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Subject: 2024 Avian Management and Monitoring Implementation Plan
Date: Friday, January 26, 2024 5:35:25 PM

Dear Ritchie and Chris:

The National Marine Fisheries Service's (NMFS) 2020 Columbia River System (CRS) Biological Opinion (BiOp) includes Terms and Conditions (Section 2.17.4(5)(Implementation Plans)(A)(vi)) that require the Action Agencies to annually submit to NMFS an "Avian Predation Management and Monitoring Plan." Specifically, NMFS requested that the Action Agencies "provide lists of actions including rationale and monitoring plans by bird species and location annually, no later than January 31." [This email is intended to fulfill this reporting requirement.](#)

A summary of the Action Agencies' planned 2024 avian predation management actions and monitoring activities are provided below. These actions are primarily intended to reduce avian predation on juvenile ESA-listed salmon and steelhead in the lower Snake and lower Columbia Rivers but may also provide benefits for bull trout and Pacific lamprey. The Action Agencies have been involved in efforts to reduce avian predation impacts on ESA-listed salmon and steelhead for decades and are continuing those efforts where feasible, practicable, and within agency authorities.

In addition to planned 2024 activities described below, Action Agency staff will participate in the Fish Passage Operation and Maintenance (FPOM) Regional Forum workgroup to coordinate avian predation management and monitoring activities, consistent with existing authorities. The U.S. Army Corps of Engineers (Corps) will coordinate Corps-funded avian predation research activities through the Studies Review Work Group (SRWG) (e.g., predation rate analysis). The Action Agencies will continue to consider management and monitoring recommendations from the 2021 Avian Predation Synthesis Report when planning future avian predation management and monitoring activities. Any new avian predation management or monitoring efforts associated with the CRS or existing management plans will be coordinated with NMFS and U.S. Fish and Wildlife Service (USFWS) prior to implementation.

1. Avian Predation Management and Monitoring at Dams: The Corps will continue avian predation deterrence and monitoring activities at all eight lower Columbia and lower Snake River dams. At each dam, piscivorous bird numbers will continue to be monitored, birds foraging in dam tailraces will be hazed (to include, in some circumstances, lethal reinforcement) and passive predation deterrents, such as irrigation sprinklers and avian wire arrays, will be deployed. Hazing typically involves launching long-range pyrotechnics at concentrations of feeding birds and occurs primarily near the spillway, powerhouse discharge, and juvenile bypass outfall areas. Other nonlethal measures used at specific sites include falconry abatement. Specific avian predation management activities at these dams will be documented in Appendix L of the 2024 Fish Passage Plan (in development, <http://pweb.crohms.org/tmt/documents/fpp/>). Any potential FY2025 evaluations of dam-based avian predation deterrence measures will be developed and coordinated through the SRWG in 2024, though the Corps does not currently anticipate the

need for such studies.

2. Inland Avian Predation Management Plan (IAPMP): At Crescent Island, the Corps will monitor presence / absence and magnitude of Caspian terns (1-2 site visits or aerial flights during the breeding season) and will report findings to the (FPOM) workgroup. The Corps will work with USFWS McNary National Wildlife Refuge and regional partners to implement activities to dissuade terns from nesting on Crescent and Badger islands (without ground disturbance to ensure preservation of cultural/historic resources). Key updates will be recorded in meeting minutes and supporting documents will be communicated via FPOM and recorded in meeting minutes and supporting documents located at <http://pweb.crohms.org/tmt/documents/FPOM/2010/>.

Reclamation will continue to monitor colony size and passively and actively dissuade Caspian terns within Potholes Reservoir. At Goose Island, Reclamation will continue to implement management actions, e.g., non-lethal measures, including hazing and lethal take of up to 200 tern eggs and monitoring of colony size. Reclamation will increase hours of active hazing for the 2024 season as necessary to hold the colony size below the thresholds set in the IAPMP guidelines. Reclamation will continue developing internal management / design recommendations for Goose Island under the IAPMP's adaptive management framework in order to make Goose Island less suitable for nesting terns. In 2024, Reclamation will continue limited survey and dissuasion of Caspian terns at Banks Lake (including Twinning and Goose Island). Reclamation intends to continue to coordinate with stakeholders within the Columbia River and Plateau.

