# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 19AppL001 – Appendix L Updates for McNary Dam

**Date Submitted**: 18 Dec 2018

**Project**: McNary Lock and Dam

**Requester Name, Agency**: Bobby Johnson, McNary Lock and Dam/USACE

**Final Action:**

**FPP Section**: Appendix L – Avian Action Plans, section 5, McNARY DAM

**Justification for Change**: The McNary avian predation program has greatly changed since Appendix L was first developed. Initially, the program expanded. However, recently, due to budget constraints and changes in technology, the avian program has had to be adjusted while still protecting the majority of the smolt outmigration.

Also, note that the dates for avian hazing will be updated in the schedule of FPP actions at the beginning of the project-specific chapter (i.e., the Gantt chart) as follows:

Table MCN-1. Avian hazing dates: 21 April to 27 July 2019.

**Proposed Change**:

*[See following pages for draft Appendix L with edits in track changes]*

**Comments**:

 2/7/19 FPP Meeting: FPOM needed more time to review the Appendix L change forms. Moved to next week’s FPOM meeting on 2/14 for finalization.

 2/8/19 Charles Morrill, WDFW, via email: “… please note power and field of vision for the binoculars … are the projects all using same power and field of vision binoculars ? Please provide additional clarification on change in distribution in observed/reported numbers with addition to the new outfall following 2012. The new section updates need some editing …”

**Record of Final Action**:

Delete old MCN section and replace with new language below:

5. mcnary dam

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5.1. Introduction. McNary Dam is located at river mile 292 on the Columbia River and is the first dam downstream of the confluence of the Snake and Columbia Rivers. McNary has a diverse mix of piscivorous bird species, including California and Ring-Billed Gulls, Western Grebes, Caspian Terns, American White Pelicans, Double-Crested Cormorants, mergansers and an occasional osprey and eagle. The most numerous birds tend to be the two gull species and they are typically found in the spillway tailrace, which is the most difficult area to haze.

5.2. Monitoring. The fisheries staff does all bird counting. Bird observations and counting by zone usually occur daily from April 1 through September 30. Counting is completed 7 days a week, once per day and generally in the morning using binoculars. The fisheries staff monitors bird and hazing activities more frequently during the hazing season.

The annual daily combined (all zones) high of foraging and non-foraging bird numbers by species for the past seven years from April 1 to July 31 (hazing season) are listed within Table 1, below. As a special note, the juvenile outfall pipe was relocated in the spring of 2012 to a new area, affecting where birds congregated in relation to the pipe outfall and nearby roosting areas. Populations of piscivorous birds and their foraging locations should be considered while examining the values below. Cormorants, gulls, terns and pelicans would be affected by the outfall pipe relocation.

**Table 1.**

|  |  |
| --- | --- |
| **Species** | **Year** |
| **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** |
| Gull | 377 | 140 | 259 | 255 | 360 | 100 | 52 |
| AWPE | 55 | 29 | 53 | 127 | 35 | 63 | 102 |
| CATE | 50 | 95 | 26 | 111 | 185 | 24 | 45 |
| DCCO | 8 | 19 | 16 | 57 | 47 | 12 | 18 |
| Grebe | 61 | 70 | 46 | 144 | 131 | 90 | 52 |

**5.3. Action Plan.** The objective of the hazing program is to reduce predation on migrating juvenile salmonids by piscivorous birds at the dam. Birds are hazed in the areas of the juvenile bypass outfall, spillway and powerhouse discharges along with the forebay near the powerhouse where birds roost or feed. McNary Dam has an active hazing program provided by the United States Department of Agriculture’s (USDA) Wildlife Services. The hazing coverage provided by USDA Wildlife Services which is based off a six year average smolt passage calculation starting with the year 2012, when the outfall was moved. This program consists of one eight hour shift per day, except during McNary’s peak coverage period when there are sixteen hours of coverage per day. Table 2 below outlines McNary Dams 2019 bird hazing personnel schedule.

