



River herring (alewife and blue back herring) range along the East Coast and have supported one of the oldest fisheries in the United States. Photo credit: Jerry Prezioso, NOAA

Coastal Fish Habitat Partnerships

Winter 2016 Newsletter

2015 Alaska Fish Passage Meeting

In 2014, the [Atlantic Coastal Fish Habitat Partnership](#) (ACFHP) and [The Nature Conservancy](#) (TNC) received funding from the [National Fish and Wildlife Foundation](#) (NFWF) to develop habitat restoration priorities for river herring populations in select watersheds along the Atlantic Coast - the Chesapeake Bay, Gilbert Stuart (Narrow), Connecticut, Hudson, and Delaware rivers, and the Santee-Cooper river system. The [report](#) was recently finalized. General themes of restoration needs across all watersheds included addressing upstream and downstream fish passage barriers, water quality, water quantity and flow alteration, and excessive predation (especially related to passage barriers). This past fall nearly 60 agency practitioners participated in the 2015 Alaska Fish Passage Meeting, convening leading Federal, State, and local engineers, transportation planners, hydrologists, biologists, and regulatory specialists to examine the plans, policies, and practice of fish passage management in Alaska.

The [Southeast Alaska Fish Habitat Partnership \(SEAKFHP\)](#) hosted the 3-day meeting in Juneau, October 13-15, 2015 to examine the state of the science and practice of assessing, maintaining and restoring fish habitat connectivity through road crossings in the region. With over 5,000 inventoried culvert barriers on fish streams across local,

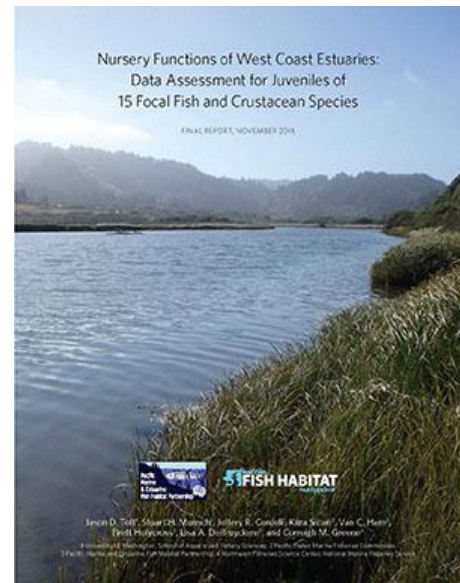
state, and federal ownerships, maintaining current fish passage regulatory policies, design and implementation approaches, and performance monitoring schemas are critical to maintaining habitat connectivity.

As road infrastructure in Alaska improves and expands, maintaining and restoring fish passage at road/stream crossings will remain a top priority for both transportation planners and aquatic habitat managers. Inventories of fish passage barriers on Federal (USFS, FWHA), State (ADOT&PF), private (ANCSA Corporation) and municipal road systems in Alaska have been largely completed over the past 15 years. Advances and refinements in fish passage assessment, prioritization, design, and construction have also occurred across the region as awareness of fish passage issues has increased. While progress has clearly been made, nearly ten years have passed since the last comprehensive review of fish passage management in Alaska.

The first two-days of the 2015 Alaska Fish Passage Meeting covered topics of fish behavior and movement, fish passage assessment and prioritization, fish passage design and fish passage authorities and policy in Alaska. The 3rd day of the meeting convened a smaller group focusing in on specific fish passage related tasks resonating interest among the group for future work group collaboration. 10 unique work group tasks were discussed are proposed as possible future actions by meeting attendees and others as part of reestablishing an Alaska Fish Passage Working Group. A detailed meeting summary, including links to informational resources and meeting presentations can be found on the meeting archive provided on the SEAKFHP website at: <http://www.seakfhp.org/resources/fish-passage-in-alaska-resources-and-publications/>

PMEP Completes Next Chapter of West Coast Fish Habitat Assessment

In November of 2015, PMEP completed another chapter in its West Coast-wide nursery assessment with the production of, "[Nursery Functions of West Coast Estuaries: Data Assessment for Juveniles of 15 Focal Fish and Crustacean Species](#)." The report, made possible with funding by NOAA and the Pacific States Marine Fisheries Commission, addressed the status of estuarine use along the West Coast for 15 focal fish and crustacean species. The species represent major guilds and species of commercial, recreational, and cultural importance, and whose life histories span all or a significant portion of West Coast estuaries. The report synthesizes the available data into a common format to create maps displaying location, average frequency of occurrence, and average catch per unit effort. The report compares habitat impacts by estuarine stressor scores. The report makes the following recommendations:



- Of the eight species that had suitable data for a modeling analysis, Chinook salmon, coho salmon, Pacific herring, and English sole may be the most impacted by estuarine stressors and therefore may receive the largest benefit from restoration efforts in shallow water areas that were the focus of beach seine efforts in our analysis.
- One recommendation for planning of West Coast restoration actions is to target estuaries that have higher stressor scores (over 0.4), with the goal of decreasing the score toward a more natural state.
- Future analysis should seek to isolate effects of individual versus cumulative estuarine stressors, and conduct concurrent fish sampling with measurement and updating of stressors to illustrate dynamic trends.
- Standard habitat classification categories should be used so that labeling and

documentation of sampled habitats are consistent (e.g., the Coastal and Marine Ecological Classification Standard-CMECS), facilitating future overlap for meta-analysis.

