



Upper Deer Creek Falls, representing the upstream extent of anadromous fish habitat in Deer Creek, California. Mill and Deer Creeks, the Carmel River in California, and the Qwuloolt Estuary in Washington are coastal fish habitats designated as 10 Waters to Watch in 2016. The 10 Waters to Watch program highlights rivers, streams, estuaries, and watersheds that benefit from strategic conservation efforts to protect, restore or enhance their current condition.

Coastal Fish Habitat Partnerships

Summer 2016 Newsletter

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ACFHP Study Finds Benthic Habitats Play an Important Role in Contributing to the Health of Coastal Fishes and Invertebrates

The [Atlantic Coastal Fish Habitat Partnership](#) (ACFHP) recently published an article in the journal of *BioScience* quantifying the use of benthic habitats by marine fishes and non-stationary invertebrates along the Atlantic coast. The article, titled 'The Importance of Benthic Habitats for Coastal Fisheries' presents the findings of the ACFHP Species-Habitat Matrix, which evaluates the relative importance of coastal, estuarine, and freshwater habitat types in terms of their value to the major life stages of over 100 species. The study evaluated the importance of benthic habitats as a space for shelter, feeding, and breeding by coastal fish and non-stationary invertebrates in four biogeographic regions of the eastern United States: the North Atlantic (Canadian border to Cape Cod), the Mid-Atlantic (Cape Cod to Cape Hatteras), the South Atlantic (Cape Hatteras to Cape Canaveral), and South Florida (Cape Canaveral to Florida Keys).

Key findings and recommendations include:

- The importance of different habitats changed with latitude: soft sediments and riverine systems scored higher in northern regions (North and Mid-Atlantic), and marshes and coral reefs scored higher in the south (South Atlantic and South Florida).
- The ecological importance of soft sediments to fish and invertebrates have been widely undervalued. Increased recognition of the importance of this habitat in environmental assessments is essential because these areas, found in both estuarine and marine waters, are typically used for offshore energy and other development activities.
- Submerged aquatic vegetation was a key nursery habitat coast-wide.
- Species use an average of 2-4 benthic habitats over their life cycle.
- Anthropogenic impacts have altered habitat availability and use, and climate change is causing disturbance.
- When assessing the value of habitats in a particular site, distinct habitats (e.g., submerged aquatic vegetation) should be evaluated and managed as an interconnected ecosystem rather than in isolation.

These results can be used to evaluate trade-offs and develop habitat-management strategies. ACFHP is currently working to create a web-based tool that will allow fishery and habitat managers, scientists, and grassroots organizations to query data in the Species-Habitat Matrix to help determine the impacts of proposed coastal development or habitat restoration activities. The web-based tool should be available in the upcoming months.

The Species-Habitat Matrix was based on the expertise of many scientists along the Atlantic coast, and was spearheaded by a team of authors: Jacob Kritzer (Environmental Defense Fund), Mari-Beth DeLucia (The Nature Conservancy), Emily Greene (Earth Resources Technology, Inc.), Caroly Shumway (Merrimack River Watershed Council), Marek Topolski (Maryland Department of Natural Resources), Jessie Thomas-Blate (American Rivers), Louis Chiarella (National Marine Fisheries Service), Kay Davy (National Marine Fisheries Service), and Kent Smith (Florida Fish

and Wildlife Conservation Commission).

Access to the abstract and instructions to download the full article can be found here:

<http://bioscience.oxfordjournals.org/content/early/2016/03/04/biosci.biw014.abstract>.

WNTI Announces Successful 2016 NFHP Project Applicants

The Western Native Trout Initiative (WNTI) awarded \$214,242 in grant funding for seven community-based projects that benefit native trout species across the western United States. The projects are funded through the National Fish Habitat Action Plan and the U.S. Fish and Wildlife Service.

IDAHO

[Hangman Creek Relict Channel and Floodplain Reconnection](#)

This project supports a large-scale habitat enhancement project to improve rearing habitat for native Redband Trout populations in a watershed within the Coeur d'Alene Tribe reservation. (\$38,447)

Partner organization: Coeur d'Alene Tribe

[Connecting Teton Creek: Green Property Habitat and Stream Flow Restoration](#)

This project re-establishes stream function and habitat connectivity on Teton Creek, one of the last remaining strongholds for Yellowstone Cutthroat Trout in the entire Greater Yellowstone Ecosystem. (\$42,100)

Partner organization: Friends of the Teton River

MONTANA

[Miners Gulch Stream and Riparian Restoration Project](#)

This project restores a degraded stream and floodplain to improve and protect habitat for Bull Trout and Westslope Cutthroat Trout. (\$20,000)

Partner organization: Lower Clark Fork Watershed Group

[Mulherin Fish Screen & Yellowstone Cutthroat Trout Entrainment Prevention](#)

This project installs a Farmers Screen™ on an irrigation diversion on Mulherin Creek, providing fish passage to the Yellowstone River for spawning Yellowstone Cutthroat Trout and their fry. (\$3,000)

Partner organization: Montana Fish, Wildlife & Parks

UTAH

[Mill Creek Watershed Restoration](#)

This project supports removal of an abandoned 14-foot high hydroelectric dam and reshaping of the stream above the dam site to allow for fish passage for Bonneville Cutthroat Trout, the Utah State Fish. (\$41,000)

Partner organization: Uinta-Wasatch-Cache National Forest

WASHINGTON

[eDNA-based Assessment of Bull Trout Distributions: Wenatchee River Basin](#)

