

# NATIONAL FISH HABITAT PARTNERSHIP

## 2022 ANNUAL REPORT

### OUR MISSION

To protect, restore, and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people.

### THE NATIONAL FISH HABITAT PARTNERSHIP BY THE NUMBERS IN 2022

Through the National Fish Habitat Partnership, the U.S. Fish and Wildlife Service (Service) and its partners provided **\$53.2 million** to support **78** fish habitat conservation projects in **37 states**. The Service provided **\$5.4 million** in 2022, with state resource agencies, non-governmental organizations, and other partners contributing an additional **\$47.6 million**. These projects represent a 9-to-1 leveraged funding match for federal funding with partnership project funding from other sources.



### 2022 NATIONAL FISH HABITAT PARTNERSHIP HIGHLIGHTS

#### Three New Members Joined the National Fish Habitat Board

In February, [The National Fish Habitat Board \(Board\)](#) welcomed three new members during their February 16-17, 2022 meeting. As part of these proceedings, the Board selected two Tribal representatives, Adam Ringia and Karen Linnell, to serve through 2025. Filling these Tribal seats completed the seating of the Board.

Adam Ringia serves as a Water Rights Office Manager for the Pueblo of Laguna and the Executive Director of the Southwest

#### ON THE WEB



[www.fishhabitat.org](http://www.fishhabitat.org)  
[www.facebook.com/nfhap](https://www.facebook.com/nfhap)  
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Tribal Fisheries Commission, a non-profit organization that seeks to promote the fisheries and watershed issues of its 19 member tribes throughout the Southwest. He has experience as a field biologist, federal law enforcement officer, teacher, supervisor, program manager, and department director. He previously served on the National Fish Habitat Board in 2020 as a Tribal representative.

Karen Linnell, appointed to the other Tribal seat, is Tlingit and Ahtna Athabascan. Linnell has been the Executive Director of Ahtna Intertribal Resource Commission (AITRC) since 2015. AITRC is a Tribal and Alaska Native Claims Settlement Act corporation sanctioned non-profit organization focused on land stewardship and honoring traditional culture and values of subsistence hunting and fishing. She is a traditional fisher, hunter, gatherer and has served on numerous local, regional, state, and nationwide councils, boards, and commissions, including the State Board of Game.

In addition to the Tribal seats, the Midwest Association of Fish and Wildlife Agencies (MAFWA) appointed Pat Rivers, Deputy Director of the Minnesota Department of Natural Resources, to fill their seat on the Board on February 1. Pat joins the Board with much previous National Fish Habitat Partnership (NFHP) expertise as a former coordinator for the Midwest Glacial Lake Partnership. Mr. Rivers replaced Doug Nygren, Chief of Fisheries, Kansas Department of Parks and Wildlife. Nygren retired following a long career in Kansas, which included valued service to the Board and Partnerships. The MAFWA term on the Board runs through February 2025.

## 2022 Waters to Watch

In October, the National Fish Habitat Partnership announced their Waters to Watch for 2022. Those projects included (with associated partnerships):

- **Deshka River, Alaska– Mat-Su Basin Salmon Habitat Partnership**
- **Grandpa’s Farm Road Bridge, Alaska – SE Alaska FHP**
- **Huzzah, Curtis, Shoal Creek Wetlands, Missouri – Fishers and Farmers Partnership**
- **Neskowin Fish Passage Improvement Project, Oregon – Pacific Marine and Estuarine Partnership**
- **Raystown Lake, Pennsylvania - Reservoir Fish Habitat Partnership**
- **Susitna River, Alaska – Pacific Lamprey Conservation Initiative**
- **Tin Cup Creek, Idaho – Western Native Trout Initiative/Desert Fish Habitat Partnership (Retrospective)**
- **White River, Vermont – Eastern Brook Trout Joint Venture (Retrospective)**
- **Wildcat Creek, California– California Fish Passage Forum**
- **Williamsburg off-channel wetland, Ohio – Reservoir Fish Habitat Partnership**

For more information and descriptions of the “Waters to Watch” list for 2022 as well as a project map point, Visit: <https://www.fishhabitat.org/waters-to-watch/>



Susitna River, AK

## NOAA FUNDS THREE NATIONAL FISH HABITAT PARTNERSHIP PROJECTS IN 2022

In June, the National Oceanic and Atmospheric Administration (NOAA) Fisheries funded three projects through coastal Fish Habitat Partnership programs working to restore coastal habitats. These projects present direct benefits to coastal communities and economies and actively engage recreational fishing communities that make critical contributions to fish habitat conservation nationwide. [Click here](#) for more information.



