# Fish Passage Plan (FPP) Change Form

**Change Form # & Title**: 22AppL002 – NWW Updates

**Date Submitted**: 1-December-2021

**Project**: NWW Projects

**Requester Name, Agency**: Chris Peery, Corps NWW

**Final Action: APPROVED 27-January-2022**

**FPP Section**:

Appendix L (Predator Mgmt Plans) – Table 2 and sections 5 through 9

**Justification for Change**:

Update NWW projects with 2022 avian hazing dates.

**Proposed Change**:

See following pages for edits to existing FPP text in “track changes.”

**Comments**:

**Record of Final Action**: APPROVED at FPOM 1/27/22.

Table 2. Hazing Dates & Methods at Lower Columbia and Lower Snake River Projects (as of January 2021). See Sections 3-10 below for project-specific descriptions.

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| **Dam** | **Passive Deterrents** | **Hazing Dates** | **Location** | **Hazing hours/day** | **Hazing Methods** | **Action Trigger** |
| **BON** | Avian wires, sprinklers | April 1 – July 31 (Avian) | Shore | 8 hrs/day | Pyrotechnics, sound, propane cannon (if necessary) | 150 birds in a single zone |
| **TDA** | Avian wires | April 15 – July 31 | Shore, Boat | 14 hrs/day Apr/Jul16 hrs/day May/Jun | Pyrotechnics | 50% of 5-yr average |
| **JDA** | Avian wires | April 10 – July 31 | Boat | 8 hrs/day | Pyrotechnics |  50% of 5-yr average |
| **MCN** | Avian wires, needle strips | April 24 – July 23 | Shore, Boat | Shore: 12 hrs/day, 6 days/wk Apr 24-Jul 23, 8 Apr 24-Jul 23, Sundays.Boat: 10 hrs/day, 3 days/wk (except Sundays) May 1-Jul 9  | Pyrotechnics, sound, lasers, lethal take (if necessary) | N/A |
| **IHR** | Avian wires, wire spikes, sprinklers | April 1 – June 30 | Shore, Boat | Shore: 8 hrs/day Apr 1-9, Jun 12-30,16 hrs/day Apr 10-Jun 11.Boat: 3 days/wk Apr 10-16, May 22-Jun 11,5 days/wk Apr 17-May 21 | Pyrotechnics, sound, laser, lethal take (if necessary) | Daily count twice 3-yr average; unresponsive to hazing. |
| **LMN** | Avian wires, sprinklers | April 1 – June 2 (to July 1 if needed) | Shore | 8 hrs/day Apr 1-May 2,16 hrs/day May 3-Jun 2. | Pyrotechnics, sound, lethal take (if necessary) | 86 gulls, 43 terns, 15 cormorants |
| **LGS** | Avian wires, needle strips, sprinklers, visual | March 29 – June 18 | Shore, Boat | Shore: 8 hrs/day Mar 29-Apr 10, May 23-Jun 18,16 hrs/day Apr 11-May 22.Boat: 8 hrs/day Mar 29-Jun 19, 3 days/wk | Pyrotechnics, sound, lethal take (if necessary) | 100 gulls &/or terns, 50 cormorants |
| **LWG** | Avian wires, needle strips, sprinklers | April 1 – June 30 | Shore | 8 hrs/day Apr 1-20, Jun 2-30,16 hrs/day Apr 20-Jun 1 | Pyrotechnics, sound, lethal take (if necessary) | 57 gulls, 110 cormorants |

5. Mcnary dam

5.3. Action Plan. USDA APHIS bird hazing occurs from April 24 through July 23 for 12 hours per day, 6 days per week. Boat hazing is also used from May 1 through July 9, for 10 hours per day, 3 days per week (except Sundays). APHIS crews may at their discretion deploy limited lethal take of gulls and cormorants, particularly if hazing by itself loses its effectiveness. Project personnel may deploy a limited number of propane cannons and electronic bird alarms from time-to-time, typically early in the season. Overhead avian deterrent wires are located along the powerhouse tailrace. The sprinkler system on the juvenile fish bypass outfall and associated plumbing and electrical supply were lost during higher flows in 2019. Deterrent lasers, long range acoustic device (LRAD) and bird calls are currently being used to reduce avian predators at the outfall pipe.