3. Blalock Islands Operation and Monitoring: From April 10 - June 1 (or as feasible based on river flows), the John Day reservoir elevation will be held between 264.5 feet and 266.5 feet to inundate sandy portions of the Blalock Islands Complex to delay Caspian terns from nesting until after the majority of the Upper Columbia and Snake River steelhead have passed downstream of this area. The Action Agencies intend to begin increasing the forebay elevation prior to initiation of nesting by Caspian terns; operations may begin earlier than April 10 (when the reservoir is typically operated between 262.0 to 266.5 feet). The operation may be adaptively managed due to changing run timing; however, the intent of the operation is to begin returning to reservoir elevations of 262.5-264.5 feet on June 1, but no later than June 15, which generally captures 95% of the annual juvenile steelhead migration. During the operation, safety-related restrictions would continue, including but not limited to maintaining ramp rates for minimizing project erosion and maintaining power grid reliability. Following this operation, the John Day reservoir elevation would return to 262.5 – 264.5 feet operating range through August 31. Consistent with 2023 efforts, Caspian tern use of the Blalock Islands Complex during the 2024 breeding season will be monitored through the Bonneville Power Administration's (Bonneville) basin-wide piscivorous colonial waterbird colony monitoring project (see #7 below). Caspian tern nesting observations at the Blalock Islands Complex will be communicated to NMFS, USFWS, and regional partners through FPOM and through reports provided by Bonneville's contractor.

4. Caspian Tern Management Plan: On East Sand Island, the Corps will continue to implement management actions, including preparation of 1.0 acre of suitable tern nesting habitat and non-lethal hazing outside the 1.0-acre tern nesting area. The Corps will monitor peak colony size (nesting pairs) and will collect and upload data to the PIT Tag Information System (PTAGIS) to enable predation rate analysis on ESA listed juvenile salmon based on recovery of PIT tags. As in 2023, pre-season control tags will be sown by Corps personnel prior to the 2024 nesting season. The need for post-season PIT tag recovery using Corps personnel and a service contract for predation rate estimates will be coordinated throughout the 2024 nesting season. Monthly

updates will be provided at FPOM (<http://pweb.crohms.org/tmt/documents/FPOM/2010/>) and reports will be distributed to FPOM members.

5. Double-crested Cormorant (DCCO) Management Plan: On East Sand Island, Phase 1 and habitat modifications of Phase 2 of the Management Plan have been completed. In 2024, the Action Agencies will monitor peak colony size and will collect data to enable predation rate analysis on ESA-listed juvenile salmonids based on recovery of PIT tags if prioritized by SRWG and as funding is available. As in 2023, pre-season control tags will be sown by Corps personnel prior to the 2024 nesting season. The need for post-season PIT tag recovery using Corps personnel and a service contract for predation rate estimates will be coordinated throughout the 2024 nesting season. In the Columbia River Estuary, the Corps may also monitor dispersal, disposition (e.g., roosting, nesting, etc.) and colony size as needed per the 2020 Biological Assessment Clarification Letter sent to the Services on April 1, 2020. As in previous years, the Corps will apply for permits to lethally take up to 500 DCCO eggs on East Sand Island (to be used only if more than 6,000 pairs of DCCO are present, which is unlikely in 2024). Monthly updates will be provided at FPOM (<http://pweb.crohms.org/tmt/documents/FPOM/2010/>) and reports will be distributed to FPOM members.

6. Avian Predation Management on Estuary Dredge Material Placement Islands: Per commitments under a separate 2012 NMFS Biological Opinion regarding operation and maintenance of the lower Columbia River Federal Navigation Channel, the Corps will conduct various avian predation management and monitoring actions in the Columbia River estuary. On Rice, Miller, and Pillar islands (and other locations as warranted), the Corps will conduct non-lethal hazing of piscivorous waterbirds, apply for permits to lethally take up to 250 DCCO and 200 CATE eggs and monitor piscivorous waterbird presence / absence. Although not a requirement, the Corps may sow pre-season PIT tags on the CATE colony on Rice Island in 2024 to facilitate potential predation rate estimates for this colony. Monthly updates will be provided at FPOM (<http://pweb.crohms.org/tmt/documents/FPOM/2010/>) and reports will be distributed to FPOM members.

7. Monitoring of Other Piscivorous Waterbird Colonies: For 2024, Bonneville will continue to assess the distribution and size of unmanaged, piscivorous waterbird colonies in the Columbia River basin through the lower- to the Mid-Columbia region, including estimating the colony-specific and cumulative, system-wide impacts of colonial waterbirds on salmonid smolt survival in the Columbia River basin. This effort includes assessing colony size and estimating per capita predation rates by Double-crested Cormorants nesting on the Astoria-Megler Bridge, the largest unmanaged colony in the Columbia River estuary. Overall, this effort is similar to monitoring activities conducted in 2023 and is part of the Columbia Basin Fish and Wildlife Program's continued commitments to monitor avian predation in the near term, as described in the Action Agencies' 2020 CRS Biological Assessment.

Please let me know if you have any questions or would like to discuss any of the matters raised above.

Sincerely,

Tim Dykstra
US Army Corps of Engineers - Northwestern Division
Senior Fish Policy Lead

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