Coastal Fish Habitat Partnerships Newsletter Summer 2014

June 2014 - In This Issue:

The Eel River meets the Pacific near Ferndale, California.

Science and the Coastal FHPs

In the coming months, this sidebar will feature science-FHP connections across the United States. This issue features Hawaii FHP science connections.

The Hawaii Fish Habitat Partnership works collaboratively with science-based initiatives intended to collect, analyze and distribute technical information for coastal fish habitat across the main Hawaiian Islands:

Sentinel Site

Hawaii FHP restoration sites are located within the Hawaii NOAA Sentinel Site network where collaborating agencies and community representatives are using existing NOAA tools, services, and other assets to apply science-based solutions to address regional coastal challenges.

http://oceanservice.noaa.gov/sentinelsites/hawaii.html

Habitat Blueprint

The Hawaii FHP is directing funds to implement aquatic habitat restoration projects within the NOAA Habitat Blueprint effort located along the south Kohala Coast of West Hawaii Island. The Habitat Blueprint provides a framework for NOAA interact strategically across programs and with other organizations to address the growing technical challenges to address coastal and marine habitat loss and degradation.

http://www.habitat.noaa.gov/habitatblueprint/WestHawaii.html

ACFHP Assists North Atlantic LCC in Completing Aquatic Habitat Assessment

The Atlantic Coastal Fish Habitat Partnership (ACFHP) has been working for the past year with the North Atlantic Landscape Conservation Cooperative (LCC) to complete an aquatic habitat assessment of Atlantic coastal draining streams, rivers, and estuaries from Maine to Virginia. The North Atlantic LCC contracted Downstream Strategies from Morgantown, WV to create a spatially explicit data analysis and modeling system for assessing fish habitat condition across the North Atlantic. The objective of the project is to develop priority areas for future protection and restoration work.

A pilot project to assess winter flounder habitat in the Narragansett Bay is underway to refine modelling techniques that will be used for a number of prioritized estuarine and coastal species. ACFHP has worked with its partners to provide fisheries and environmental data needed to complete the modelling effort. Several partners, including Rhode Island Division of Fish and Wildlife, The Nature Conservancy, and Massachusetts Division of Marine Fisheries, have been particularly involved in providing data and technical expertise to this pilot model. ACFHP has also queried partners to

Climate Change and Coastal Streams of Hawaii

All of the larger native stream fauna in Hawaii are diadromous and spend a critically important time of their life history in the coastal marine environment. The Hawaii FHP is collaborating with the U.S. Forest Service, the Pacific Islands Climate Change Cooperative, and Michigan State University to study the ecological effects the changes in stream discharges to the marine environment that are anticipated to occur with the onset of a changing climate. (Link is to a very well-produced video interview with Hawaii FHP Steering Committee member Rich MacKenzie.)

http://www.fs.fed.us/psw/publications/video/mackenzie201210/

"Each of us has this special connection to the sea because we come from the sea, and you just have to measure the amount of salt in water in the human body and in the veins in our blood, and you understand that connection."

~ Secretary of State John Kerry

Two FHPs Join Forces to Celebrate the Eel River Delta

The California Fish Passage Forum and Pacific Marine and Estuarine Fish Habitat Partnership are joining forces in September to highlight the important restoration efforts underway in the Eel River Delta in California.

A perfect storm of four events is occurring in the fall, creating a unique opportunity to showcase the 196-mile long river and its tributaries, which comprise the third largest river in California.

Events include celebrating National Estuaries Week (scheduled for the week of September 23), highlighting the Eel River as a *10 Waters to Watch*, jointly funding the Salt River Ecosystem Restoration project, and hosting the fall Forum meeting in the Arcata, California area.

Both fish habitat partnerships seek to convene existing and potential funders, NFHP leaders, federal and state agency leaders, local government officials, and others to discuss the importance of the delta and showcase collaborative efforts underway in the delta. Stay tuned for more details!

PMEP Makes Progress on West Coast-wide Assessment

The Pacific Marine and Estuarine Fish Habitat Partnership is working with partners to make progress implementing its West Coast-wide juvenile fish habitat assessment.

