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Western Fisheries Research Center (WFRC)

Western Fisheries Science News

Interpretive signage created by designer and illustrator Denise Dahn, with murals on USGS WFRC Pump House created by Jeff Jacobson in background. Photo by Kyle Sato, USGS.

New WFRC Pump-house in Magnuson Park Provides Water for Scientific Research, Wetlands, Wildlife and Recreation

This month, the U.S. Geological Survey announced the completion of its new Western Fisheries Research Center (WFRC) pump-house structure in the southeast part of Magnuson Park in Seattle. The pump-house brings in water from nearby Lake Washington allowing WFRC's Seattle laboratory to conduct research in its wet lab facilities. The pump-house provides water for scientific research, nearby wetlands and associated wildlife and recreation.

In the early 2000s, new regulations, safety concerns and pump wear-and-tear indicated that a new pump-house was needed. WFRC worked together with the City of Seattle Parks and Recreation Department, Magnuson Environmental Stewardship Alliance (MESA) and other interested parties to come up with a plan that would allow the construction of a new pump structure, while improving the park for both wildlife and visitors.

"Thank you to the USGS for their work to improve Magnuson Park for visitors and wildlife through the thoughtful design and construction of the new pump house," said Seattle Mayor Ed Murray.

"USGS has been a good neighbor in the past by providing water for wetlands construction, improving wildlife passage and aesthetics, and by helping restore park land adjacent to their WFRC," said Tom Kelly of MESA.

The coordinated effort involved a design for the new pump-house, which serves a pipeline underground (Continued on page 2)

Research

USGS Collaborates with NOAA's National Marine Fisheries Service (NMFS) on Research in Alaska: Although there is increasing evidence that the first year of marine residency is a critical stage for Chinook salmon, limited information is available on the spatial and temporal distribution of the fish during this period. Juvenile Chinook released from a NOAA's NMFS hatchery at the Little Port Walter Research Station, approximately 140 miles south of Juneau, Alaska on the southern tip of Baranoff Island, leave the hatchery but it is uncertain where they go once released. On May 1-16, scientists from the WFRC Columbia River Research Laboratory (CRRL) traveled to Little Port Walter to assist scientists from NMFS in a study using acoustic telemetry to provide insights into the distribution and migratory patterns of this species. This cooperative project will help determine the feasibility of conducting larger-scale telemetry studies at this location. While in Alaska, USGS scientists will also test the use of underwater autonomous vehicles to mobile-track acoustic-tagged fish in seawater. For more information, contact Theresa Liedtke, tliedtke@usgs.gov, 509-538-2299 x270, or John Beeman, jbeeman@usgs.gov, 509-538-2299 x257.

Events

USGS Provides Presentation to Trout Unlimited about the Elwha River Dam Removals: On April 27, 2016, research ecologist Jeff Duda gave a presentation hosted by the Edmonds Salmon Chapter of Trout Unlimited in Seattle, WA. The presentation gave a background of the Elwha River dam removals, shared progress on the river ecosystem recovery, and discussed the project in a larger perspective of dam removals and river restoration in the 21st (Continued on page 2)

through an easement to USGS, and directing cleaned water from WFRC into the Magnuson Park wetlands. Since the project required removal of some trees and vegetation, restoration and mitigation efforts were included in the plan. The pump structure needed to be an above-ground structure, so the WFRC had local Seattle artist Jeff Jacobson create an environmentally themed mural on its walls and local interpretive designer and illustrator, Denise Dahn, provide educational signage near the structure and associated wetlands.

The wetlands in Magnuson Park—receiving year-round water from the USGS WFRC—provides habitat for a multitude of wildlife species, including waterfowl and other birds, frogs, insects and aquatic invertebrates, and is a wonderful place for wildlife watching and otherwise enjoying nature.

"The USGS conducts cutting-edge fisheries research at this facility, this new pump ensures that vital management information is generated here," said Jill Rolland, Director of the USGS WFRC.

