                |               | 778          | 1,193        | 71         |     | 2,042          |
| <b>TOTAL</b> |     |     |     |     | <b>3,811</b> | <b>2,925</b> | <b>346,524</b> | <b>25,170</b> | <b>7,403</b> | <b>4,370</b> | <b>570</b> |     | <b>390,773</b> |
| LAMPREY      |     |     |     |     |              |              |                | 1             | 2            |              |            |     | 3              |
| BULL TROUT   |     |     |     |     | 18           | 48           | 5              | 1             | 0            | 1            | 1          |     | 74             |

\*Jacks included

TABLE 163

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

MAY 2012

| DATE                  | CHINOOK ADULT |                      |                     | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD        | WILD STEELHEAD        | BULL TROUT        | LAMPREY | DISCH KCFS   | SPILL KCFS  | *DEG F |
|-----------------------|---------------|----------------------|---------------------|--------------|------------|-----------|---------|------------------|-----------------------|-------------------|---------|--------------|-------------|--------|
|                       | SPRING        | SUMMER               | FALL                |              |            |           |         |                  |                       |                   |         |              |             |        |
| May 1                 | 0             |                      |                     | 1            |            |           |         | 14               | 10                    | 0                 |         | 236.2        | 68.0        |        |
| May 2                 | 0             |                      |                     | 0            |            |           |         | 13               | 8                     | 0                 |         | 246.4        | 90.7        |        |
| May 3                 | 1             |                      |                     | 0            |            |           |         | 8                | 5                     | 0                 |         | 247.0        | 78.1        |        |
| May 4                 | 0             |                      |                     | 0            |            |           |         | 2                | 2                     | 0                 |         | 249.3        | 89.0        |        |
| May 5                 | 0             |                      |                     | 0            |            |           |         | 6                | 5                     | 0                 |         | 226.2        | 75.2        |        |
| May 6                 | 0             |                      |                     | 0            |            |           |         | 3                | 3                     | 0                 |         | 236.5        | 66.9        |        |
| May 7                 | 0             |                      |                     | 0            |            |           |         | 6                | 5                     | 0                 |         | 225.3        | 59.9        |        |
| May 8                 | 1             |                      |                     | 0            |            |           |         | 0                | 0                     | 0                 |         | 229.4        | 63.1        |        |
| May 9                 | 2             |                      |                     | 0            |            |           |         | 5                | 5                     | 0                 |         | 239.9        | 77.8        |        |
| May 10                | 3             |                      |                     | 0            |            |           |         | 4                | 4                     | 0                 |         | 246.6        | 79.3        |        |
| May 11                | 5             |                      |                     | 0            |            |           |         | 5                | 5                     | 0                 |         | 217.6        | 56.8        |        |
| May 12                | 5             |                      |                     | 0            |            |           |         | 3                | 3                     | 0                 |         | 192.5        | 34.2        |        |
| May 13                | 16            |                      |                     | 1            |            |           |         | 1                | 1                     | 0                 |         | 186.7        | 27.4        |        |
| May 14                | 6             |                      |                     | 0            |            |           |         | 6                | 4                     | 0                 |         | 205.1        | 46.0        |        |
| May 15                | 16            |                      |                     | 0            |            |           |         | 2                | 1                     | 1                 |         | 204.1        | 60.4        |        |
| May 16                | 35            |                      |                     | 1            |            |           |         | 5                | 5                     | 0                 |         | 191.1        | 57.8        |        |
| May 17                | 51            |                      |                     | 0            |            |           |         | 0                | 0                     | 1                 |         | 213.2        | 81.6        |        |
| May 18                | 68            |                      |                     | 2            |            |           |         | 1                | 1                     | 0                 |         | 220.1        | 61.4        |        |
| May 19                | 94            |                      |                     | 5            |            |           |         | 2                | 0                     | 1                 |         | 233.2        | 72.8        |        |
| May 20                | 89            |                      |                     | 4            |            |           |         | 2                | 2                     | 2                 |         | 221.8        | 60.8        |        |
| May 21                | 113           |                      |                     | 5            |            |           |         | 0                | 0                     | 0                 |         | 228.1        | 66.4        |        |
| May 22                | 240           |                      |                     | 12           |            |           |         | 1                | 1                     | 2                 |         | 208.3        | 62.1        |        |
| May 23                | 309           |                      |                     | 12           |            |           |         | 0                | 0                     | 4                 |         | 201.7        | 55.3        |        |
| May 24                | 432           |                      |                     | 27           |            |           |         | 2                | 1                     | 2                 |         | 221.9        | 60.1        |        |
| May 25                | 397           |                      |                     | 18           |            |           |         | 0                | 0                     | 0                 |         | 221.7        | 63.5        |        |
| May 26                | 381           |                      |                     | 21           |            |           |         | 5                | 3                     | 1                 |         | 226.2        | 65.7        |        |
| May 27                | 207           |                      |                     | 32           |            |           |         | 1                | 1                     | 1                 |         | 185.2        | 25.9        |        |
| May 28                | 279           |                      |                     | 38           |            |           |         | 2                | 2                     | 2                 |         | 188.7        | 28.1        |        |
| May 29                | 237           |                      |                     | 48           |            |           |         | 1                | 1                     | 1                 |         | 202.1        | 37.1        |        |
| May 30                | 157           |                      |                     | 39           |            |           |         | 1                | 1                     | 0                 |         | 191.0        | 27.6        |        |
| May 31                | 277           |                      |                     | 23           |            |           |         | 0                | 0                     | 0                 |         | 189.3        | 30.8        |        |
| <b>TOTAL</b>          | <b>3,421</b>  |                      |                     | <b>289</b>   |            |           |         | <b>101</b>       | <b>79</b>             | <b>18</b>         |         |              |             |        |
| <b>AVG.</b>           | <b>110</b>    |                      |                     | <b>9</b>     |            |           |         | <b>3</b>         | <b>3</b>              | <b>1</b>          |         | <b>217.2</b> | <b>59.0</b> |        |
| <b>RUN YEAR</b>       |               |                      |                     |              |            |           |         |                  |                       |                   |         |              |             |        |
| <b>TOTALS TO DATE</b> |               | <b>CHINOOK ADULT</b> | <b>CHINOOK JACK</b> |              |            |           |         | <b>STEELHEAD</b> | <b>WILD STEELHEAD</b> | <b>BULL TROUT</b> |         |              |             |        |
| <b>SPRING</b>         |               | <b>3,421</b>         | <b>289</b>          |              |            |           |         | <b>101</b>       | <b>79</b>             | <b>18</b>         |         |              |             |        |