**Table 2.**

|  |  |  |  |
| --- | --- | --- | --- |
| Deck Hazer #1 | Monday–Friday | 4/21/2019 – 7/27/2019 | Regular Coverage |
| Weekend Hazer #1 | Saturday–Sunday | 4/21/2019 – 7/27/2019 | Regular Coverage |
| Deck Hazer #2 | Monday–Friday | 4/28/2019 – 7/13/2019 | Peak Season |
| Weekend Hazer #2 | Saturday–Sunday | 4/28/2019 – 7/13/2019 | Peak Season |
| Boat Captain &Boat Hazer | 4 days/week (not including Sunday) | 4/28/2019 – 7/06/2019  | Boat Operations |

Boat based hazing takes place approximately six hours per day, four days per week. Boat based hazing is performed at the juvenile bypass outfall pipe to detour cormorants, gulls and terns. At this time, hazing of pelicans is not allowed.

While boat hazing, limited lethal control of cormorants and gulls has been allowed since 2014 as part of the hazing program when other methods prove ineffective. Lethal take is performed and regulated by Wildlife Service employees with appropriate permits in place.

Wildlife Services nonlethal control measures include 15mm cartridges, 18mm CAPA cartridges and Cracker shell pyrotechnics. Wildlife Services employees haze birds on both sides of the river, from various areas on project and worked as far as two miles below the dam.

Passive avian deterrent structures include bird wires which are maintained in several areas of the dam. These areas include parts of the tailrace, the barge dock, the outfall bypass pipe walkway and the navigation lock wing wall. Needle strips are also used on the outfall bypass pipe walkway and barge dock. In addition, audible bird distress sounds are played using the “Bird Guard Pro Plus” system. These devices are located at various places around the project where birds feed or roost, with the distress calls being deployed before the birds arrive.

Bird aversion water sprinklers are located on the juvenile bypass outfall pipe. Two large sprinkler heads or several inverted heads are used depending on tailwater elevation. However, due to high water in 2018, this system was washed out and could not be used the remainder of the season. This system will not be replaced for the 2019 season. A green light laser is being considered for the outfall.

As budgets become tighter, innovative ideas like green light lasers will need to be considered. The hazing plan may also need to be adjusted.

5.4. Incident Response. Much of what the McNary project does to control predatory birds is determined months in advance, so the options are limited as to what the project can do during times of unusually high avian predation. However, the hazing action plan was develop to match peak average smolt outmigration, which should match peak avian activity. The plan design should cover any incidents that might occur. Nevertheless, when predation becomes high in any particular location on project or at any particular time of day, a call is made to Wildlife Services to start a response plan. Wildlife Service employees shifts can be adjusted around to change the shift times or double up on employees at times of high predation. Locations of where the Wildlife Service employees can haze can be adjusted depending on the bird population density. Overtime is still available to add additional hours. Wildlife Services will also increase long range pyrotechnics and use lethal take if needed. Boat days can also be shifted around during the week, removed if not necessary or added on days when predation is high.

5.5. Reporting. Data collected during the counting season is recorded onto a standardized excel spreadsheet. Data collected is limited to gulls, pelicans, terns, cormorants and grebes. There are four zones monitored for birds. These areas include the forebay (FB1), spillway tailrace (SWT1), powerhouse tailrace (PHT1) and the juvenile bypass outfall (JFOF). There are two activities monitored; foraging and non-foraging. Foraging includes activities such as diving into the water after juveniles, feeding on juveniles, and flying or hovering over the water. Non-foraging includes activities such as resting on structures, debris or land, and flying by.

Weekly reporting of bird activity is listed in the ESA Fish Facilities Weekly Report for the McNary project. This data can be found in the section “Other”, labeled avian activity, which includes hazing methods, avian activity and counts for the report week. In the ESA Weekly Report and in the annual Juvenile Facility Monitoring Report, the data collection is focused during the juvenile fish bypass season, roughly April 1 to September 30 with other observations noted outside these dates.

During the hazing season, Wildlife Service personnel also turns in daily and monthly reports.