The three funded projects included:

- Coral Reef Restoration in West Oahu, Hawai'i – Hawai'i Fish Habitat Partnership
- Engaging Underrepresented Coastal Communities in Recreational Fishing and Habitat Conservation in South Carolina – Southeast Aquatic Resources Partnership
- Alaska Fish Habitat Mapping and Community Science: Engaging Anglers in Caring for Their Home Waters – Southeast Alaska Fish Habitat Partnership

## BASS PRO SHOPS/NATIONAL FISH HABITAT PARTNERSHIP U.S. OPEN GRANT PROGRAM FUNDS NINE PROJECTS IN 2022

The National Fish Habitat Partnership (NFHP) announced nine projects funded through a nearly \$1.6 million grant program established through proceeds from the Bass Pro Shops U.S.



Open Amateur Bass Fishing Championships held in 2021. These projects are high-priority focus areas of the Reservoir Fish Habitat Partnership and were selected out of 30 proposals from across the U.S.

The selected projects bring over \$3 million in additional leveraged funds beyond the Bass Pro Shop grants, all of which will support on-the-ground efforts benefitting fish habitat and improving angling opportunities.



Johnny Morris, Founder of Bass Pro Shops presented National Fish Habitat Partnership Program Manager, Ryan Roberts with a check at the Bass Pro Shops U.S. Championship on November 21, 2021. (Photo Credit: Bass Pro Shops)

Projects funded through this opportunity include:

- Beaver Lake, Norfolk Lake, and Bull Shoals Lake, Arkansas
- Blue Marsh Lake, Pennsylvania
- Lake Shelbyville, Illinois
- Mark Twain Lake, Missouri
- Old Hickory Lake, Tennessee
- Pymatuning Reservoir, Pennsylvania/Ohio
- Ralph Hall Reservoir, Texas
- Table Rock Lake, Missouri
- Three-Mile Lake, Iowa



Funding for this grant program is managed through [Beyond the Pond](#), the non-profit organization established in 2015 to benefit the National Fish Habitat Partnership and associated Fish Habitat Partnerships under NFHP.

Partnerships under NFHP have online donation pages set-up to receive donations at [https://www.flipcause.com/secure/cause\\_pdetails/MTQ1Nzcx](https://www.flipcause.com/secure/cause_pdetails/MTQ1Nzcx)

## NATIONAL FISH HABITAT PARTNERSHIP SPONSORS WILDLIFE FOREVER FISH ART CONTEST

The National Fish Habitat Partnership (NFHP) continued their strategic partnership with Wildlife Forever in 2022. This collaboration will share The Art of Conservation® with young people across the nation, focusing on the critical role habitat has on fish and aquatic resources.



The mission of Wildlife Forever is to conserve America's wildlife heritage through conservation education, preservation of habitat and management of fish and wildlife. In honor of this new alliance, NFHP, through the State Fish - Art Contest has created the [Fish Habitat Creative Writing Award](#) to highlight the importance of protecting, restoring, and enhancing aquatic habitat.

The Fish Habitat Writing Award is open to all contestants participating in the Fish Art Contest. In the writing portion of their entry, participants should highlight the unique habitat requirements of their fish species and the importance of quality habitat for all aquatic species. Winners were selected in four grade categories; Kindergarten-3rd grade, 4th-6th grade, 7th-9th grade, and 10th-12th grade.



## FISH HABITAT PARTNERSHIP (FHP) ACCOMPLISHMENTS 2022

### Atlantic Coastal Fish Habitat Partnership

#### Communications & Outreach



- Media on ACFHP's work and endorsed projects in 2022 included a new ACFHP [promotional video](#), publishing the Atlantic States Marine Fisheries Commission Habitat Hotline, promoting [Atlantic City's Shell Recycling Program](#), and distributing partner newsletters.
- ACFHP presented at the Chesapeake Bay Program Fish Habitat Action Team meeting and multiple Atlantic States Marine Fisheries Commission meetings.
- ACFHP is serving on the South Atlantic Fishery Management Council Habitat Advisory Panel; Chesapeake Bay Program Fisheries Goal Implementation Team; Atlantic Coast River Herring Collaborative Forum; and the Submerged Aquatic Vegetation Monitoring Community of Practice (A-SAVE), led by the Pew Charitable Trusts.
- ACFHP is working with the South Carolina Department of Natural Resources to engage under-represented schools in oyster habitat restoration and provide access to recreational fishing, with funding from NOAA's *Increasing Recreational Fisheries Engagement through the FHPs*.