\*Data unavailable

TABLE 164

MONTHLY FISH PASSAGE SUMMARY REPORT  
U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

JUNE 2012

| DATE         | CHINOOK ADULT |           |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE    | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS   | SPILL KCFS  | DEG F       |
|--------------|---------------|-----------|------|--------------|------------|-----------|------------|-----------|----------------|------------|---------|--------------|-------------|-------------|
|              | SPRING        | SUMMER    | FALL |              |            |           |            |           |                |            |         |              |             |             |
| Jun 1        | 189           |           |      | 34           |            |           | 0          | 0         | 0              | 1          |         | 185.1        | 25.4        |             |
| Jun 2        | 156           |           |      | 30           |            |           | 0          | 4         | 3              | 4          |         | 136.1        | 10.0        |             |
| Jun 3        | 188           |           |      | 29           |            |           | 0          | 1         | 1              | 1          |         | 157.2        | 18.5        |             |
| Jun 4        | 15            |           |      | 15           |            |           | 0          | 0         | 0              | 3          |         | 164.2        | 14.3        |             |
| Jun 5        | 37            |           |      | 10           |            |           | 0          | 0         | 0              | 1          |         | 128.4        | 11.2        |             |
| Jun 6        | 96            |           |      | 27           |            |           | 0          | 0         | 0              | 0          |         | 211.9        | 49.6        |             |
| Jun 7        | 138           |           |      | 35           |            |           | 0          | 3         | 3              | 0          |         | 231.7        | 56.8        |             |
| Jun 8        | 77            |           |      | 23           |            |           | 0          | 2         | 2              | 2          |         | 235.0        | 68.2        |             |
| Jun 9        | 69            |           |      | 19           |            |           | 0          | 3         | 3              | 3          |         | 223.7        | 45.5        |             |
| Jun 10       | 71            |           |      | 26           |            |           | 0          | 2         | 2              | 2          |         | 228.0        | 40.9        |             |
| Jun 11       | 42            |           |      | 18           |            |           | 0          | 2         | 2              | 4          |         | 228.4        | 42.9        |             |
| Jun 12       | 64            |           |      | 25           |            |           | 0          | 1         | 0              | 5          |         | 232.8        | 54.2        |             |
| Jun 13       | 53            |           |      | 12           |            |           | 0          | 0         | 0              | 3          |         | 233.9        | 50.4        |             |
| Jun 14       | 80            |           |      | 13           |            |           | 0          | 1         | 1              | 0          |         | 227.3        | 45.7        |             |
| Jun 15       | 49            |           |      | 14           |            |           | 1          | 3         | 3              | 1          |         | 234.4        | 52.6        |             |
| Jun 16       | 28            |           |      | 8            |            |           | 0          | 3         | 2              | 1          |         | 234.9        | 49.0        |             |
| Jun 17       | 34            |           |      | 2            |            |           | 0          | 1         | 1              | 4          |         | 223.8        | 41.3        |             |
| Jun 18       | 23            |           |      | 7            |            |           | 0          | 1         | 1              | 1          |         | 217.5        | 46.2        |             |
| Jun 19       | 46            |           |      | 15           |            |           | 5          | 1         | 1              | 2          |         | 221.6        | 37.4        |             |
| Jun 20       | 26            |           |      | 4            |            |           | 10         | 3         | 1              | 2          |         | 256.5        | 70.9        |             |
| Jun 21       | 86            |           |      | 11           |            |           | 9          | 2         | 0              | 2          |         | 256.5        | 66.3        |             |
| Jun 22       | 86            |           |      | 6            |            |           | 15         | 3         | 2              | 0          |         | 259.9        | 89.5        |             |
| Jun 23       | 73            |           |      | 7            |            |           | 27         | 3         | 3              | 2          |         | 221.9        | 54.5        |             |
| Jun 24       | 46            |           |      | 6            |            |           | 53         | 1         | 0              | 0          |         | 267.3        | 82.0        |             |
| Jun 25       | 17            |           |      | 7            |            |           | 76         | 1         | 0              | 1          |         | 300.5        | 133.1       |             |
| Jun 26       | 29            |           |      | 5            |            |           | 58         | 2         | 1              | 3          |         | 295.3        | 141.6       |             |
| Jun 27       | 32            |           |      | 2            |            |           | 31         | 3         | 1              | 0          |         | 292.3        | 135.0       | 54.3        |
| Jun 28       | 40            |           |      | 1            |            |           | 70         | 4         | 4              | 0          |         | 300.7        | 144.8       | 54.7        |
| Jun 29       |               | 31        |      | 1            |            |           | 69         | 3         | 2              | 0          |         | 293.5        | 135.0       | 55.2        |
| Jun 30       |               | 33        |      | 4            |            |           | 75         | 3         | 2              | 0          |         | 287.3        | 135.7       | 55.6        |
| <b>TOTAL</b> | <b>1,890</b>  | <b>64</b> |      | <b>416</b>   |            |           | <b>499</b> | <b>56</b> | <b>41</b>      | <b>48</b>  |         |              |             |             |
| <b>AVG.</b>  | <b>68</b>     | <b>32</b> |      | <b>14</b>    |            |           | <b>17</b>  | <b>2</b>  | <b>1</b>       | <b>2</b>   |         | <b>232.9</b> | <b>64.9</b> | <b>55.0</b> |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 5,311         | 700          |
| SUMMER         | 64            | 5            |
| <b>TOTAL</b>   | <b>5,375</b>  | <b>705</b>   |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT |
|---------|-----------|----------------|------------|
| 499     | 157       | 120            | 66         |