- When possible, standard gear types should be used to facilitate accurate calculations of density of fishes that would give more precise measurements and comparability across studies (e.g., 37-m length for beach seines, 10-minute tow for otter trawls).
- Major habitat types, such as emergent tidal marshes, tidal flats, and seagrass beds, would be best suited for analyzing broad-scale habitat patterns in shallow waters. Especially focusing on species with rich datasets, such as the four in our analysis that showed a negative response to estuarine stressors (Chinook salmon, coho salmon, Pacific herring, and English sole).
- Improved spatial data of sampling locations along with current and historic habitat types and habitat losses would allow future data synthesis efforts to accomplish more precise analyses and habitat linkages.
- Acquiring specific measures of nursery function that target changes due to anthropogenic modifications, restoration actions, and sea level rise, will help us to predict the potential for improving and maintaining nursery functions given climate change scenarios.

PMEP has launched the next phase of its assessment work, which will lead to the development of a prioritization scheme to inform strategies investments in conservation and restoration actions in West Coast estuaries.

Celebrating the Wonder of Salmon at the 2015 Mat-Su Salmon Science and Conservation Symposium - Palmer, Alaska



What a great two days! I heard from many people who thought it was the best Symposium yet. Now in its eighth year the Symposium continues to be the most diverse gathering of its kind in the Matanuska and Susitna (Mat-Su) River Basin, bringing together a broad range of people to share information and exchange ideas about salmon science and conservation.

There were 100 people in attendance each day, with an impressive suite of over 30 presentations and a handful of short movies from the first Alaska Fish Film Festival. Symposium topics included the economic value of salmon, hydropower and salmon, mapping Mat-Su waters and important areas for fish, prioritizing efforts for strategic conservation, climate change and resilience of salmon, an update on Partnership progress, strategic priorities and more.

This year's symposium theme was *the wonder of salmon*. We were thrilled to have Alaskan icon Richard Nelson as our Keynote speaker. Dr. Nelson is a cultural anthropologist, award-winning author, former Alaska Writer laureate, radio producer and natural sounds recordist. His free evening presentation, was attended by over 100 members of the community and received a standing ovation. One of the key messages was

about the opportunity in Alaska to get the right balance between human populations and thriving salmon populations. He emphasized the importance of habitat protection and management and that if we can get it right in Alaska, it would be a historic first globally.

"When fishing and habitat are managed wisely, salmon may be the ultimate sustainable natural resource, capable of bringing nutritious food to our homes and millions of dollars to our economy-literally forever. From an economic perspective, wild salmon may be the world's most perfect business model: Nature provides the necessary infrastructure, we invest nothing in the wild production system, and every year we harvest an enormously valuable resource. In this sense, our spawning streams might be called an "environmental bank," and the salmon are "nature's capital." The only requirement is that we treat this remarkable system carefully and gratefully receive the amazing gift of salmon."

- Richard Nelson, Mat-Su Salmon Symposium 2015

Dr. Nelson also emphasized the importance of action to preserve the Alaskan opportunity to get it right. It's not enough to simply appreciate the wonders of salmon. We can all play a part ensuring salmon and the wonders they bring us continue long into the future.

We took time out to recognize the accomplishments of many individuals and organizations. The Nature Conservancy received a giant stuffed salmon in recognition of outstanding leadership and achievement from the Alaska Hydrography Technical Working group for coordinating the efforts of a coalition of partners to successfully map Mat-Su basin streams to national standards. As of December 2015 the entire Mat-Su Basin has been updated and integrated into the USGS National Hydrographic database (NHD), doubling the stream miles in the Mat-Su basin. This will help the partnership continue to support the NFHP Science and Data Committee's national fish habitat condition assessment.

Kim Sollien of the Great Land Trust crowned several *King Makers* for their outstanding work conserving salmon: Jeff and Gay Davis of the Susitna Salmon Center, Doug Hill of Alaska Department of Fish and Game, Mike Gracz of Kenai Watershed Forum, and Richard Nelson.

Echoing Dr. Nelson, Sue Mauger of Cook Inletkeeper closed the symposium with another call to action, suggesting we need to be bold, share our stories and tell people what we know about salmon - so everyone can do their part to conserve them.

Special thanks to the Symposium Planning Committee, this year's presenters, moderators and collaborators, and to our Symposium supporters. Hope to see you there next year!

Find the Symposium proceedings, including Dr. Nelson's recorded evening presentation, on our website www.matsusalmon.org.

California Fish Passage Forum Helps Support Memorial County Park Fish Passage Barrier Remediation Project

Historically, Pescadero watershed in coastal San Mateo County supported runs of steelhead and

coho salmon, but these species have experienced substantial declines during the past century. Although steelhead are found in the system, coho are believed to be extirpated. In 2003, 17,000 hatchery-raised coho smolts were released into Pescadero Creek, but adult coho have only been observed at a few locations over the past decade. Populations are listed as endangered or threatened under the federal Endangered Species Act. The Central California Coast evolutionary significant unit includes San Mateo County and was among one of the first in which both coho and steelhead were listed.



Recovery of coho is inextricably linked to successful recovery in this watershed because Pescadero is the only independent watershed in San Mateo County.

Memorial County Park was acquired in 1924 and dedicated to the memory of soldiers that died in World War I. Facilities at park were constructed by the Depression-era Works Progress Administration, and include a seasonal dam built in 1938 to provide a swimming hole as well as a vehicle ford that allows park visitors to cross the creek to a family camp.

The Memorial County Park Fish Passage Barriers Remediation Project modified the two remaining barriers to fish passage on Pescadero Creek to improve migration conditions for all life stages of coho and steelhead. Passage has been significantly improved for juveniles, and unfettered access now exists for adults.

The San Mateo County Resource Conservation District was the lead for the project. The total cost of the project was \$488,243. The Forum contributed \$67,243.







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