

Directors Report



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Forage Fish Research

The Washington Department of Fish and Wildlife (WDFW) and the Department of Natural Resources (DNR) received funding in 2018 to begin implementing Recommendation 15 from the Southern Resident Orca Task Force. Recommendation 15 aims to increase the food available for Chinook by “monitor(ing) forage fish populations. The data gathered will inform decisions on harvest and management actions to ensure sufficient feedstocks to support increased abundance of Chinook.”

In Puget Sound several species of forage fish, including Pacific Herring, Surf Smelt, Pacific Sand Lance, and Northern Anchovy, are prey for adult salmon and other fish, mammals, and birds. Small commercial and recreational fisheries also exist for herring and smelt.

Of the species listed above, three spawn in nearshore areas (i.e., where their habitat is susceptible to degradation from development), but only one (Pacific Herring) has been monitored to develop an annual index of abundance.

To begin addressing Recommendation 15 and fill key data gaps, the WDFW and DNR are:

- Continuing surveys of Puget Sound shorelines to document the timing and map the locations of Surf Smelt and Pacific Sand Lance spawning areas to provide up to date information for Habitat Biologists and nearshore resource managers.
- Continuing annual herring spawning surveys to document the timing and map the location of herring spawn, and produce annual estimates of herring spawning stock biomass to track trends in herring abundance.
- Expanding upon pilot efforts to implement a Surf Smelt tagging and creel study near the focal area of the commercial and recreational smelt fisheries in Puget Sound to begin assessing impacts from these previously unmonitored fisheries.
- Implementing a new survey of juvenile herring on the commercial fishing grounds to assess whether herring abundance and distribution is consistent with the assumptions of our current management design, and to inform future fishery management actions.

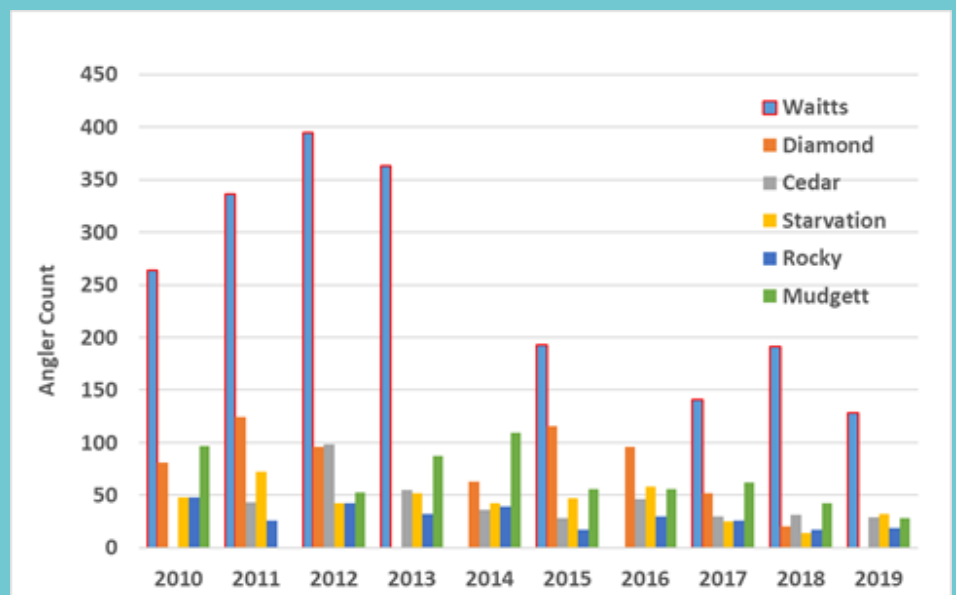
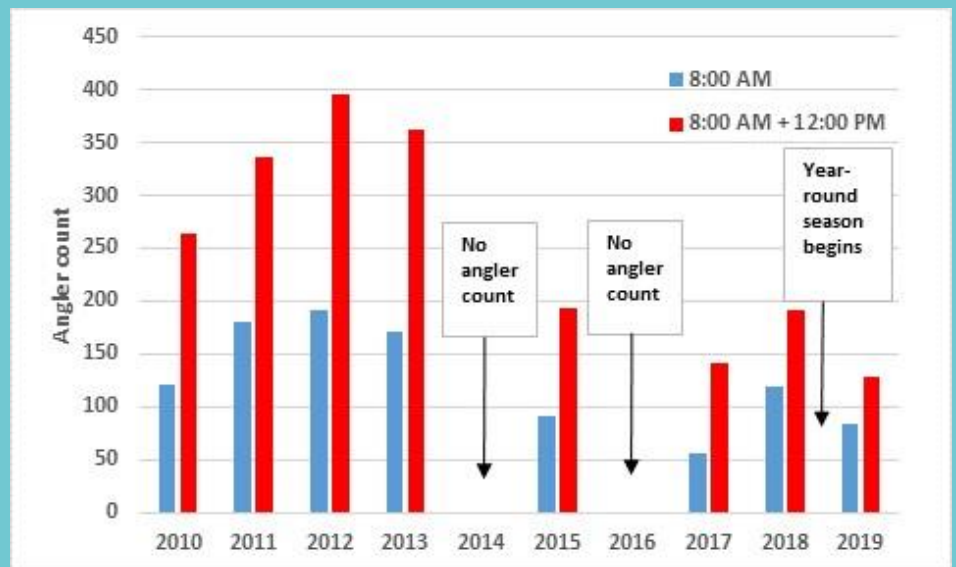
These new and continuing efforts will be conducted by WDFW staff working with six Puget Sound Corps interns that are being funded by the DNR. We are also working with several Marine Resource Committees and the Northwest Straits Commission to monitor several index sites and shoreline restoration sites for Surf Smelt and Sand Lance Spawning.