TABLE 165

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

JULY 2012

| DATE   | CHINOOK ADULT |        |      | CHINOOK | COHO  | COHO | WILD    |           |           | BULL  | LAMPREY | DISCH | SPILL | DEG F |
|--------|---------------|--------|------|---------|-------|------|---------|-----------|-----------|-------|---------|-------|-------|-------|
|        | SPRING        | SUMMER | FALL | JACK    | ADULT | JACK | SOCKEYE | STEELHEAD | STEELHEAD | TROUT |         |       |       |       |
| Jul 1  |               | 49     |      | 1       |       |      | 165     | 1         | 0         | 1     |         | 274.5 | 120.7 | 55.8  |
| Jul 2  |               | 52     |      | 4       |       |      | 267     | 1         | 0         | 0     |         | 277.9 | 124.5 | 55.9  |
| Jul 3  |               | 69     |      | 2       |       |      | 398     | 1         | 0         | 0     |         | 282.1 | 132.0 | 55.9  |
| Jul 4  |               | 215    |      | 22      |       |      | 1,199   | 2         | 1         | 0     |         | 274.1 | 123.6 | 56.1  |
| Jul 5  |               | 147    |      | 2       |       |      | 1,210   | 4         | 1         | 0     |         | 280.6 | 130.1 | 55.9  |
| Jul 6  |               | 394    |      | 7       |       |      | 1,604   | 1         | 1         | 0     |         | 263.7 | 104.0 | 56.5  |
| Jul 7  |               | 814    |      | 20      |       |      | 2,792   | 0         | 0         | 0     |         | 255.2 | 70.3  | 57.2  |
| Jul 8  |               | 807    |      | 27      |       |      | 6,025   | 4         | 1         | 1     |         | 261.4 | 80.7  | 57.7  |
| Jul 9  |               | 720    |      | 31      |       |      | 11,128  | 7         | 4         | 0     |         | 272.5 | 98.6  | 57.9  |
| Jul 10 |               | 1,116  |      | 89      |       |      | 22,006  | 15        | 6         | 1     |         | 278.0 | 101.3 | 58.5  |
| Jul 11 |               | 1,174  |      | 106     |       |      | 22,665  | 9         | 5         | 1     |         | 262.0 | 100.2 | 58.5  |
| Jul 12 |               | 1,368  |      | 88      |       |      | 24,835  | 6         | 3         | 0     |         | 262.4 | 91.2  | 58.8  |
| Jul 13 |               | 1,025  |      | 56      |       |      | 23,812  | 14        | 3         | 0     |         | 268.5 | 99.6  | 59.0  |
| Jul 14 |               | 1,193  |      | 103     |       |      | 27,815  | 14        | 9         | 0     |         | 263.2 | 89.4  | 59.2  |
| Jul 15 |               | 906    |      | 68      |       |      | 21,249  | 17        | 8         | 0     |         | 261.9 | 87.4  | 59.0  |
| Jul 16 |               | 646    |      | 66      |       |      | 17,587  | 21        | 8         | 0     |         | 255.2 | 88.5  | 59.2  |
| Jul 17 |               | 538    |      | 51      |       |      | 14,459  | 16        | 10        | 0     |         | 245.7 | 85.9  | 59.7  |
| Jul 18 |               | 940    |      | 61      |       |      | 15,099  | 13        | 6         | 0     |         | 243.4 | 76.7  | 59.5  |
| Jul 19 |               | 1,116  |      | 69      |       |      | 15,180  | 15        | 5         | 0     |         | 260.2 | 84.4  | 59.5  |
| Jul 20 |               | 646    |      | 51      |       |      | 12,265  | 14        | 9         | 0     |         | 263.3 | 91.3  | 59.9  |
| Jul 21 |               | 947    |      | 59      |       |      | 14,935  | 19        | 10        | 0     |         | 263.0 | 85.5  | 60.3  |
| Jul 22 |               | 974    |      | 87      |       |      | 11,790  | 16        | 7         | 0     |         | 256.5 | 87.3  | 60.6  |
| Jul 23 |               | 881    |      | 80      |       |      | 6,750   | 32        | 14        | 0     |         | 255.0 | 86.9  | 60.8  |
| Jul 24 |               | 1,191  |      | 62      |       |      | 9,603   | 25        | 13        | 0     |         | 254.9 | 80.1  | 61.0  |
| Jul 25 |               | 1,200  |      | 56      |       |      | 7,307   | 37        | 22        | 1     |         | 244.4 | 69.9  | 61.2  |
| Jul 26 |               | 1,314  |      | 105     |       |      | 6,929   | 46        | 22        | 0     |         | 229.1 | 45.7  | 61.5  |
| Jul 27 |               | 1,276  |      | 136     |       |      | 6,375   | 41        | 18        | 0     |         | 223.3 | 44.1  | 62.1  |
| Jul 28 |               | 1,114  |      | 98      |       |      | 4,919   | 45        | 20        | 0     |         | 215.1 | 44.5  | 62.1  |
| Jul 29 |               | 750    |      | 70      |       |      | 3,213   | 28        | 15        | 0     |         | 203.6 | 33.9  | 62.2  |
| Jul 30 |               | 1,005  |      | 66      |       |      | 2,324   | 44        | 23        | 0     |         | 214.0 | 34.0  | 62.4  |
| Jul 31 |               | 1,719  |      | 141     |       |      | 1,872   | 49        | 22        | 0     |         | 202.0 | 25.3  | 63.0  |

TOTAL

26,306

1,884

317,777

557

266

5

AVG.

