# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 19AppL003 – Appendix L Updates for LOWER MONUMENTAL

**Date Submitted**: 12/21/18

**Project**: LMN

**Requester Name, Agency**: Chris Peery, USACE NWW; Chuck Barnes, USACE LMN

**Final Action: APPROVED – 2/14/2019**

**FPP Section**: Appendix L – Avian Action Plans, section 7, Lower Monumental Dam.

**Justification for Change**: Updates Appendix L avian action plans for Lower Monumental Dam. Deletes section 7.1.1 and corresponding data table to standardize with other projects and remove extra antiquated data that can easily be found elsewhere in annual reports.

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 LMN-1. Avian hazing dates: 1 April to 2 June 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 ? we not have more current data than 2013 ? Could graphical summaries be provided for McN and Lgs ?”

2/14/19 FPOM: The updated hazing dates are approved but all else will be dealt with at a later date. An FPOM task group will be formed to develop new project sections that are consistent with the RPA.

**Record of Final Action**:

Approved as revised at FPOM 2/14 (only update hazing dates).

7. LOWER MONUMENTAL Dam

7.1. Monitoring. Bird monitoring as part of standard fish ladder inspections will occur from March 1 to September 30. Fish ladder inspections will be conducted 4 days per week, once per day at random times from April 1 to June 30 (crew size permitting, 3 inspections per week minimum if crew size is compromised). Additionally, Wildlife Services (APHIS) will collect these data on the three days per week not covered by COE. This will cover 97% of the typical juvenile salmonid outmigration. Fish ladder inspections will continue (July 1 to December 31) to collect this data at the required rate of 3 inspections per week.

* + 1. The annual high daily bird numbers by species including resting, flyby and foraging birds for the past ten years are as follows. For years 2004 through 2008 only gull numbers were required so the records are so limited. Also of note, is the fact that binoculars were not used on these inspections until 2012. Numbers prior to 2012 should be considered as reduced by some factor relating to the visual acuity of the inspector conducting the inspection.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Year** | | | | | | | | | |
| **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** |
| Gull | 74 | 155 | 86 | 360 | 445 | 37 | 59 | 101 | 104 | 247 |
| Terns | N/A | N/A | N/A | N/A | N/A | 2 | 1 | 6 | 37 | 1 |
| Cormorants | N/A | N/A | N/A | N/A | N/A | 29 | 3 | 9 | 44 | 22 |

Additionally, bird hazing effectiveness inspections will take place once daily from April 1 through June 30. These will consist of flying gull and tern counts and floating cormorant counts in the tailrace and at the juvenile fish bypass outfall. These inspections will be conducted from the river end of the raceway structure and will occur between 1100 and 1300 hours.

1. Data collected during fish ladder inspection will be recorded in a standardized excel spreadsheet and will be limited to: gulls, cormorants, terns, grebes and pelicans. There will be five zones monitored including: Forebay (FB1), Spillway (SWT1), Power house outflow under birdwires (PH1), Power house outflow downstream of birdwires (PH2) and the juvenile bypass outfall (JFOF). There will be two bird activities monitored; Act of Foraging (flying, diving or feeding) and Act of Non-foraging (resting in/on water, on debris, structures or land or while scavenging).
2. Data collected during bird hazing effectiveness inspections will be recorded in a standardized excel spreadsheet and will be limited to: gulls, cormorants and terns.

7.2. Action Plan. Lower Monumental Dam will have an active hazing program consisting of one 8-hour shift per day from April 1 through May 2, and two 8-hour shifts (non-concurrent) from May 3 through June 2. Gulls, cormorants, and terns will be the major focus of this hazing effort.

1. Hazing shifts and zones to be emphasized will be adjusted to maximize deterrent effect on feeding bird populations.
2. Lethal take may occur as part of the hazing program and would exclusively be performed and regulated by licensed agencies and/or companies.
3. Bird wires will be maintained across the turbine discharge area (see zone photo). The addition of bird wires across the spillway is not practical or safe as the fish transport barge and tug would run through them.
4. Bird aversion water cannons will be in operation from April 1 through October 1 at the bypass outfall.
5. Boat hazing is not needed at Lower Monumental as the river is sufficiently narrow to allow effective hazing from the dam structure and shore.

7.3. Incident Response. In response to operational trigger numbers observed during bird hazing effectiveness inspections the following action toolbox items will be utilized. The timing of the introduction of these additional hazing methods will be dependent on available trained staff to carry them out:

1. Propane cannon placement.
2. COE employee (added) hazing with screamers and poppers fired from shore.

**7.3.1. Operational Triggers.** When the following operational trigger criteria are met (depending on the conditions), one of the toolbox items will be put into service. Available staff will likely be a factor in which item is selected. Re-evaluation of the item causing the action will occur daily in regard to stepping up, terminating or randomizing use of the operations from the Action Toolbox. Items will be added to the toolbox as they are tested and proved effective. The following action point numbers based on foraging birds are proposed as a starting point for this process. As more years of data are collected with the benefit of binoculars, these action points will be adjusted accordingly:

1. Action point Gulls = 86.
2. Action point Terns = 43.
3. Action point Cormorants = 15.

**7.4. Daily Abundance of Foraging Birds.** The graphs below show the average daily foraging bird numbers by species for the 2012 and 2013 operating year. Foraging bird numbers can be highly variable during the juvenile fish outmigration. The high foraging gull numbers, tern numbers and cormorant numbers for these two years were 72, 37, and 9, respectively.

**LMN Caspian Terns 2013** – Only 1 Caspian Tern recorded feeding during 2013 inspections (on April 14, 2013).

7.4. Reporting.

**7.4.1. Annual Reporting** of fish ladder inspection bird monitoring results will be included in the “Adult and Juvenile Fish Facility Monitoring Report” focusing on bird activities from April 1 through June 30.

**7.4.2. Weekly Reporting** of bird hazing effectiveness inspections and occurrence of trigger points and resulting action will be added to the standard Fish Facility Weekly Report in its own section and summary table labeled, “Table 2. LMN Tailrace Counts of Foraging Piscivorous Birds”, from April 1 through June 30.