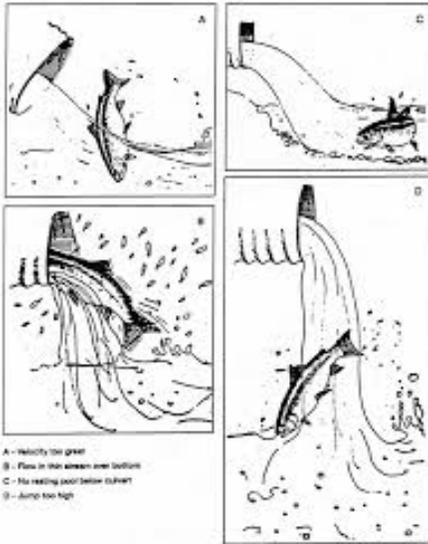
This project will assess the distribution of juvenile Bull Trout, an Endangered Species Act-listed species, in the Wenatchee River Basin using inexpensive, environmental DNA sampling (eDNA). (\$34,695)

Partner organization: Wild Fish Conservancy

[Swauk Creek Floodplain Reconnection Design](#)

for 44 Coastal Species of Conservation Concern, the Gulf Coast Vulnerability Assessment (GCVA), the Southeast Aquatic Connectivity Assessment Project (SEACAP) Tool, Coastal Wetland Migration Under Alternative Future Sea-level Rise and Urbanization Scenarios, and the Southeast Region Conservation Planning Atlas (CPA). [Click here](#) to view the assessment tools compilation document.

The mission of the Gulf of Mexico Alliance is to enhance the ecological and economic health of the Gulf of Mexico through increased regional collaboration. The five U. S. Gulf States (Alabama, Florida, Louisiana, Mississippi, and Texas) face similar challenges and concerns regarding the Gulf Coast and its waters. GOMA relies on a diverse set of partners to forward conservation in the Gulf of Mexico.



Examples of culvert fish-passage barrier conditions (Powers and Osborn 1985).

California Fish Passage Forum Supports Project to Inform Jump Guidelines for Juvenile Salmonids

To successfully negotiate a culvert, salmon must be able to enter the culvert, travel the length of the culvert, leave the culvert, and travel further upstream to a resting area. However, if there is excessive flow velocity, not enough water in the culvert, a blockage in the culvert that prevents the fish from moving through, or anything that prevents fish from entering the culvert, then the culvert becomes a barrier to fish passage.

State of California and federal jump height requirements have been different for many years because of insufficient information on the swimming and leaping abilities of juvenile salmonids. As a result, coordination between agencies and fish passage project applicants and development of economical and efficient fish passage designs has been hampered. The California Fish Passage Forum is supporting a project that will inform development of baseline performance data to streamline coordination and design efforts. The project will be conducted at the Warm Springs Fish Hatchery in Geyserville, California in partnership with NOAA.

Stay tuned for the results!



PMEP Supports Three Projects in 2016 to Advance Fish Habitat in Washington and Oregon

The Pacific Marine and Estuarine Fish

Habitat Partnership is supporting three projects in Oregon and Washington in 2016:

[Columbia-Pacific Passage Habitat Restoration at Megler Creek](#) - This project is one part of the Columbia-Pacific Passage Habitat Restoration Project, a multi-phase project sponsored by the Columbia River Estuary Study Taskforce (CREST), involving three separate tributaries to the Columbia River estuary. Historical alterations to the shoreline have eliminated most of the off-channel foraging and rearing opportunities in this important migration corridor. Riprap and inappropriately-sized and placed culverts have created disconnections to these important habitats. This project will address the fish passage barrier at Megler Creek by replacing an undersized culvert impassable to fish during most tidal and flow cycles, improving tidal connection to 2.2 miles of upstream habitat.

"Almost the entire nine miles of Lower Columbia River shoreline in southwest Washington from Knappton Cove to the town of Chinook is heavily riprapped to protect SR401 and highway 101," said CREST Habitat Restoration Project Manager Jason Smith. "PMEP's contribution will help replace a key undersized culvert with a fully passable stream simulation box culvert, providing access to high quality off-channel rearing and spawning habitat this is important for improving the survival of upper and lower river ESA-listed salmonids."

[Eelgrass mapping of the Coos Estuary](#) - Seagrasses provide important and preferred habitat for many marine and estuarine species, including 13 of PMEP's 15 focal species, yet comprehensive information on the distribution of seagrass habitat in Coos estuary is lacking. This project provides up-to-date GIS data layers and maps characterizing the spatial extent of eelgrass throughout the entire Coos estuary. The results of this project will support habitat classification and conservation, mitigation and restoration planning, and ecological monitoring.

"Eelgrass provides important habitat for juvenile life stages of estuarine-dependent fish and invertebrate species," said Lead Scientist/Research Coordinator Dr. Bree Yednock. "This project will provide updated maps on the distribution and density of eelgrass beds throughout the entire Coos estuary, allowing us to better protect areas with eelgrass and prioritize restoration projects in areas where eelgrass cover has been lost."

[Conservation of Poole Slough in Yaquina estuary](#) - The Yaquina Bay and River is an important production system for coho, chum, and Chinook salmon, winter steelhead trout, and sea-run cutthroat trout, and NOAA has designated the lower reaches and sloughs in the Yaquina system as Critical Habitat for the ESA-listed green sturgeon and eulachon. More than 70% of salt marsh habitat in Yaquina Bay has been lost to historic filling, diking, and ditching activities. This project will result in permanent protection and monitoring of a 150-acre coastal wetland marsh, including developing an assessment of baseline conditions, by The Wetlands Conservancy.