849

61

10251

18

9

0

253.8

84.4

59.3

RUN YEAR

CHINOOK ADULT

CHINOOK JACK

SOCKEYE

STEELHEAD

WILD STEELHEAD

BULL TROUT

TOTALS TO DATE

5,311

700

318,276

714

386

71

SPRING

26,370

1,889

SUMMER

31,681

2,589

TOTAL

TABLE 166

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

AUGUST 2012

| DATE         | CHINOOK ADULT |               |            | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE      | STEELHEAD    | WILD STEELHEAD | BULL TROUT | LAMPREY  | DISCH KCFS | SPILL KCFS | DEG F |
|--------------|---------------|---------------|------------|--------------|------------|-----------|--------------|--------------|----------------|------------|----------|------------|------------|-------|
|              | SPRING        | SUMMER        | FALL       |              |            |           |              |              |                |            |          |            |            |       |
| Aug 1        |               | 1,346         |            | 71           |            |           | 1,800        | 35           | 19             | 0          | 0        | 199.9      | 21.0       | 63.0  |
| Aug 2        |               | 987           |            | 104          |            |           | 1,103        | 40           | 16             | 0          | 0        | 191.3      | 16.3       | 63.0  |
| Aug 3        |               | 661           |            | 62           |            |           | 938          | 46           | 29             | 0          | 0        | 183.2      | 10.0       | 63.0  |
| Aug 4        |               | 1,107         |            | 59           |            |           | 836          | 53           | 23             | 0          | 0        | 190.2      | 13.3       | 63.1  |
| Aug 5        |               | 810           |            | 75           |            |           | 622          | 62           | 32             | 0          | 0        | 184.5      | 13.8       | 62.8  |
| Aug 6        |               | 506           |            | 26           |            |           | 386          | 35           | 17             | 0          | 0        | 182.1      | 10.0       | 63.0  |
| Aug 7        |               | 455           |            | 43           |            |           | 307          | 33           | 17             | 0          | 0        | 180.5      | 10.5       | 63.1  |
| Aug 8        |               | 435           |            | 49           |            |           | 301          | 85           | 39             | 1          | 0        | 174.4      | 10.6       | 63.3  |
| Aug 9        |               | 537           |            | 41           |            |           | 287          | 93           | 39             | 0          | 0        | 174.3      | 14.5       | 63.5  |
| Aug 10       |               | 491           |            | 51           |            |           | 187          | 94           | 42             | 0          | 0        | 180.3      | 11.5       | 63.3  |
| Aug 11       |               | 221           |            | 59           |            |           | 156          | 92           | 43             | 0          | 0        | 164.9      | 10.0       | 63.3  |
| Aug 12       |               | 337           |            | 43           |            |           | 149          | 102          | 49             | 0          | 0        | 168.8      | 10.0       | 63.5  |
| Aug 13       |               | 340           |            | 63           |            |           | 89           | 61           | 26             | 0          | 0        | 166.6      | 10.0       | 63.7  |
| Aug 14       |               | 460           |            | 26           |            |           | 85           | 134          | 55             | 0          | 0        | 156.4      | 10.0       | 63.9  |
| Aug 15       |               | 245           |            | 41           |            |           | 81           | 149          | 74             | 0          | 0        | 143.1      | 10.0       | 64.2  |
| Aug 16       |               | 525           |            | 37           |            |           | 78           | 146          | 67             | 0          | 0        | 157.9      | 13.4       | 64.2  |
| Aug 17       |               | 299           |            | 37           |            |           | 54           | 114          | 46             | 0          | 0        | 153.9      | 10.0       | 64.0  |
| Aug 18       |               | 365           |            | 43           |            |           | 39           | 125          | 55             | 0          | 0        | 152.5      | 13.8       | 64.2  |
| Aug 19       |               | 393           |            | 49           |            |           | 47           | 127          | 57             | 0          | 0        | 165.0      | 15.3       | 64.2  |
| Aug 20       |               | 86            |            | 27           |            |           | 33           | 55           | 26             | 0          | 0        | 146.0      | 25.3       | 64.4  |
| Aug 21       |               | 156           |            | 35           |            |           | 32           | 129          | 58             | 0          | 0        | 152.3      | 39.8       | 64.4  |
| Aug 22       |               | 287           |            | 47           |            |           | 28           | 134          | 53             | 0          | 0        | 149.9      | 37.8       | 64.6  |
| Aug 23       |               | 333           |            | 101          |            |           | 8            | 156          | 77             | 0          | 0        | 148.8      | 24.4       | 64.6  |
| Aug 24       |               | 199           |            | 62           |            |           | 18           | 225          | 88             | 0          | 0        | 137.2      | 1.9        | 64.4  |
| Aug 25       |               | 194           |            | 38           |            |           | 14           | 124          | 55             | 0          | 0        | 132.3      | 0.0        | 64.4  |
| Aug 26       |               | 238           |            | 35           |            |           | 12           | 184          | 84             | 0          | 0        | 119.5      | 0.0        | 64.4  |
| Aug 27       |               | 61            |            | 26           |            |           | 10           | 45           | 19             | 0          | 0        | 119.5      | 0.0        | 64.4  |
| Aug 28       |               | 144           |            | 32           |            |           | 15           | 139          | 51             | 0          | 1        | 132.3      | 0.0        | 64.2  |
| Aug 29       |               |               | 220        | 26           |            |           | 8            | 188          | 83             | 0          | 0        | 135.9      | 5.7        | 64.2  |
| Aug 30       |               |               | 122        | 29           |            |           | 4            | 144          | 66             | 0          | 0        | 147.4      | 12.6       | 64.2  |
| Aug 31       |               |               | 103        | 35           |            |           | 14           | 145          | 68             | 0          | 0        | 127.3      | 7.6        | 64.8  |
| <b>TOTAL</b> |               | <b>12,218</b> | <b>445</b> | <b>1,472</b> |            |           | <b>7,741</b> | <b>3,294</b> | <b>1,473</b>   | <b>1</b>   | <b>1</b> |            |            |       |

|      |     |     |    |  |  |  |     |     |    |   |   |       |      |      |
|------|-----|-----|----|--|--|--|-----|-----|----|---|---|-------|------|------|
| AVG. | 436 | 148 | 47 |  |  |  | 250 | 106 | 48 | 0 | 0 | 158.7 | 12.5 | 63.8 |
|------|-----|-----|----|--|--|--|-----|-----|----|---|---|-------|------|------|