The WFRC's Seattle Headquarters and Seattle Laboratory are located at Sand Point near Lake Washington, from which the pump-house draws water for its wet lab. This laboratory, completed in 1994 replaced a World War II-era Navy building in which it had occupied for nearly three decades. The laboratory is a world-class facility, unique to USGS, and to the Nation's scientific community. The Seattle Laboratory was designed to support fish health and ecology needs in the West.

To see more pictures of the new pump structure in Magnuson Park, visit us on Facebook https://goo.gl/NmwioM. To learn more about the Seattle laboratory, visit our website http://goo.gl/qMegPF.

Events (Continued)

century. Removal of the 210-foot and 105-foot tall dams and the release of a large portion of the 27.5 million cubic yards of stored reservoir sediment have provided an opportunity to study the patterns, processes and outcomes of dam removal from multiple scientific perspectives. For more information, contact Jeff Duda, jduda@usgs.gov, 206-526-2532.

USGS Scientists Provide Educational Outreach about Fisheries Research: On April 21 and 22, 2016, WFRC scientists, from the CRRL, participated in 7th grade science field trips for students from Henkle Middle School (White Salmon, WA). Students visited a USGS fish trap on the White Salmon River and learned about research of juvenile salmonid populations and anadromous fish recolonization since removal of Condit Dam in 2011. For more information, contact Patrick Connolly, pconnolly@usgs.gov, 509-538-2299 x269.

USGS Scientist Presents at Science Conference: Toby Kock, a fishery biologist with the WFRC was invited to present at the 2016 Cowlitz Fisheries and Aquatic Science Conference, which was held in Chehalis, WA on April 20, 2016. The presentation was titled "Using a Multistate Model to Describe Responses of Adult Chinook Salmon to Trap-and-Haul in the Upper Cowlitz River Basin" and focused on a multi-year telemetry study that evaluated trap-and-haul efforts for steelhead, coho salmon, and Chinook salmon populations in the Cowlitz River basin. These efforts were initiated to reintroduce anadromous fish populations into areas blocked by dam construction during the 1960s. For more information, contact Toby Kock, tkock@usgs.gov, 509-538-2299 x215. (Continued next column)

Events (Continued)

USGS Hosts Tours and Lecture at Marrowstone Marine Field Station (MMFS): The WFRC MMFS recently hosted visits from University of Washington (UW) and the Port Townsend Marine Science Center. On April 14, 2016, MMFS hosted a facility tour and a guest lecture for the Diseases of Aquatic Organisms class from the UW. On April 20, 2016, MMFS hosted an additional facility tour for the leadership from the Port Townsend Marine Science Center. The MMFS, located along the northwestern shore of Puget Sound, is a marine/seawater-based research facility focused on understanding ecological processes that impact marine ecosystem health. For more information, contact Paul Hershberger, phershberger@usgs.gov, 360-385-1007 x225.

In the News

On April 6, 2016, WFRC scientists were featured in an article by the Herald and News (Klamath Falls, OR) about monitoring of the Lost River sucker subpopulation that spawns at shoreline springs on the east side of Upper Klamath Lake. For more information, contact David Hewitt, dhewitt@usgs.gov, 541-273-8689 x215.

Publications

Kock, T.J., R.W. Perry, C. Gleizes, W. Dammers, and T.L. Liedtke. 2016. Angler harvest, hatchery return, and tributary stray rates of recycled adult summer steelhead *Oncorhynchus mykiss* in the Cowlitz River, Washington. River Res. Appl. (*Online first*)

Allen, M.B., R.O. Engle, J.S. Zendt, F.C. Shrier, J.T. Wilson, and P.J. Connolly. 2016. Salmon and steelhead in the White Salmon River after the removal of Condit Dam - planning efforts and recolonization results. Fisheries 41(4): 190-203.

Donaldson, M.R., J. Amberg, S. Adhikari, A. Cupp, N. Jensen, J. Romine, A. Wright, M. Gaikowski, and C.D. Suski. 2016. Carbon Dioxide as a Tool to Deter the Movement of Invasive Bigheaded Carps. Trans. Am. Fish. Soc., 145(3): 657-670.

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