#### Science

- Our [Species-Habitat Matrix](#) was used in a project to integrate NOAA's Northeast Fish Habitat Climate Vulnerability and Fish Climate Vulnerability Assessments.
- ACFHP serves on the Steering Committee for the Mid-Atlantic and New England Fishery Management Councils' Northeast Regional Habitat Assessment.

#### Conservation Accomplishments

When completed, Atlantic Coastal Fish Habitat Partnership projects funded in 2022 will:

- Restore 3.5 acres of oyster habitat and plant oyster spat to reach restoration targets in the South River and Herring Bay in Anne Arundel County, MD.
- Restore 45 miles of mainstem and tributary habitat with riparian plantings and removal of the Paulins Dam, opening habitat for diadromous fish in Blairstown, NJ.

- Restore access to 8,960 acres and 137 miles of stream habitat for diadromous fish with a pool and weir fishway installation at the Baskahegan Dam in Danforth, ME.
- Restore 36 miles of upstream access to 180 acres of habitat for River Herring and American Eel with removal of the Ames Pond Dam and installation of a pool-and-weir fishway around the downstream Rock Falls in Braintree, MA.
- Restore fish passage and ecological connectivity to 6.5 miles of the Norwalk River to Long Island Sound, and reconnect 1.13 acres of heterogeneous floodplain near Wilton, CT.

## California Fish Passage Forum

### Communications & Outreach

- **Wildcat Creek was selected as a 2022 Waters to Watch** by the National Fish Habitat Partnership.
- **Klamath Fish Passage Summit for World Fish Migration Day (WFMD) 2022:** The Forum worked with the Salmonid Restoration Federation (SRF) to host an event celebrating the pending removal of the four Klamath River Dams and work done over the last two decades to improve fish passage in the Klamath Basin. This event brought together more than 80 participants and featured a moving half-day plenary featuring tribal speakers, updates from the Klamath River Renewal Corporation (KRRC), and technical presentations from partners on the restoration activities completed and underway.
- **Facilitated Outreach for PAD Plan Implementation:** Forum coordinator guided and supported implementation of outreach related to the implementation of the PAD Plan (an effort to review and update all records for fish passage barriers in the California Passage Assessment Database (PAD)).
- **Initiated Quarterly e-Newsletter** to stakeholders and partners
- **Enhanced internal communications via an internal newsletter** to the Steering Committee providing programmatic updates, explanations of funding processes and timelines, queries for input on Waters to Watch nominations and future e-newsletter content.



### Science

- **Support the State of California’s Passage Assessment Database (PAD):** The Forum’s Science and Data Committee, continued to support updating inputs and barrier information to the PAD

- **Baseline Habitat Layer Refinement:** continued to refine the Baseline Fish Habitat (BFH) layer, an effort to model potential habitat for California’s Salmon and Trout populations for the Forum and partners
- **First Pass Incidental Report Form & Mobile Application:** conducted an initial review of the First Pass Incidental Report Form which feeds into an accompanying mobile application developed by PSMFC staff and distributed the form to the Forum Science & Data Committee and other related partners for their review.
- **FISHPASS — Evaluation of effectiveness and utility of barrier optimization tool:** Due to the cost maintaining and updating the tool, the Forum’s Governance and Science & Data Committee spent much of 2022 discussing and evaluating whether it was in the Forum’s best interest to continue supporting FISHPass. These discussions are still underway as new sources of funding and technical support are sought.

### Conservation Accomplishments

In 2022, four conservation projects supported by the Forum were completed, addressing connectivity needs and habitat restoration for spawning and rearing habitat and benefiting species including Coho salmon, Chinook Salmon, Steelhead/rainbow trout, Pacific Lamprey, Coastal cutthroat trout, Green sturgeon, Threespine stickleback.

- 1 barrier optimization plan for the Smith River watershed, which includes barrier assessments of 385 potential sites to determine current fish passage status
- 1 project design completed to improve a low flow fish passage barrier
- 7.6 stream miles enhanced
- 1.1 acres of off channel habitat restored

## Desert Fish Habitat Partnership

### Communications & Outreach

- DFHP continued collaboration on an educational and outreach focused project titled “Communicating the conservation value of Nevada’s desert fishes and their habitats.” This project will be conducted by [Freshwaters Illustrated](#) and shared widely once complete. An estimated 50,000 online video views and engagements in addition to the film being shown at 25 physical or virtual presentations/events are expected.



