OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE - 16 MCN 09 TSW Removal
COORDINATION DATE - May 25, 2016 **– Update June 09, 2016**
PROJECT- McNary
RESPONSE DATE - June 02, 2016. Comments on update accepted to June 16, 2016.

Description of the problem: Per 2016 "Fish Operations Plan" page 13, the TSWs in spill bays 19 and 20 are to be removed from service on June 8. The removal is to be coordinated with FPOM. A debris spill is to take place between June 06 and 08 (see MOC 16 MCN 08 Debris Spill Notification). This debris spill operation may extend to June 8 with the TSW in bay 20 open as needed that day until the debris removal is completed. The TSW in bay 20 would be open no more than five hours.

Update June 9: Most of the debris was spilled on June 8, but some still remains. The remaining debris is to be spilled June 9 (today) with the help of the log bronc (tug). No changes in turbine operations or spill are necessary for this phase of debris removal. Should there be any remaining forebay debris during the June 9 debris removal operation, TSW 20 may be briefly operated to remove this debris. The debris movement has stirred up forebay milfoil, causing higher differentials on some of the VBSs. VBS cleaning will be necessary before TSW removals take place. Since there is insufficient staff and space to conduct VBS cleaning operations and TSW removal simultaneously, only one TSW will be removed this week. The second TSW removal is expected to take place on Monday, June 13.

Type of outage required: At 0001 hours on June 8, the TSWs in bays 19 and 20 will be closed. The spill pattern will be switched to Table MCN 10, the TSW removal pattern. That morning, the general maintenance staff will begin removing the TSW in bay 19 and installing a standard spill gate. If the debris spill operation is completed, the TSW in bay 20 will remain out of service. If the debris spill operation is not completed, the TSW in bay 20 will opened and used as needed for debris removal. Surface flow out the TSW is required to remove the debris, especially large logs. The TSW in bay 20 will be removed from service on June 8 after completion of the debris removal operation and no later than 1700 hours. Each TSW removal and exchange takes about two days. Wind conditions during the operation can delay the process. Both TSWs should be replace with standard spill gates by close of business on June 11, at which time the spill pattern will be switched to Table 9 MCN-9, the spill pattern with no TSWs in operation.

Impact on facility operation: TSW removal is a onetime operation that occurs every June. Different this year is the possibility of using the TSW in bay 20 for five hours or less to remove forebay debris on June 8.

Dates of impacts/repairs: The TSW in bay 20 may be opened for debris removal on June 8 dependent upon timing as dictated by weather constraints (Typically 1200 to 1700 hours). TSW removal will occur from June 8 to 11.

Length of time for repairs: No repairs are required.

Expected impacts on fish passage: Please refer to MOC 16MCN 08 which covers impacts of debris removal. TSW use for debris removal and TSW removal should have minimal impact on spring or summer Chinook, steelhead and sockeye adults. The ladder exits are located a good distance from the TSWs. Fish passage number in early June 2015, are record in Table 1 below. The data was generated from the Portland District website: http://www.nwp.usace.army.mil/Missions/Environment/Fish/Counts.aspx.

During the same time frame, 22 fallbacks, 17 of which were non-clipped steelhead, were released from the JFF separator. TSW flow for debris removal might alter the passage route of a very small number of fallbacks. TSW closure will result in two spillbays not being available to a small number of fallbacks.

Table 1. McNary Adult Fish Passage June 4 to 15, 2015.

Date	All Chinook	Adult Chinook	Jack Chinook	All Steelhead	Clipped Steelhead	Unclipped Steelhead	Sockeye
6/4/2015	1,577	1,410	167	20	19	1	83
6/5/2015	1,638	1,542	96	18	15	3	74
6/6/2015	1,256	1,184	72	19	18	1	69
6/7/2015	1,025	949	76	16	14	2	105
6/8/2015	1,299	1,215	84	24	22	2	216
6/9/2015	1,652	1,518	134	10	12	-2	479
6/10/2015	1,827	1,701	126	13	9	4	562
6/11/2015	1,737	1,559	178	26	26	0	758
6/12/2015	2,054	1,824	230	21	19	2	947
6/13/2015	2,480	2,198	282	29	26	3	1,192
6/14/2015	2,713	2,594	119	19	23	-4	1,522
6/15/2015	2,287	2,097	190	23	13	10	2,854

TSWs are removed and replaced with standard spillgates to enhance subyearling Chinook passage (which is beginning as reflected in Table 3 below) as they out migrate at greater depths than yearling Chinook, steelhead, coho and sockeye (these species out migration are past 90 percent complete by June 8 as reflected in Table 2 below.). During the TSW use for debris removal, one spillbay will be less efficient at passing a small number of subyearling Chinook from 1200 to 1700 hours. During TSW closure, two spillways will be out of service for subyearling passage for approximately four days. 20 other spillways will be accessible to the subyearling Chinook. A slight amount of searching for a passage route might occur.

Table 2. McNary 10 Average Year 90 Percent Passage Date at JFF.

Yearling CH		Steelhead		Coho		Sockeye	
Clip	Non	Clip	Non	Clip	Non	Clip	Non

25 May	23 May	23 May	27 May	4 Jun	8 Jun	2 Jun	2 Jun
92.5%	90.5%	92.1%	91.2%	90.7%	92.0%	90.8%	94.7%

Table 3. McNary 10 Year Average Percent Passage for Subyearlings at the JFF in June.

Subyearling CH	
Clip	Non-Clipped
1 Jun	1 Jun
0.3%	1.1%
15 Jun	15 Jun
6.3%	5.3%

Subyearling Chinook passage numbers for 2015 at the JFF during the time frame of the TSW replacement for 2016 are reflected in Table 4 below.

Table 4. McNary JFF Passage June 4 to 16, 2015.

Date	Yearling CH	Sub-Yr CH	Clipped SH	Non-clipped SH	Sockeye	Coho
Jun 4	2,814	2,119	859	358	600	800
Jun 6	2,400	6,200	1,250	550	550	600
Jun 8	1,700	7,750	1,400	250	300	1,150
Jun 10	1,874	15,559	1,110	457	150	850
Jun 12	1,011	28,985	103	101	0	100
Jun 14	1,200	21,100	200	100	200	100
Jun 16	411	20,986	302	101	0	200

Comments from agencies

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-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Wednesday, June 01, 2016 12:24 PM
To: Bailey, John C NWW <John.C.Bailey@usace.army.mil>
Cc: Johnson, Bobby NWW <Bobby.Johnson@usace.army.mil>; Lorz, Tom
<lort@critfc.org>
Subject: [EXTERNAL] Re: MOC 16 MCN 09 TSW Removal

John,  I agree with the conclusion in the MOC of minimal effect due to
the extra 5 hour operation of the Bay 20 TSW.  Good luck with the
debris spill.  Thanks,   Gary
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Final results

Please email or call with questions or concerns.
Thank you,

Bobby Johnson
Fisheries Biologist
McNary Lock and Dam

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