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 5,311         | 700          |
| SUMMER         | 38,588        | 3,271        |
| FALL           | 445           | 90           |
| <b>TOTAL</b>   | <b>44,344</b> | <b>4,061</b> |

| SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|---------|-----------|----------------|------------|---------|
| 326,017 | 4,008     | 1,859          | 72         | 1       |

TABLE 167

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

SEPTEMBER 2012

| DATE         | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | SOCKEYE | STEELHEAD | WILD  | BULL      | LAMPREY | DISCH | SPILL | DEG F |      |
|--------------|---------------|--------|---------|------|-------|---------|-----------|-------|-----------|---------|-------|-------|-------|------|
|              | SPRING        | SUMMER | FALL    | JACK | ADULT |         |           | JACK  | STEELHEAD |         | TROUT | KCFS  |       | KCFS |
| Sep 1        |               |        | 81      | 27   | 0     | 0       | 0         | 144   | 65        |         | 0     | 82.8  | 0.0   | 64.6 |
| Sep 2        |               |        | 67      | 29   | 0     | 0       | 6         | 96    | 35        |         | 0     | 70.0  | 0.0   | 64.8 |
| Sep 3        |               |        | 205     | 27   | 0     | 0       | 7         | 194   | 101       |         | 0     | 87.4  | 0.7   | 64.9 |
| Sep 4        |               |        | 126     | 15   | 0     | 0       | 6         | 74    | 36        |         | 0     | 120.3 | 9.2   | 65.1 |
| Sep 5        |               |        | 50      | 19   | 0     | 0       | 6         | 58    | 17        |         | 0     | 97.7  | 0.0   | 64.9 |
| Sep 6        |               |        | 145     | 30   | 0     | 0       | 7         | 137   | 55        |         | 2     | 82.9  | 0.0   | 64.6 |
| Sep 7        |               |        | 148     | 27   | 0     | 0       | 2         | 148   | 59        |         | 0     | 98.5  | 0.6   | 64.6 |
| Sep 8        |               |        | 86      | 20   | 1     | 0       | 7         | 87    | 39        |         | 0     | 80.3  | 0.1   | 64.9 |
| Sep 9        |               |        | 51      | 25   | 1     | 0       | 2         | 113   | 40        |         | 0     | 53.1  | 0.0   | 65.1 |
| Sep 10       |               |        | 33      | 30   | 0     | 0       | 3         | 60    | 31        |         | 0     | 73.8  | 0.0   | 64.9 |
| Sep 11       |               |        | 48      | 16   | 7     | 0       | 4         | 105   | 58        |         | 0     | 89.2  | 0.0   | 64.6 |
| Sep 12       |               |        | 57      | 27   | 3     | 0       | 4         | 126   | 60        |         | 0     | 75.9  | 0.0   | 64.2 |
| Sep 13       |               |        | 75      | 34   | 11    | 0       | 1         | 172   | 76        |         | 0     | 91.6  | 0.8   | 64.6 |
| Sep 14       |               |        | 45      | 32   | 9     | 0       | 2         | 168   | 75        |         | 0     | 92.0  | 0.0   | 64.2 |
| Sep 15       |               |        | 27      | 19   | 5     | 0       | 2         | 140   | 50        |         | 0     | 71.9  | 0.0   | 64.2 |
| Sep 16       |               |        | 26      | 22   | 12    | 0       | 0         | 168   | 72        |         | 0     | 55.5  | 0.0   | 64.2 |
| Sep 17       |               |        | 66      | 16   | 12    | 0       | 0         | 122   | 47        |         | 0     | 87.7  | 0.0   | 64.2 |
| Sep 18       |               |        | 44      | 21   | 13    | 0       | 2         | 119   | 43        |         | 0     | 90.4  | 0.0   | 64.4 |
| Sep 19       |               |        | 45      | 30   | 32    | 0       | 0         | 150   | 65        |         | 0     | 76.6  | 0.0   | 64.4 |
| Sep 20       |               |        | 40      | 36   | 41    | 0       | 1         | 191   | 70        |         | 0     | 95.8  | 0.0   | 64.4 |
| Sep 21       |               |        | 68      | 25   | 48    | 0       | 0         | 219   | 79        |         | 0     | 85.1  | 0.0   | 64.2 |
| Sep 22       |               |        | 20      | 16   | 43    | 0       | 2         | 133   | 47        |         | 0     | 65.3  | 0.0   | 64.2 |
| Sep 23       |               |        | 40      | 26   | 60    | 0       | 0         | 164   | 68        |         | 0     | 66.0  | 0.0   | 64.4 |
| Sep 24       |               |        | 39      | 24   | 73    | 0       | 3         | 148   | 61        |         | 0     | 83.1  | 0.0   | 64.4 |
| Sep 25       |               |        | 29      | 29   | 54    | 0       | 1         | 77    | 29        |         | 0     | 70.0  | 0.0   | 64.4 |
| Sep 26       |               |        | 42      | 24   | 84    | 0       | 4         | 167   | 58        |         | 0     | 77.7  | 0.0   |      |
| Sep 27       |               |        | 36      | 21   | 83    | 4       | 5         | 162   | 62        |         | 0     | 85.2  | 0.0   |      |
| Sep 28       |               |        | 44      | 11   | 56    | 0       | 3         | 154   | 71        |         | 0     | 75.2  | 0.0   |      |
| Sep 29       |               |        | 23      | 15   | 58    | 0       | 0         | 90    | 29        |         | 0     | 48.8  | 0.0   |      |
| Sep 30       |               |        | 31      | 11   | 68    | 0       | 3         | 115   | 49        |         | 0     | 56.5  | 0.0   |      |
| <b>TOTAL</b> |               |        | 1,837   | 704  | 774   | 4       | 83        | 4,001 | 1,647     |         | 2     |       |       |      |
| <b>AVG.</b>  |               |        | 61      | 23   | 26    | 0       | 3         | 133   | 55        |         | 0     | 79.5  | 0.4   | 64.5 |

| RUN YEAR       | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| TOTALS TO DATE |               |              |
| SPRING         | 5,311         | 700          |
| SUMMER         | 38,588        | 3,271        |
| FALL           | 2,282         | 794          |
| <b>TOTAL</b>   | <b>46,181</b> | <b>4,765</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 774        | 4         | 326,100 | 8,009     | 3,506          | 72         | 3       |