DESERT FISH HABITAT  
PARTNERSHIP

- 300 students reached through targeted educational programs.
- DFHP used Multi-State Grant funds to contribute to a Gila River Basin film project by Freshwaters Illustrated, and to pay an independent artist to create five new designs for DFHP.
- DFHP coordinated with the Desert Fishes Council throughout FY2022 to participate in the first in-person annual meeting since the pandemic, which took place early in FY2023. DFHP set up a booth to handout educational and outreach materials, and the DFHP coordinator moderated a session and served as a mentor in the student and professional networking session.
- The Partnership continued coordination on two outreach projects with Freshwaters Illustrated, a non-profit organization whose mission is “raising public awareness about the life, study, and conservation of freshwater ecosystems through immersive visual media and storytelling, and sharing imagery and stories with educators, conservation groups, and community audiences.” Both projects have an anticipated completion date of FY2023.
- DFHP used USFWS Multi-State Conservation Grant funds to hire an independent artist to create five new designs for DFHP that can be used in a variety of ways: stickers, hats, mugs, website, etc.



- Kept [website](#) up to date, including sending out regular [Shout-Outs](#), which cover topics from announcing RFPs, introducing new committee members, and highlighting funded projects. In addition, a new website page was created to house the Multi-Species Habitat Assessments that DFHP is working towards completing for the entire geographic area.
- Desert fish continued to be highlighted on DFHP’s social media accounts, including [Facebook](#) and [Instagram](#), through the #DesertFishFriday initiative.

**Science**

- Two important regional multi-species aquatic habitat assessments that DFHP contributed funds towards were completed in FY2022. These assessments filled a critical gap in DFHP’s geographic region that has a completed assessment with the same methodologies that produce a “conservation rank” for each catchment/subwatershed. Projects submitted to DFHP for funding consideration can be overlaid on these assessments which gives a landscape/basin-level context for each project

location. Where these assessments have not been completed, the score from the NFHP National Assessment is used as a proxy for these conservation ranks.

- DFHP has identified efforts in Oregon and southern Washington that are currently underway that can be used to fill the last remaining gap of DFHP’s geographic region. Once completed, DFHP plans to incorporate conservation ranks into project prioritization efforts, such as developing future work plans or prioritizing projects through the annual request for project proposals. DFHP has and will continue to share all data from these assessments with the NFHP National Science and Data Committee.
- DFHP hopes these regional assessments can be incorporated into future national assessments.
- DFHP Executive and Steering Committee members collaborated together and with other experts to drive forward research and scientific knowledge of desert fishes and ecosystems. Overall, DFHP executive and steering committee members published over 10 scientific journal articles on desert aquatic species, habitats, or climate change.

**Conservation Accomplishments**

- DFHP contributed funds towards five habitat restoration and protection projects that were completed in 2022. These projects will benefit over 30 DFHP focal species.
- 2 barriers removed re-opening over 14 miles of habitat to native species
- 0.5 stream miles and 0.25 riparian miles restored
- Over 15 species and populations, and dozens of watersheds assessed and monitored for project effectiveness
- Threats addressed across these projects included competition, predation, or hybridization with nonnative species, fragmented habitat, degrading instream and riparian habitat, loss of water quantity, and gaps in regional scale habitat data necessary for prioritization efforts.
- For a subset of funded projects, DFHP is both strategic and intentional about being an early contributor of large, complex, expensive, and high value projects that may have a more extended completion timeline. Our intent is to leverage DFHP’s early commitment to attract other partners and to get the project “off the ground.” In one example, DFHP’s \$50,000 investment to initiate the project led to \$450,000 leveraged dollars with six funding partners.

