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June 7, 2022

MEMORANDUM

TO: Fish & Wildlife Committee

FROM: Cathy P. Kellon

SUBJECT: Update on Steigerwald Island Reconnection Project

BACKGROUND:

Presenter: Chris Collins, Restoration Program Lead, Lower Columbia Estuary Partnership (Estuary Partnership)

Summary: Chris Collins of the Estuary Partnership will share the results of its largest restoration project to date at Steigerwald Lake National Wildlife Refuge, about twenty miles east of Vancouver, Washington. This project reconnected Gibbons Creek and the Columbia River to historic floodplain, after levees disconnected them half-a-century ago. As a result, floodplain habitat on the mainstem Columbia increased by over 14% in the stretch between Bonneville Dam and the Willamette River, benefitting five species of salmonids, two species of lamprey, as well as other native and migrating upriver fish, and numerous different bird and wildlife species.

Relevance: The Steigerwald Reconnection Project (BPA Project Number 2003-011-00) addresses multiple aspects of the 2014 Fish and Wildlife Program, including the measure, "Continuing actions to reconnect the river to its floodplains wherever possible in the mainstem, with special emphasis on the estuary and lower Columbia River," and the Estuary sub-strategy, "Restore ecosystem function to protect and enhance critical habitat and spawning and rearing grounds in the estuary and lower Columbia." This project will make a significant contribution towards the 2020 Program Addendum's *Estuary Strategy Indicator* of "acres of estuary floodplain protected or restored per hydrogeomorphic reach."

Background: The \$31 million Steigerwald Reconnection Project was completed this spring after seven years of planning and three years of construction. Located within the Steigerwald Lake National Wildlife Refuge (Refuge)*, east of Washougal, Washington, the project reconnected the Columbia River and a tributary, Gibbons Creek, to 965 acres of historic floodplain; restored 115 acres of wetlands; and re-established 250 acres of riparian habitat.

It is the largest restoration project on the Lower Columbia River; notable given the site's proximity to the densely developed Portland-Vancouver metro area. Led by the Lower Columbia Estuary Partnership, the multi-phase project also involved the U.S. Fish and Wildlife Service (USFWS), the Port of Camas-Washougal (Port), and a dozen other partners. The Bonneville Power Administration provided approximately \$17 million in funding, and match was provided by Washington Department of Ecology, National Fish and Wildlife Foundation, USFW, and Bonneville Environmental Foundation.

Project sponsors removed 2.2 miles of Army Corps of Engineers' levee plus diversion structures; placed more than eighty-four large wood structures; reconfigured multiple water channels and water bodies; planted over 500,000 trees and shrubs; elevated a section of state highway; and more.

The Estuary Partnership incorporated climate adaptation into the project's design. Specifically, they used a 500-year flood event, instead of the standard 100-year, as the engineering design standard and they forgo traditional riprap to harden the toe of the setback levees, and instead put in a living shoreline, a gently sloping area of overbuild with native vegetation. They also planted more areas with Wapato, an important First Food, in order to provide future harvest opportunities for northwest Tribes.

With the project's completion, Coho, steelhead, and lamprey now have unobstructed passage to rearing and spawning habitat in Gibbons Creek, and the recovery of mainstem floodplain processes creates a patchwork of cool and slow water refuges for migrating salmon and steelhead in a stretch of the Columbia where it is otherwise lacking. Project sponsors anticipate that chum salmon will also make use of the restored alluvial fan of Gibbons creek.

Enhanced terrestrial, riparian, and wetland habitats also benefit local wildlife like beaver, cougar, Western Pond Turtle, and black bear and the two hundred bird species that frequent the Refuge. In addition to its significant ecological benefits, the project added 1.1 miles of public recreational trails within the 1,049-acre Refuge and reduced flooding for residences, Highway 14, the Port's industrial park, and more.

*Steigerwald was designated as a Refuge in the 1980s as partial mitigation for the fish and wildlife impacts of the construction of the second powerhouse at Bonneville Dam about twenty-five miles upriver.

More Info:

News and information about Steigerwald Lake NWR and the Reconnection Project:

- <https://www.estuarypartnership.org/our-work/habitat-restoration/steigerwald-reconnection-project>
- <https://www.fws.gov/refuge/steigerwald-lake>
- <https://www.nwcouncil.org/news/tag/steigerwald-lake/>

NPCC Fish and Wildlife Program references:

- 2014 Program (see esp., pp.41-43 and 68-69)
https://www.nwcouncil.org/sites/default/files/2014-12_1.pdf
- 2020 Program Addendum (see p. 28) <https://www.nwcouncil.org/reports/2020-9/>