



US Army Corps
of Engineers®
Portland District

Columbia River Basin Salmonids and the ESA Frequently Asked Questions

U.S. ARMY CORPS OF ENGINEERS

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The U.S. Army Corps of Engineers is preparing an Environmental Impact Statement to analyze factors and conditions surrounding the predation of double-crested cormorants on endangered salmonids. For more information, visit the Corps' website: www.nwp.usace.army.mil/Missions/Currentprojects/CormorantEIS.aspx.

Q. What is the Endangered Species Act?

A. Passed in 1973, the Endangered Species Act conserves threatened and endangered species and the ecosystems on which those species depend. Listing a species under the ESA as endangered makes it illegal to take that species (i.e., harass, pursue, wound, kill, trap, capture, collect or attempt to do these things). Similar restrictions usually extend to threatened species. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service and the U.S. Fish and Wildlife Service share responsibility for implementing the ESA. Generally,



USFWS manages land and freshwater species, while NOAA Fisheries manages marine and anadromous species, such as salmon and steelhead.

Q. What is a Columbia River Basin salmonid?

A. Pacific salmon and steelhead are salmonids, of the scientific family *Salmonidae*. Salmonids are anadromous fish, which means they hatch in fresh water and travel to the ocean for a few years, then return to spawn in their native streams. These Pacific salmon are in the scientific genus *Oncorhynchus*, which includes steelhead trout and sockeye, chum, chinook and coho salmon.

Q. What is their life cycle?

A. They have complex life cycle that spans a variety of fresh and saltwater habitats. Columbia River Basin

salmon are born in tributaries of the Columbia River. As juveniles, they migrate through the Columbia River estuary and into the Pacific Ocean waters to grow. There are two main freshwater rearing strategies for salmonids: ocean-type and stream-type. Ocean-type salmonids migrate to the sea early in their first year of life. Stream-type salmonids migrate to the sea after rearing for longer periods in freshwater, usually at least one year.

Q. Are ESA-listed fish protected by law?

A. Yes. Under the ESA, five Columbia River Basin salmonids and 13 of their Evolutionary Significant Units are listed as threatened or endangered. A species is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. A species is considered threatened if it is likely to become endangered in the future. The Columbia River Basin salmonids were first listed in the 1990s.



Q. What is an Evolutionary Significant Unit?

A. An ESU is defined as group of Pacific salmon or steelhead trout that a) is substantially reproductively isolated from other units within the species, and b) represents an important component of the evolutionary legacy of the species. For example, the Upper Columbia River Spring run of chinook salmon is considered an Evolutionary Significant Unit.

Q. How does the ESA apply to the Corps of Engineers?

A. The Corps and all federal agencies are directed to consult with NOAA Fisheries, under Section 7(a)(2) of the ESA, on activities that may affect a listed species. Because the Corps operates and maintains several hydropower dams on the Columbia and Upper Snake rivers, it and two other federal agencies formally consult with NOAA Fisheries to ensure that their actions are not likely to jeopardize the continued existence of ESA-listed Columbia River Basin salmon, nor will adversely modify critical habitat.

Q. What is a Biological Opinion?

A. A Biological Opinion stems from the Section 7 consultation and documents NOAA Fisheries' opinion as to whether the federal action is likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of their critical habitat. Biological Opinions may provide an exemption for the take of listed species while specifying the extent of take allowed, the reasonable and prudent alternatives necessary to minimize impacts, and the terms and conditions with which the federal action agency must comply.

Q. What's in the Biological Opinion?

A. In January 2014, NOAA Fisheries updated its 2008 Biological Opinion on the operations of the hydropower dams that make up the Federal Columbia River Power System. In this 2014 supplemental opinion, NOAA Fisheries confirmed the 2008 Biological Opinion conclusion that through implementation of the Biological Opinion's recommended reasonable and prudent alternatives, or RPAs, operation of the FCRPS would not likely jeopardize 13 ESA-listed species of salmon affected by the system. The RPAs include improving fish passage at dams, managing flow, controlling predators that prey on young salmon, improving tributary and estuary habitat and reforming hatchery practices.

Q. How is this related to management of double-crested cormorants?

A. Several of the reasonable and prudent alternatives from the 2008 Biological Opinion were revised in the 2014 Supplement Opinion. These RPAs directly address double-crested cormorant management because of their



impact on ESA-listed juvenile salmon and steelhead in the Columbia River estuary. One large colony, nesting on East Sand Island, consumes millions of juvenile salmonids (both hatchery-raised and ESA-listed) each year. The RPAs require monitoring their population in the estuary, as well as developing and implementing actions with the goal of decreasing predation rates.

A revised 2014 RPA set an East Sand Island double-crested cormorant population target for reducing predation by these birds. The draft EIS evaluates alternatives designed to reduce the cormorant colony to the 2008

population levels. These levels are based on predation rates from analysis completed by NOAA Fisheries.