Working in concert with The Nature Conservancy and SeaSpatial, the assessment team conducted three webinars with experts from Washington, Oregon, and California to inform the content of a State of the Knowledge report. The report, which will be finalized in August of 2014, lays the foundation for the assessment, and includes a new Coastal and Marine Ecological Classification

determine which additional species could be modelled as part of this effort, and a draft list of potential priority species in under consideration.

Coastal fish habitat partnerships such as ACFHP can provide assistance to the Landscape Conservation Cooperatives by acting as the fish habitat conservation coordination body for LCC efforts. This fish habitat modeling project is an implemented example of how ACFHP envisions integrating with the larger landscape level U.S Fish and Wildlife Service collaboration effort.

Exploring Protections for the Lower Hillsborough River

Restoration of Ulele Springs along the Lower Hillsborough River. Photo credit: Lindsay Gardner, SARP.

On May 28th, 35 participants gathered at the Beck Building in downtown Tampa, Florida to collaborate and share ideas about ways to continue to preserve and protect the lower Hillsborough River through participation in a dynamic workshop titled, "Exploring Best Practices for the Lower Hillsborough River." Presented by the Southeast Watershed Forum (SEWF) with partners, the Southeast Aquatic Resources Partnership (SARP) and Ecosphere Restoration Institute, and hosted by the City of Tampa Planning & Development Department, this workshop included an overview of planned activities for slated development on the river

Small group mapping exercise discussions. Photo credit: Lindsay Gardner, SARP.

, as well as expert presentations on low impact development (LID) techniques and a hands-on small group mapping exercise to identify potential target areas where LID/best practices could protect water quality and habitat. The river is also the focus of the city's new and expanding river walk, providing recreational and economic opportunities for people living, working and visiting the area and can showcase how low impact development enhances local quality of life.

The Hillsborough River flows into Tampa Bay, an EPA priority watershed, and has significant value as fish and manatee habitat. At the center of the river walk development is the construction of Waterworks Park and the restoration of Ulele Springs, once a drinking water source for Tampa and a green oasis. As the city grew, the spring was piped

includes a new Coastal and Marine Ecological Classification Standard (CMECS)-based West Coast estuary classification system as well as life history information on 15 focal species:

Green sturgeon (*Acipenser medirostris*)
Leopard shark (*Triakis semifasciata*) Bat ray (*Myliobatis californica*)
Pacific herring (*Clupea pallasi*)
Bay shrimp (*Crangon franciscorum*)
Dungeness crab (*Cancer magister*)
California halibut (*Paralichthys californicus*)
English sole (*Parophrys vetulus*)
Starry flounder (*Platichthys stellatus*)
Shiner perch (*Cymatogaster aggregata*)
Steelhead (*Oncorhynchus mykiss*)
Coho salmon (*Oncorhynchus kisutch*)
Chinook salmon (*Oncorhynchus tshawytscha*)
Brown rockfish (*Sebastes auriculatus*)
Staghorn sculpin (*Leptocottus armatus*)

A peer review of the State of the Knowledge report will occur in July 2014 prior to the report being finalized.

Phase II of the assessment begins in July of 2014. Phase I included a West Coast-wide survey of fish experts to obtain information on existing datasets associated with fish habitat in estuaries. Phase II includes direct contact with individuals who have datasets and data summaries to obtain the data. Phase III will incorporate existing datasets into a geospatial data framework.

In early spring 2015, PMEP will convene West Coast experts to review a draft of the PMEP assessment report and take key next steps to define priorities for West Coast juvenile fish habitat restoration.

Juvenile starry flounder at the Suisun Marsh, California. Photo caption: Dave Giordano.