TABLE 168

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

OCTOBER 2012

| DATE   | CHINOOK ADULT |        | CHINOOK | COHO | COHO  | SOCKEYE | STEELHEAD | WILD | BULL      | LAMPREY | DISCH | SPILL |
|--------|---------------|--------|---------|------|-------|---------|-----------|------|-----------|---------|-------|-------|
|        | SPRING        | SUMMER | FALL    | JACK | ADULT |         |           | JACK | STEELHEAD |         |       |       |
| Oct 1  |               |        | 47      | 30   | 72    | 0       | 0         | 95   | 32        | 0       | 71.7  | 0.0   |
| Oct 2  |               |        | 112     | 21   | 70    | 0       | 0         | 139  | 58        | 0       | 62.5  | 0.0   |
| Oct 3  |               |        | 33      | 20   | 36    | 0       | 1         | 82   | 28        | 0       | 65.4  | 0.0   |
| Oct 4  |               |        | 25      | 11   | 71    | 0       | 1         | 90   | 36        | 0       | 69.5  | 0.0   |
| Oct 5  |               |        | 26      | 29   | 56    | 1       | 0         | 115  | 51        | 1       | 66.1  | 0.0   |
| Oct 6  |               |        | 39      | 27   | 67    | 1       | 0         | 86   | 32        | 0       | 55.2  | 0.0   |
| Oct 7  |               |        | 29      | 20   | 84    | 0       | 0         | 90   | 38        | 0       | 56.7  | 0.0   |
| Oct 8  |               |        | 24      | 12   | 59    | 0       | 1         | 40   | 12        | 0       | 69.0  | 0.0   |
| Oct 9  |               |        | 36      | 18   | 63    | 0       | 1         | 82   | 27        | 0       | 68.9  | 0.0   |
| Oct 10 |               |        | 34      | 21   | 47    | 0       | 0         | 50   | 22        | 0       | 61.1  | 0.0   |
| Oct 11 |               |        | 28      | 14   | 31    | 0       | 0         | 41   | 11        | 0       | 68.5  | 0.0   |
| Oct 12 |               |        | 23      | 16   | 35    | 0       | 0         | 54   | 22        | 0       | 48.3  | 0.0   |
| Oct 13 |               |        | 16      | 12   | 45    | 0       | 1         | 68   | 26        | 0       | 46.7  | 0.0   |
| Oct 14 |               |        | 26      | 23   | 44    | 0       | 0         | 46   | 15        | 0       | 39.2  | 0.0   |
| Oct 15 |               |        | 41      | 26   | 62    | 0       | 0         | 22   | 8         | 0       | 59.8  | 0.0   |
| Oct 16 |               |        | 44      | 20   | 36    | 0       | 0         | 29   | 16        | 0       | 41.4  | 0.0   |
| Oct 17 |               |        | 42      | 34   | 27    | 0       | 1         | 33   | 13        | 0       | 44.6  | 0.0   |
| Oct 18 |               |        | 80      | 24   | 41    | 0       | 0         | 53   | 23        | 0       | 58.9  | 0.0   |
| Oct 19 |               |        | 19      | 15   | 35    | 0       | 0         | 55   | 35        | 0       | 40.3  | 0.0   |
| Oct 20 |               |        | 68      | 20   | 37    | 1       | 0         | 38   | 23        | 0       | 39.8  | 0.1   |
| Oct 21 |               |        | 24      | 7    | 23    | 0       | 0         | 28   | 11        | 0       | 61.6  | 0.0   |
| Oct 22 |               |        | 9       | 11   | 24    | 0       | 0         | 25   | 10        | 0       | 87.7  | 0.0   |
| Oct 23 |               |        | 12      | 12   | 9     | 0       | 0         | 17   | 8         | 0       | 91.6  | 0.0   |
| Oct 24 |               |        | 20      | 10   | 19    | 0       | 0         | 28   | 13        | 0       | 92.2  | 0.0   |
| Oct 25 |               |        | 21      | 13   | 12    | 0       | 0         | 32   | 14        | 0       | 85.6  | 0.0   |
| Oct 26 |               |        | 36      | 12   | 15    | 0       | 0         | 33   | 16        | 0       | 92.8  | 0.0   |
| Oct 27 |               |        | 31      | 24   | 14    | 0       | 1         | 22   | 12        | 0       | 73.8  | 0.0   |
| Oct 28 |               |        | 23      | 14   | 24    | 0       | 0         | 17   | 8         | 0       | 55.1  | 0.0   |
| Oct 29 |               |        | 18      | 18   | 18    | 0       | 0         | 14   | 10        | 0       | 62.6  | 0.0   |
| Oct 30 |               |        | 32      | 7    | 6     | 0       | 0         | 9    | 5         | 0       | 69.4  | 0.0   |
| Oct 31 |               |        | 44      | 13   | 8     | 0       | 0         | 21   | 8         | 0       | 79.0  | 0.0   |

**TOTAL**

|       |     |       |   |   |       |     |   |
|-------|-----|-------|---|---|-------|-----|---|
| 1,062 | 554 | 1,190 | 3 | 7 | 1,554 | 643 | 1 |
|-------|-----|-------|---|---|-------|-----|---|

AVG.

|    |    |    |   |   |    |    |   |
|----|----|----|---|---|----|----|---|
| 34 | 18 | 38 | 0 | 0 | 50 | 21 | 0 |
|----|----|----|---|---|----|----|---|

|      |     |
|------|-----|
| 64.0 | 0.0 |
|------|-----|

\*Data unavailable

RUN YEAR

| TOTALS TO DATE | CHINOOK ADULT | CHINOOK JACK |
|----------------|---------------|--------------|
| SPRING         | 5,311         | 700          |
| SUMMER         | 38,588        | 3,271        |
| FALL           | 3,344         | 1,348        |
| <b>TOTAL</b>   | <b>47,243</b> | <b>5,319</b> |

| COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|------------|-----------|---------|-----------|----------------|------------|---------|
| 1,964      | 7         | 326,107 | 9,563     | 4,149          | 73         | 3       |