## Driftless Area Restoration Effort Fish Habitat Partnership

### Communications & Outreach

- The Driftless Area Restoration Effort (DARE) hosted our 14th annual Driftless Area Symposium online in March 2022. We had:
  - 500 live viewers
  - 4500 additional viewers of the saved content
  - Videos are available on our Facebook Page: <https://www.facebook.com/TUDriftless/>
- We have created a YouTube channel for the Driftless Area: <https://www.youtube.com/playlist?list=PLEXZljM8NmhsxMqEGJQz9T150Sz7HCGvH>
- We provided an introduction & training activity through Wisconsin Land + Water for county conservation departments and partners in November 2022.
- The DARE program manager presented about the Driftless Area program on the Wisconsin “Talking Trout” program in January 2023.
- The DARE program manager was a guest lecturer at Viterbo University in October 2022.
- DARE program manager participated in the Grasslands 2.0 Learning Hub workshop “Visions for the Ridge & Valley” in October 2022.
- We created a website for the DARE NFHP program on Trout Unlimited’s website: <https://tu.org/driftless>.
- DARE and our partners met with 77 landowners to discuss conservation programs.



### Science

- We continued our WiseH2O water quality app for the Driftless Area and had 60 observers log data at 450 sites on 428 stream locations.
- Trout Unlimited presented on the WiseH2O water quality work at the Wild Trout Symposium in 2022.
- Conducted pre- and post-restoration fish surveys in conjunction with state agencies at numerous sites.
- Received funding to conduct Aquatic Organism Passage inventories in 4 counties in the Driftless Area beginning in 2023.

- Partners are monitoring projects, testing water quality and providing data/reports.
- Provided input to watershed planning activities in all 4 Driftless states.

### Conservation Accomplishments

- Restored 1.1 miles of cold water streams in Wisconsin
- Restored 1.7 miles of riparian habitat
- Partners held ~9 workshops with landowners and farmer-led watershed organizations
- Received renewal for \$6.1 million Regional Conservation Partnership Program for Trout Unlimited Driftless Area Program. In 2022, this program restored an additional 6.5 miles of streams, removed 876 lbs of phosphorus from eroding streambanks, established 10 miles of riparian buffers, installed 66 acres of pollinator habitats and installed 208 habitat features in streams.

## Eastern Brook Trout Joint Venture

### Communications & Outreach

- EBTJV held its first ever hybrid meeting, and the first annual meeting since 2019, at the National Conservation Training Center in April. The main focus was science-based management for protecting, restoring, and enhancing wild brook trout populations. For more information and links to presentations, see <https://easternbrooktrout.org/news-events/news-inbox/see-our-videos-from-the-recent-ebtjv-annual-meeting>
- EBTJV partnered with WV Rivers Coalition for landowner outreach about brook trout and the role of brook trout and stream habitat projects in protecting drinking water for communities. Approximately 1000 brochures were distributed to watershed groups in West Virginia.
- EBTJV expanded its use of newsletters linking to web-based news items, producing [seven e-Newsletters](#) via its listserve (approx. 700). Content is a mixture of original blog posts to promote EBTJV’s work and messaging, alongside other news links of interest to the coldwater conservation community. The response has been very positive, and email open rate continues to be strong, between 30 and 50%.





2022 Fishers & Farmers Steering Committee & Project Tour of NFHP Waters to Watch Shoal Creek-Huzzah Watershed, Missouri

- EBTJV continued to grow its social media presence in 2022, posting to Facebook 90 times, with a reach of ~ 49,000 and 1,500 likes; posted to its new [Instagram page](#) 31 times, and added 400 followers; and launched a YouTube channel, [youtube.com/@brooktrout](https://youtube.com/@brooktrout).
- EBTJV continued to improve upon the new website to make it more user-friendly and engaging for the public and resource professionals alike.
- Upper White River (VT) was featured in the NFHWP 2022 Waters to Watch.

### Science

- One of EBTJV’s most important products is its salmonid assessment in catchments of the Eastern US. In 2022, EBTJV’s 17 member states and National Parks began testing EBTJV’s new online application for updating the [brook trout occupancy catchment database and map](#). The process of beta testing the application is well underway with a target date to completed the assessment of Fall 2023.
- The EBTJV continued its collaborative working relationship with the [Chesapeake Bay Program](#) (CBP). EBTJV, with Trout Unlimited, was awarded funding for the CBP Goal Implementation Team (GIT) project “Facilitating Brook Trout Outcome Attainability through Coordination with CBP Jurisdictions and Partners”, and began the project in November 2022. One important outcome of this project will be a living dataset of conservation projects done since 2016 in coldwater reaches of the Chesapeake Bay watershed, allowing investigation of links between restoration activities and changes in brook trout occupancy (as indicated by the forthcoming EBTJV assessment).