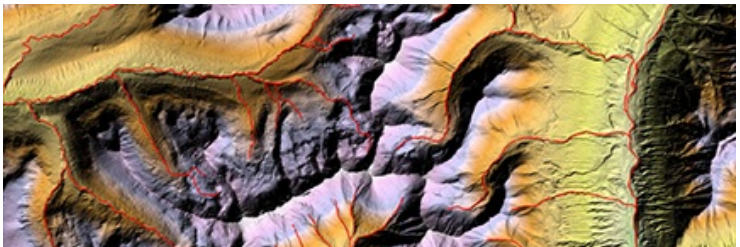
underground and the natural habitat was degraded. An extensive restoration effort (sponsored by SARP, NOAA, USFWS, the Southwest Florida Water Management District (SWFWMD), the Tampa Bay Estuary Program (TBEP), and others) to reconnect water from the springs to the Hillsborough River is under way allowing fish, manatee and other wildlife access to the fresh water and providing thriving habitat in the heart of downtown Tampa. Workshop participants were asked to keep protections and management of this and other areas of potential "prime habitat" in mind when exploring best management practices and considering key partners, potential funding sources, and possible next steps moving forward.

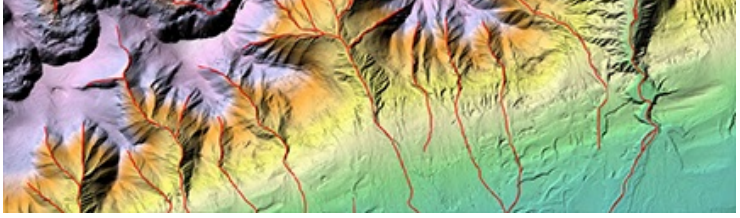
Ultimately, in addition to providing information about methods, the workshop presentations and discussions helped to raise awareness about the cost of and funding and technical support available for best management practices. It also provided a platform for multiple departments at the City to communicate with representatives from federal, state and local agencies, as well as developers about changes to internal processes and programs that would assist in the implementation of best management practices. Lastly, it facilitated communication about ways that the City could potentially encourage and incentivize low impact development. The project was funded by a Targeted Watershed Grant from EPA Region 4.

Mapping and Inventory in the Mat-Su

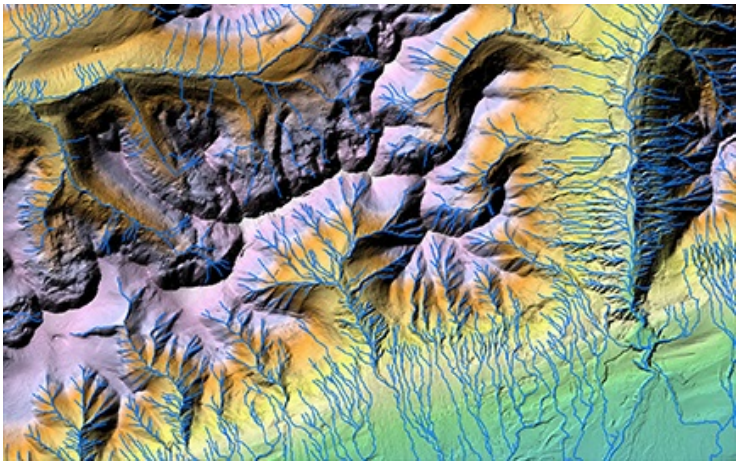
Along with other Alaska Fish Habitat Partnerships (FHPs), the Mat-Su Basin Salmon Habitat Partnership and Alaska Landscape Conservation Cooperatives (LCCs) are working together in multiple areas of conservation overlap. Two primary joint efforts involve mapping and inventory, which meet climate change objectives outlined in the Mat-Su Salmon Partnership's Strategic Plan, as well as Alaska LCC strategies.

The first involves updating the National Hydrography Dataset (NHD), which the NFHP Science and Data Committee uses to evaluate the status of fish habitat across the nation every five years. In the Mat-Su (as across Alaska), this common dataset is insufficiently detailed, has inaccuracies, and is currently lacking the analytical tools that are available in other parts of the U.S. and are needed for the national evaluation. This deficit is also a significant concern to the five LCCs that cover the Alaska landscape.