TABLE 169

MONTHLY FISH PASSAGE SUMMARY REPORT

U.S. ARMY ENGINEER DISTRICT, PORTLAND

WELLS PROJECT- FISH COUNTS

NOVEMBER 2012

| DATE   | CHINOOK ADULT |        |      | CHINOOK JACK | COHO ADULT | COHO JACK | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY | DISCH KCFS | SPILL KCFS | * DEG F |
|--------|---------------|--------|------|--------------|------------|-----------|---------|-----------|----------------|------------|---------|------------|------------|---------|
|        | SPRING        | SUMMER | FALL |              |            |           |         |           |                |            |         |            |            |         |
| Nov 1  |               |        | 33   | 12           | 15         |           |         | 19        | 10             | 0          |         | 67.9       | 0.0        |         |
| Nov 2  |               |        | 16   | 8            | 7          |           |         | 9         | 4              | 0          |         | 90.0       | 0.0        |         |
| Nov 3  |               |        | 54   | 6            | 13         |           |         | 21        | 12             | 0          |         | 68.2       | 0.0        |         |
| Nov 4  |               |        | 11   | 6            | 8          |           |         | 19        | 8              | 0          |         | 61.5       | 0.0        |         |
| Nov 5  |               |        | 17   | 6            | 7          |           |         | 24        | 6              | 0          |         | 79.6       | 0.0        |         |
| Nov 6  |               |        | 15   | 4            | 7          |           |         | 17        | 7              | 0          |         | 89.6       | 0.0        |         |
| Nov 7  |               |        | 5    | 6            | 3          |           |         | 20        | 12             | 0          |         | 78.9       | 0.0        |         |
| Nov 8  |               |        | 12   | 1            | 3          |           |         | 17        | 10             | 0          |         | 83.4       | 0.0        |         |
| Nov 9  |               |        | 8    | 6            | 3          |           |         | 9         | 6              | 0          |         | 99.2       | 0.0        |         |
| Nov 10 |               |        | 11   | 3            | 1          |           |         | 17        | 6              | 0          |         | 96.6       | 0.0        |         |
| Nov 11 |               |        | 10   | 2            | 1          |           |         | 13        | 3              | 0          |         | 96.9       | 0.0        |         |
| Nov 12 |               |        | 11   | 3            | 2          |           |         | 4         | 2              | 0          |         | 80.5       | 0.0        |         |
| Nov 13 |               |        | 2    | 2            | 0          |           |         | 5         | 4              | 0          |         | 84.0       | 0.0        |         |
| Nov 14 |               |        | 3    | 3            | 1          |           |         | 11        | 7              | 1          |         | 91.8       | 0.0        |         |
| Nov 15 |               |        | 7    | 1            | 0          |           |         | 10        | 2              | 0          |         | 97.1       | 0.0        |         |
| Nov 16 |               |        |      |              |            |           |         |           |                |            |         | 108.9      | 0.0        |         |
| Nov 17 |               |        |      |              |            |           |         |           |                |            |         | 103.9      | 0.5        |         |
| Nov 18 |               |        |      |              |            |           |         |           |                |            |         | 94.3       | 0.0        |         |
| Nov 19 |               |        |      |              |            |           |         |           |                |            |         | 95.8       | 0.0        |         |
| Nov 20 |               |        |      |              |            |           |         |           |                |            |         | 84.7       | 0.0        |         |
| Nov 21 |               |        |      |              |            |           |         |           |                |            |         | 60.9       | 0.0        |         |
| Nov 22 |               |        |      |              |            |           |         |           |                |            |         | 79.8       | 0.0        |         |
| Nov 23 |               |        |      |              |            |           |         |           |                |            |         | 82.1       | 0.0        |         |
| Nov 24 |               |        |      |              |            |           |         |           |                |            |         | 86.4       | 0.0        |         |
| Nov 25 |               |        |      |              |            |           |         |           |                |            |         | 90.7       | 0.0        |         |
| Nov 26 |               |        |      |              |            |           |         |           |                |            |         | 97.6       | 0.0        |         |
| Nov 27 |               |        |      |              |            |           |         |           |                |            |         | 86.5       | 0.0        |         |
| Nov 28 |               |        |      |              |            |           |         |           |                |            |         | 100.6      | 0.0        |         |
| Nov 29 |               |        |      |              |            |           |         |           |                |            |         | 108.1      | 0.3        |         |
| Nov 30 |               |        |      |              |            |           |         |           |                |            |         | 106.6      | 0.3        |         |

|               |  |  |     |    |    |  |  |     |    |   |  |  |  |  |
|---------------|--|--|-----|----|----|--|--|-----|----|---|--|--|--|--|
| <b>TOTALS</b> |  |  | 215 | 69 | 71 |  |  | 215 | 99 | 1 |  |  |  |  |
| <b>AVG.</b>   |  |  | 14  | 5  | 5  |  |  | 14  | 7  | 0 |  |  |  |  |

88.4 0.0  
\*Data unavailable

| RUN YEAR       | CHINOOK       |              | COHO  |      | SOCKEYE | STEELHEAD | WILD STEELHEAD | BULL TROUT | LAMPREY |
|----------------|---------------|--------------|-------|------|---------|-----------|----------------|------------|---------|
|                | ADULT         | JACK         | ADULT | JACK |         |           |                |            |         |
| TOTALS TO DATE |               |              |       |      |         |           |                |            |         |
| SPRING         | 5,311         | 700          |       |      |         |           |                |            |         |
| SUMMER         | 38,588        | 3,271        |       |      |         |           |                |            |         |
| FALL           | 3,559         | 1,417        |       |      |         |           |                |            |         |
| <b>TOTAL</b>   | <b>47,458</b> | <b>5,388</b> |       |      |         |           |                |            |         |