To implement these projects we are utilizing some traditional methods, such as vegetation rake surveys and sediment sampling to document spawning areas, and some high-tech methods, such as employing scientific echosounders (sonar) to measure the abundance of juvenile herring. In addition, we will use some new-to-forage fish methods, such as applying coded wire tags (commonly used to mark salmon) to assess encounter rates of smelt in the fisheries. Since these surveys are largely dependent on the timing of spawning and/or the fisheries, most of the field work will be conducted from January through September, with the exception of Sand Lance surveys, which occur November through February, and Surf Smelt surveys, which occur year-round.

If you would like additional information about any of these projects or forage fish in general, contact the Washington State Forage Fish Research and Management Lead, Phillip Dionne at Phillip.Dionne@dfw.wa.gov or (360) 902-2641.

Impact of Changing Opening Day at Waitts Lake

Concerns that removal of Opening Day would have a negative impact on the local economy, particularly for resorts operating on the lake, were voiced in a petition received by the Commission in 2018, shortly after the new rule was enacted. The concern was noted, but the petition was denied. WDFW does not have the capacity to directly measure the actual economic impact of the season change. However, angler effort is assumed to provide a proxy for economic impact. Angler count data collected at Waitts Lake on Opening Day of Lowland Lakes Trout Season from 2010-2019 is shown in Figure 1. The blue bars indicate angler counts at 8am. The red bars are combined angler counts at 8am + counts at noon. The angler counts in 2019 are consistent with those observed in 2015 and 2017-2018. While generally lower than counts observed between 2010-2013, this is fairly consistent with patterns of angler effort at other District 1 lakes during those same years (Figure 2).



Partnership to Protect Biodiversity and Working Lands

On July 12, WDFW, the Rocky Mountain Elk Foundation and Forterra completed a transaction to permanently protect 4,475 acres in the west of Yakima. In October, the Executive Management Team visited the property located in the South Fork Cowiche Unit of the Oak Creek Wildlife Area.

The property is positioned in the transition zone between the dry forest to the west and the shrubsteppe to the east creating an incredible amount of habitat diversity. Adding to this diversity is more than seven miles of the South Fork of Cowiche Creek. Habitat for mule deer, elk, Neotropical migratory birds, butterflies, bats, coho and Chinook salmon and bull trout is now protected forever. Outdoor recreationists have been using the primary road that bisects the property to access state and federal lands further into the Cascades for decades. This acquisition ensures the public can enjoy these resources for generations to come.

WDFW used funds from a U.S. Fish and Wildlife Service Section 6 Grant and a mitigation agreement with Pacific Power to secure 3,552 acres. Forterra purchased and will hold the remaining 923 acres until the agency purchases them next year using funds from the Recreation and Conservation Office's Washington Wildlife and Recreation Program.

Future management will be supported by a stewardship agreement with Forterra. In addition, \$500,000 has been provided by the Yakima Basin Integrated Water Management Plan and \$50,000 by the North Yakima Conservation District to support working lands and habitat protection on the property.



Partnership with Mobius Science Center

The Department is partnering with Spokane's Mobius Science Center on a wildlife science series of presentations and activities to teach children and families about the fish, wildlife, and habitat of Washington State. Monthly events began in November with a demonstration of trout spawning by Spokane Hatchery staff. The children in the large crowd were mesmerized, and many of the adults as well. The kids (of all ages) also loved touching the fish, feeling the eggs, and petting the animal pelts staff brought to the event.

Leque Island Estuary Restoration Project

Between July and October 2019, WDFW, along with Ducks Unlimited and Strider Construction, implemented the final phase of the Leque Island Estuary Restoration Project. The team removed over 2.4 miles of levee, excavated over 5 miles of new tidal channels, and created several lower depressions called tidal headwaters. This work restored 250 acres of historic salt marsh at the confluence of the Stillaguamish River, Port Susan, and Skagit Bays where 85% of historic tidal marsh has been displaced.

In addition to habitat restoration benefits, the team constructed a 0.7-mile wave protection berm that protects the City of Stanwood. This berm serves as an elevated walking trail that allows people to continue enjoying the property for bird watching, waterfowl hunting, or just enjoying the views of the marsh and surrounding mountains. Visitors can use a new small boat launch to put in hand-carried boats for paddling access in the new tidal channels. WDFW has also partnered with the City of Stanwood to build a new larger boat launch for motorized boats slightly upriver, planned for 2020 construction. The site opened to the public in mid-November and is already busy with people enjoying the property.

Estuaries are important for juvenile Chinook salmon as they transition from fresh to salt water, as well as shorebirds, waterfowl, and a host of other species in the area.

Because Puget Sound's Southern Resident Killer Whales rely upon Chinook salmon for food, the project is also closely aligned with orca recovery efforts.

The project moved forward with significant stakeholder and local community involvement. Recreation features such as the boat launches and berm top trail, along with the tidal headwater areas that hold water for birds, were suggested by the local Washington Waterfowl Association and Audubon chapters. By involving the community, WDFW was able to identify and include these important features into the project.



There were also skulls, antlers, animal tracks and scat for people to touch and learn about.

The second event in the series was Dec. 7 with a habitat biologist teaching about riparian areas. Future topics include sage and sharptailed grouse and its fascinating mating dance, making scent stations and plaster casts (with Regional Director Steve Pozzanghera!), Spokane's "signature" fish the Redband trout, and Puddles the dog demonstrating how she sniffs out aquatic invasive mussel larva. They've requested an expansion on the partnership for a presentation on wolves during a special spring break event in April.

Mobius has been as engaged in this partnership as we are and has been actively marketing this collaborative effort to the public. The WDFW-Mobius partnership has also caught the notice of the Spokesman-Review newspaper and was featured in a recent article.