Currently mapped streams (red lines) of Government Peak near Hatcher Pass on highly detailed topographic relief of the Mat-Su LiDAR project. Red lines represent currently mapped streams. Note how many stream channels in the topography are "missing" a stream line.



Newly mapped stream lines which were derived from the highly-detailed LiDAR topography. Most of the channels in the topography now show a new stream line. Once the new streams are mapped across the Mat-Su basin, they will undergo a verification process to determine which stream channels have water year round and which are seasonal.

In 2013, a statewide interagency group (which included a representative from the Mat-Su Salmon Partnership Steering Committee) formed to address the need to update the NHD in Alaska. That same year, the Alaska FHPs and LCCs secured $300,000 in funding to facilitate upgrades to Alaska's NHD. Over the next three years, partners will support and participate in a large effort to accurately map streams in the Mat-Su Basin so they are on par with the national standards, and create the ability to use NHD+ in the future.

The second effort includes inventory data contribution to the Alaska Online Aquatic Temperature Site (AKOATS). Funded by the Western Alaska LCC, the University of Alaska is developing a comprehensive statewide inventory of current and historic continuous monitoring locations for stream and lake temperatures. This project is one component of the LCC's strategy to understand potential climate impacts to freshwater systems across Alaska, and is building on existing efforts of Alaska FHPs and other organizations throughout the state. With support from NFHP and others, Cook Inlet Keeper (a Mat-Su Partnership member) conducted stream temperature monitoring from 2008-2012. They have analyzed the data and are using it to identify and assess climate vulnerability differences between cold and warm streams across the Mat-Su. This project is an extension of work on the Kenai Peninsula and Kenai FHP, and is being used as a model to evaluate climate change considerations within all Alaska FHPs. Inclusion of FHP project data will continue to strengthen the AKOATS network, and our ability to maximize the resiliency of salmon and other fish in the face of climate change.

Coastal Resource Management Module

A rich source of coastal zone data now available for Southeast Alaska

The coastal zone of Southeast Alaska is a complex and important area as there is a wide range of human activities and productive fish and wildlife habitat occurring at the interface between the terrestrial and marine zones. The Southeast Alaska GIS Library and its partners identified access to a broad range of coastal geospatial data as a starting point for resource managers to navigate this complexity.

Through partner support, the Coastal Resource Management Module is a family of services hosted by the Southeast Alaska GIS Library that facilitates access and visualization to a broad range of users and serves as a gateway of coastal-specific geospatial datasets of Southeast Alaska. This effort fosters region-wide cooperation and collaboration in the sharing, improvement, and acquisition of geospatial data in the coastal zone, a complex and multi-dimensional landscape with many jurisdictions.

The Coastal Resources Assessment Module is a website coupled with geospatial technology that allows users to search, browse, visualize, and download a total of approximately 40 spatial datasets that are relevant to coastal systems. Web mapping services are available, including a data streaming service that allows users to incorporate GIS data seamlessly into their GIS projects, an interactive web map that allows users to both interrogate and visualize Coastal GIS spatial data, and a geoportal tool that allows users to both query and download relevant Coastal GIS spatial datasets.

For a preview, go to: http://seakgis.alaska.edu for the Southeast Alaska GIS Library holdings and/or navigate to http://seakgis.alaska.edu/coastal-resource-module/ for the Coastal Thematic Map gallery. For more information please contact the University of Alaska Southeast GIS Coordinator Kim Homan (907)796-6051, kim.homan@uas.alaska.edu.

The Southeast Alaska GIS Library is a cooperative project sponsored by the Alaska Department of Environmental Conservation, the Alaska Department of Fish and Game, the Alaska Department of Natural Resources, the Alaska Department of Transportation and Public Facilities, the Geographic Information Network of Alaska, The Nature Conservancy of Alaska, the National Marine Fisheries Service of NOAA, the US Forest Service, the US Fish and Wildlife Service, the US Geological Survey and the University of Alaska Southeast and supports a key science and data role for the Southeast Alaska Fish Habitat Partnership. This partnership formed to promote the use of regional geospatial data and develop applications to further research and improve management of public resources in Southeast Alaska.