TABLE 170

**MONTHLY COUNT OF STEELHEAD  
WELLS DAM: 1976 - 2012**

| YEAR                       | JAN | FEB | MAR | APR | MAY          | JUN          | JUL           | AUG           | SEP            | OCT           | NOV           | DEC | TOTAL          |
|----------------------------|-----|-----|-----|-----|--------------|--------------|---------------|---------------|----------------|---------------|---------------|-----|----------------|
| 1976                       |     |     |     |     | 44           | 37           | 56            | 530           | 1964           | 1856          | 156           |     | 4,643          |
| 1977                       |     |     |     |     | 37           | 22           | 38            | 1,034         | 818            | 2,849         | 526           |     | 5,324          |
| 1978                       |     |     |     |     | 177          | 32           | 12            | 399           | 432            | 528           |               |     | 1,580          |
| 1979                       |     |     |     |     | 72           | 2            | 22            | 1,212         | 938            | 1,040         | 355           |     | 3,641          |
| 1980                       |     |     |     |     | 202          | 24           | 15            | 382           | 1,032          | 1,358         | 413           |     | 3,426          |
| 1981                       |     |     |     |     | 139          | 23           | 107           | 212           | 1,702          | 1,401         | 513           |     | 4,097          |
| 1982                       |     |     |     |     | 149          | 7            | 67            | 814           | 2,428          | 3,733         | 730           |     | 7,928          |
| 1983                       |     |     |     |     | 26           | 2            | 145           | 1,891         | 10,728         | 5,294         | 1,327         |     | 19,413         |
| 1984                       |     |     |     |     | 153          | 32           | 766           | 5,024         | 6,545          | 3,298         | 778           |     | 16,596         |
| 1985                       |     |     |     |     | 220          | 401          | 2,675         | 3,387         | 9,822          | 2,821         | 541           |     | 19,867         |
| 1986                       |     |     |     |     | 65           | 102          | 1,515         | 4,994         | 3,833          | 2,391         | 403           |     | 13,303         |
| 1987                       |     |     |     |     | 13           | 29           | 413           | 1,897         | 1,668          | 1,236         | 237           |     | 5,493          |
| 1988                       |     |     |     |     | 85           | 103          | 357           | 1,273         | 1,797          | 785           |               |     | 4,400          |
| 1989                       |     |     |     |     | 43           | 11           | 351           | 1,168         | 2,223          | 804           |               |     | 4,600          |
| 1990                       |     |     |     |     | 20           | 16           | 283           | 1,093         | 1,630          | 702           | 104           |     | 3,848          |
| 1991                       |     |     |     |     | 14           | 8            | 361           | 2,054         | 3,078          | 1,923         | 313           |     | 7,751          |
| 1992                       |     |     |     |     | 86           | 168          | 892           | 1,448         | 2,946          | 1,346         | 181           |     | 7,067          |
| 1993                       |     |     |     |     | 48           | 10           | 240           | 706           | 883            | 490           | 23            |     | 2,400          |
| 1994                       |     |     |     |     | 7            | 8            | 240           | 442           | 670            | 695           | 121           |     | 2,183          |
| 1995                       |     |     |     |     | 5            | 6            | 77            | 160           | 509            | 188           | **            |     | 945            |
| 1996                       |     |     |     |     | 11           | 7            | 79            | 764           | 2,099          | 921           | 246           |     | 4,127          |
| 1997                       |     |     |     |     | 38           | 6            | 82            | 868           | 1,758          | 1,199         | 156           |     | 4,107          |
| 1998                       |     |     |     |     | 5            | 3            | 161           | 363           | 1,031          | 995           | 110           |     | 2,668          |
| 1999                       |     |     |     |     | 13           | 33           | 106           | 903           | 1,941          | 446           | 62            |     | 3,504          |
| 2000                       |     |     |     |     | 23           | 6            | 309           | 1,338         | 3,661          | 857           | 86            |     | 6,280          |
| 2001                       |     |     |     |     | 30           | 34           | 947           | 5,404         | 8,326          | 3,339         | 403           |     | 18,483         |
| 2002                       |     |     |     |     | 66           | 33           | 957           | 3,630         | 3,388          | 1,244         | 157           |     | 9,475          |
| 2003                       |     |     |     |     | 21           | 10           | 456           | 2,346         | 4,618          | 2,320         | 192           |     | 9,963          |
| 2004                       |     |     |     |     | 74           | 56           | 916           | 1,709         | 5,039          | 1,401         | 122           |     | 9,317          |
| 2005                       |     |     |     |     | 63           | 14           | 366           | 1,590         | 3,287          | 1,738         | 145           |     | 7,203          |
| 2006                       |     |     |     |     | 28           | 16           | 138           | 922           | 4,017          | 1,248         | 305           |     | 6,674          |
| 2007                       |     |     |     |     | 45           | 18           | 250           | 1,605         | 3,332          | 2,033         | 217           |     | 7,500          |
| 2008                       |     |     |     |     | 145          | 167          | 861           | 2,792         | 3,740          | 1,580         | 523           |     | 9,808          |
| 2009                       |     |     |     |     | 70           | 37           | 502           | 4,777         | 15,992         | 3,813         | 252           |     | 25,443         |
| 2010                       |     |     |     |     | 95           | 34           | 1,085         | 4,524         | 5,235          | 1,581         | 375           |     | 12,929         |
| 2011                       |     |     |     |     | 123          | 4            | 242           | 3,274         | 5,873          | 2,377         | 176           |     | 12,069         |
| 2012                       |     |     |     |     | 101          | 56           | 557           | 3,294         | 4,001          | 1,554         | 215           |     | 9,778          |
| <b>TOTAL</b>               |     |     |     |     | <b>2,556</b> | <b>1,577</b> | <b>16,646</b> | <b>70,223</b> | <b>132,984</b> | <b>63,384</b> | <b>10,463</b> |     | <b>297,833</b> |
| <b>10-Year<br/>Average</b> |     |     |     |     | <b>77</b>    | <b>41</b>    | <b>537</b>    | <b>2,683</b>  | <b>5,513</b>   | <b>1,965</b>  | <b>252</b>    |     | <b>11,068</b>  |

\*\*Wells Dam did not count in November of 1995.