

Summary Sheet

Meeting dates: November 1, 2018

Agenda item: Updates on Predation, Pinnipeds, and Killer Whales—Briefing

Presenter(s): Nate Pamplin, Policy Director, WDFW
Dan Rawding, Columbia River Salmon Resource Policy Manager, WDFW
James Lawonn, Avian Predation Specialist, ODFW
Dr. Shaun Clements, Senior Policy Advisor, ODFW
Dr. Penny Becker, Killer Whale Policy Lead, WDFW

Background summary:

Overview

In general, salmon recovery efforts focus on addressing four primary limiting factors, often referred to as the “four Hs”—hatcheries, harvest, habitat, and hydropower. The panel will provide an overview of agency activities as it relates to addressing salmon predation in the Columbia River. In addition, an update will be presented on Governor Inslee’s Southern Resident Killer Whale task force.

Fish Predation

Dan Rawding will highlight factors that have increased juvenile salmonid predation and demonstrate approaches to manage predation with two case studies including northern pikeminnow and northern pike.

Avian Predation

Three federal avian management plans have been implemented recently in the Columbia River Basin in an effort to reduce predation mortality on juvenile salmonids, and all three of these plans are now nearing completion. The plans target Caspian terns and double-crested cormorants, fish-eating colonial waterbirds native to Oregon and Washington. Prior to 1980, 200 or fewer pairs of each species were known to nest near the Columbia River, in contrast to populations in the 2000s, when tern and cormorant abundance reached highs of about 10,000 and 15,000 breeding pairs, respectively. Monitored colonies for these two species have each resulted in average annual losses of 0–16% of available juvenile salmon, depending on river location and specific salmon run. Combined predation rates for the two species have exceeded 20% of available juvenile salmon in the Columbia River estuary for some federal Endangered Species Act-listed salmon runs in recent years.

The three management plans were developed by Federal Columbia River Power System action agencies in accordance with Reasonable and Prudent Alternatives outlined in recent National Marine Fisheries Service (NMFS) Biological Opinions (BiOps), though the Army Corps of Engineers (Corps) has been most involved with plan development and implementation. State fish and wildlife agencies have played an advisory role to federal agencies during development and implementation of the plans, though executive authority belongs to the federal agencies. 1) The *Inland Avian Predation Management Plan* was developed to dissuade Caspian tern breeding on specific colony sites on the Columbia Plateau, near the Tri-Cities area of southeast Washington. Terns were successfully dissuaded from nesting at two major breeding colonies during 2015–2018, but new colonies emerged during the same years, with the largest at the Blalock Islands, managed by the Umatilla National Wildlife Refuge. As a result, about 400–700

tern pairs have continued to nest within the region. Limited data indicate predation rates on Upper Columbia steelhead have been reduced from about 18% to 5% as a result of the plan, but predation rates on Snake River steelhead and sockeye have apparently increased over pre-management levels. 2) The management plan, *Caspian Tern Management to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary*, was intended to reduce the overall breeding population of Caspian terns in the estuary to 2,500–3,125 breeding pairs from a previous high of over 10,000 breeding pairs. The plan reduced the amount of available nesting habitat on East Sand Island from 3.1 acres in 2010 to 1.0 acre in 2015–2018, the minimum area allowed under the plan's Record of Decision. Despite the habitat reduction, about 5,000 breeding pairs used the East Sand Island colony annually during 2015–2018, and predation rates on Upper Columbia and Snake River steelhead during this period averaged about 9%, a significant reduction compared to about 20% prior to management, but greater than the ~5% goal. 3) The *Double-crested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary* was developed to reduce the overall double-crested cormorant population in the estuary from about 13,000 to 5,660 breeding pairs by a combination of culling and habitat modification on East Sand Island. Concurrent with plan implementation during 2015–2018, the size of the cormorant colony on the Astoria-Megler Bridge grew to 1,737 breeding pairs, compared to 333 pairs prior to the management plan. Researchers currently estimate that the bridge could support 3,500 or more breeding pairs, and available evidence suggests breeding cormorants at the bridge colony may consume at least twice as many salmonids per capita compared to breeders on East Sand Island. Overall, available evidence indicates that future estuary-wide predation rates may be no less than, or possibly greater than, prior to management.

In conclusion, two of three avian plans have shown measureable reductions in avian predation, but none of these plans has fully met its biological goals. Survival gains resulting from the plans may thus be inadequate to fully offset hydrosystem mortality as outlined under the most recent, and court-remanded, NMFS BiOps. Further reductions in avian predation are needed to achieve previously determined survival goals. No clear pathway is apparent for further reductions in avian predation under current plans, which are rapidly approaching completion. New federal avian plans may be needed to achieve acceptable levels of predation.

Pinniped Predation—Bonneville Dam Update and Overview of WDFW bioenergetic analyses

Nate Pamplin will present an overview of the current Section 120 permit that states have for removing California sea lions that have preyed on salmon at Bonneville Dam.

In March 2008, fish and wildlife agencies in Washington, Oregon and Idaho received federal authorization to remove California sea lions that have been observed preying on salmon and steelhead below Bonneville Dam. The authority granted under Section 120 of the Marine Mammal Protection Act, allows the states to use lethal or nonlethal measures to remove California sea lions that 1) can be identified by markings, 2) have been hazed to discourage them from predation and 3) have been documented feeding on salmon and steelhead below the dam. The states' federal permit, which was renewed in 2016 for another five years, does not authorize removal of Steller sea lions.

These efforts have helped to control the portion of the salmon and steelhead runs taken by California sea lions below Bonneville Dam, although thousands of fish are still lost to predation every year.

Over the past year, WDFW along with a number of partners, is compiling harbor seal, California sea lion, and Steller sea lion distribution, abundance, and diet information, along with Chinook salmon smolt and adult data for the Puget Sound and the Outer Coast. The data is being used in an analysis to assess localized annual consumption rates and compare with recent publications about pinniped bioenergetics. WDFW is presenting a more in-depth review at the Washington Fish and Wildlife Commission meeting in December 2018.

In August 2018, the Washington Fish and Wildlife Commission adopted a policy position advocating for greater flexibility in state and federal laws to manage pinnipeds and significantly reduce predation on salmon. That policy position can be found at:

https://wdfw.wa.gov/commission/2018_aug08_pinniped_guidance.pdf

Pinniped Predation—Willamette Falls; Federal Legislation Update

Dr. Clements will present an update on the pinniped predation issues in the Willamette River, including results of the most recent monitoring and analyses and the outcome of the Section 120 taskforce meeting. Additionally, he will provide an update on the status and goal of Federal legislation to amend the MMPA. Last, he will describe the efforts underway within ODFW/WDFW and partners to build capacity to address pinniped predation issues regionally.

Southern Resident Killer Whale Task Force

Dr. Becker will present an update on the Southern Resident Orca Task Force and agency recovery actions. She will discuss actions that are already in motion at WDFW, as well as several draft recommendations that are being discussed by the Task Force for their November 2018 report. ODFW and WDFW worked together on the Prey Working Group of the Task Force and ODFW's involvement was integral in the development of actions to increase salmon abundance for orcas. Both Washington and Oregon are highlighted as vital to orca recovery based upon the Chinook stocks that are most important to the species. Washington is looking forward to continuing to work closely with Oregon to implement the recommendations from the Task Force to achieve Southern Resident Orca recovery.

Staff recommendation: N/A

Policy issue(s) and expected outcome: N/A

Fiscal impacts of agency implementation: N/A

Public involvement process used and what you learned: N/A

Action requested and/or proposed next steps: N/A

Draft motion language:

N/A

Post decision communications plan: N/A