6. Ice harbor dam

**6.2. Hazing**. Ice Harbor Dam utilizes the U.S. Department of Agriculture’s Animal & Plant Health Inspection Service (APHIS) for hazing of piscivorous birds to reduce predation on ESA-listed fish passing the dam. Bird hazing occurs from April 1 through June 30, 7 days per week, and is focused on gulls, terns and cormorants observed to be feeding on passing fish. Land-based hazing is conducted by a Wildlife Specialist 8 hours per day April 1–9 and June 12–30, and 16 hours per day April 10–June 11. Boat-based hazing is conducted 3 days per week April 10–16 and May 22–June 11, and 5 days per week April 17–May 21.

**6.3. Action Plan**. Birds are actively hazed in the immediate forebay of the dam to the Boat Restrictive Zone (BRZ). In the tailrace, birds are actively hazed from the immediate tailrace of the dam downstream to Eagle Island. Data that are noted are the time, avian zone, the species of the bird, number of birds, if they are foraging or not foraging and control action taken.

Birds are hazed daily using pyrotechnics. If a gull or cormorant becomes unresponsive to hazing and is leading other birds to feed on juvenile fish (instigator bird) who are also unresponsive to hazing, lethal take of the instigator bird or a bird in the group of unresponsive birds will occur at the discretion of the boat-based hazing crew. This action will occur most sparingly after hazing efforts have failed to move the birds. In addition, there are bird wires across the turbine discharge area and the spillway area below the Dam. A water cannon is located on the juvenile fish bypass pipe terminus. Wire spikes are installed on light poles, forebay buoys, and other bird perching areas.

**6.4. Incident Response**. If the daily total count of gulls, cormorants, and terns increases to twice the most recent 3-year average daily count for the same week(“threshold”), the Project Biologist will consult with the APHIS field crew leader about focusing hazing efforts at problem bird zones (if this has not already occurred). If these focused efforts do not reduce bird numbers below the threshold, Corps personnel will deploy additional bird deterrent devices, including propane cannons, bird distress calls, and/or hand-held lasers. If bird numbers are still not reduced, the Project Biologist will consult with the APHIS field crew leader about increasing the use of lethal take.*,*

8. little goose dam

**8.2. Action Plan**. Little Goose will perform bird hazing, which includes at least 8 hours per day, 7 days per week of contracted services from March 29 to June 18. During the peak period for bird abundance, April 11-May 22, up to 16 hours of hazing will occur. Boat hazing will occur March 29-June 19 for 8 hours per day, three days per week. Gulls, cormorants and terns will be hazed as needed during the juvenile fish passage season. Hazing will be performed using scare products. These include consumer fireworks, scare cannons, bird bangers and bird screamers.

9. lower granite dam

**9.2. Action Plan**. Base actions will be include the array of methods in long-time use by the USDA/APHIS and will also include limited lethal control when the other methods prove ineffective. Passive avian deterrent structures include the overhead array of 34 wires spanning the tailrace downstream to the end of the navigation lock wall and across the river to the pole located just upstream of the visitor center overlook. Nonlethal control measures will include 15 mm pyrotechnics and Dominator rocket pyrotechnics. Agents will haze birds on both side of the river and will work as far as two miles below the dam. Limited lethal control of gulls and cormorants will be at the discretion of the agents working on site. Lethal take will be conducted with a shotgun in accordance with the USFWS-issued permit. Powerhouse operators and persons conducting tours will be notified before any lethal take activities take place. No lethal take will be allowed when schools or other tour groups are on site. Hazing activities will take place 8 hours per day from April 1 through April 20 and from June 2 through June 30. Hazing will take place 16 hours per day from April 20 through June 1 when the maximum numbers of juvenile salmonids are normally passing the dam.