

EXCEPTS FROM THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THE  
DOUBLE-CRESTED CORMORANT MANAGEMENT PLAN TO REDUCE PREDATION  
OF JUVENILE SALMONIDS IN THE COLUMBIA RIVER ESTUARY

On February 6, 2015, the U.S. Army Corps of Engineers, Portland District made available for public review the Double-crested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary- Final Environmental Impact Statement (FEIS). The Corps has evaluated four action alternatives in the FEIS outlining management strategies to reduce double-crested cormorant (*Phalacrocorax auritus*) predation impacts on juvenile salmon (*Oncorhynchus* spp.) and steelhead (*O. mykiss*) in the Columbia River Estuary. The Council provided comments on the draft EIS in August of 2014 in support of Alternative C.

The FEIS is open for public comment through March 16, 2015 and is available on the Corps webpage in the Documents section at:

[www.nwp.usace.army.mil/Missions/Projects/CormorantEIS](http://www.nwp.usace.army.mil/Missions/Projects/CormorantEIS).

The following excerpts are from the FEIS Executive Summary and the FEIS web page.

#### Proposed action:

In the FEIS, the Corps is proposing to reduce the double-crested cormorant colony size from current levels (approximately 13,000 breeding pairs) to approximately 5,600 breeding pairs on East Sand Island. To accomplish this, the Corps is proposing to implement a management plan that includes shooting individual double-crested cormorants and oiling eggs in nests, along with hazing and integrated non-lethal methods to reduce the colony size over a period of 4 years. Shooting is proposed on East Sand Island and over water from boats. Annual regional monitoring would occur to assess the impacts of the proposed action to the western population of double-crested cormorants. Information gained from this monitoring would be used to adjust future actions through an adaptive management strategy.

Once the management objective for colony size is attained (approximately 5,600 breeding pairs), the Corps is proposing to modify the terrain of East Sand Island on the western portion of the island to reduce the available nesting habitat for double-crested cormorants. This would occur by excavating sand on the western portion of the island to inundate it with tidal flows and placing rock armor along the northern shore to ensure stabilization of the island. To prevent immigration and growth of the colony, the Corps would monitor and perform hazing and monitoring as necessary.

#### The Preferred Alternative/Management Plan

The Council on Environmental Quality defines the agency's preferred alternative as "the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors." Alternative C-1 was identified as the preferred alternative after evaluating the environmental consequences of each alternative when compared to the technical and logistical feasibility of achieving the Final Environmental Impact Statement purpose and need. In fulfilling the Corps' statutory

responsibilities, adoption and implementation of the double-crested cormorant management plan described in Alternative C-1 meets the consultation requirements under the Endangered Species Act as identified by the 2014 Federal Columbia River Power System Supplemental Biological Opinion. Additionally, Alternative C-1 addresses many of the substantive comments received on the Draft Environmental Impact Statement during the public review period.

Because Alternative C-1 proposes a reduction in colony size through culling and egg oiling, there is more certainty this alternative would meet the need of reducing double-crested cormorant predation throughout the Columbia River Estuary than Alternatives B and D, which propose abundance reduction through dispersal. Compared to Alternative C, Alternative C-1 would lessen the potential effects to the short- and long-term population trend of the western population of double-crested cormorants by decreasing the number of adults lethally removed annually. Risk to the long-term sustainability of the western population is further reduced given that take on East Sand Island would Executive Summary – Page 28 occur within a well-monitored and adaptive management framework (see Chapter 2, Section 2.1), and proposed take levels would be reviewed annually under a depredation permit application. Monitoring of the western population would occur annually and this information would be used to evaluate and adjust future management activities. This allows time for annual evaluation and adaptive management changes and increases the ability for the western population to respond from a potential catastrophic event.

Minimal double-crested cormorant dispersal is expected under Alternative C-1 given proposed field techniques, adaptive management protocols, and knowledge from other similar programs. Dispersal levels would likely be similar to Alternative C and lower than Alternatives B and D. Given the proposed adaptive management techniques to minimize dispersal, this alternative would likely have few direct and indirect adverse effects to non-target species and resources off East Sand Island. Alternative C-1 would have similar costs compared to Alternative C and lower associated dollar costs for implementation than Alternatives B and D.

Alternative C-1 is expected to have greater direct adverse effects to individual double-crested cormorants and the colony on East Sand Island than Alternative B, but less than Alternatives C and D. Additionally, a reduction in culling by 40 percent and the inclusion of egg oiling into the alternative could lessen the effects to individuals who have a high existence value for double-crested cormorants and who