### Conservation Accomplishments

- Of the three FY21 EBTJV/NFHP funded projects, two were completed in 2022. Of the four projects funded for FY22, two finished construction between August and December of 2022, showcasing the commitment and agility of our partners.
- Three of these projects replaced undersized culverts (three across NC, TN, and MD) with fish friendly designs, reconnecting 3.3 miles of habitat in important brook trout watersheds (such as the [Savage River, MD](#)).
- Across all four completed projects, partners restored over 2,200 ft of stream channel, including several pools and riffle sequences and three engineered log jams, and planted native vegetation (see this [factsheet](#) on one project, the Narraguagus River, ME).

### Fishers & Farmers Partnership for the Upper Mississippi River Basin

#### Communications & Outreach

- Updated [Fishers & Farmers Partnership’s website](#) to include a networking page [Soil Health and Watershed Groups](#). A total of 27 groups have reached out to provide data.
- The National Fish Habitat Partnership selected [2022 Waters to Watch Project Huzzah, Courtois, Shoal Creek Watersheds, Missouri](#).





- Dean Houghton published article “Corn, Cows...and Trout” in [John Deere magazine](#) featuring Steering Committee member Mike Steuck.
- Prepared session “[Producer Led Watershed Groups](#) with American Farmland Trust” for Association of Illinois Soil & Water Conservation District’s Conference.
- Jack Lauer (MN DNR) presented to MN DNR Statewide Fisheries Meeting,
- Karen Wilke (TNC) presented to Iowa Association of County Conservation Board.
- Working with University of WI in [Confluence for Watershed Leaders](#).
- Hosted one webinar to discuss the Request for Proposals and project funding attracted 50 potential project applicants.
- Listserve has been growing to over 800 people.

**Science**

- Hired a new Science Team Lead, Jodi Whittier, University of Missouri, Fall 2022.
- Conducted fish surveys with FWS in streams near present/future oxbow projects.
- Partners are monitoring projects, testing water quality.

**Conservation Accomplishments**

- Restored 3 oxbows, created plans for 4 more Boone River Watershed, IA
- 3,195 ft streambank restoration, 3.40 ac riparian habitat, WI
- 7.8 Upland acres prairie buffer next to wetland, IL
- Conserved 4.6 acres of wetlands in IL
- Flood monitoring systems for streambank restoration sites, WI
- 1750 acres of cover crops added to neighboring watersheds.
- Partners ~12 outreach events: field days, webinars, workshops, and trainings
- 500 ac [Relay Cropping](#) (New) with Iowa Soybean Association
- 4 Farmer/Watershed Councils – Building, strengthening
- 12 active projects in 2022, completed 5

**Great Lakes Basin FHP**

**Communications & Outreach**

- The USFWS worked with several agencies who requested more information on the GLBFHP Coordinator position. At this time none have committed and the USFWS and Steering Committee will continue to search for the next GLBFHP Coordinator.



*Fishers & Farmers Stream side tour of project & Upland tour*

### Conservation Accomplishments

- The USFWS continued to forgo Base NFHP funds, choosing instead to apply for funds available under the Great Lake Restoration Initiative (GLRI).
- The GLBFHP funded six projects in 2022 using USFWS GLRI funds.
  - Funds totaled \$242,718.
  - Feasibility and Engineering Assessment for Installation of a Fish Passageway Around the Dundee Old Mill Low-Head Dam in the River Raisin in Dundee, Michigan, and feasibility of three low-head dams for removal. (\$47,000). Species to benefit will be endangered mussels.
  - Trout River Dam Seasonal Fish Passage Design Phase Presque Isle County, MI (\$20,000). Complete design for seasonal fish passage at Trout River Dam while blocking sea lamprey. Brook Trout will be primary species to benefit.
  - Instream Habitat Restoration scoping project on the North Branch Manistee River near Flowing Wells (\$7,000) to survey and collect data on two miles of stream habitat to develop restoration options to benefit Brook Trout.
  - Clay Cliffs Natural Area Bank Protection (\$25,000) to stabilize 100 feet streambank, establish 200 feet of pool and riffle habitat, and stabilize 0.29 acres of streambank, and eliminate 326 tons of sediment entering the stream to benefit Brook Trout.

- Six Mile Creek Headwater Restoration Projects (\$52,500) to stabilize 1,500 feet of streambank using large woody debris to benefit Brook Trout.
- Streambank Restoration and Trout Habitat Establishment on the Cattaraugus Creek, Arcade, NY (\$18,750) to stabilize and restore 100 feet of streambank and create 24 feet of trout habitat using eight foot LUNKERS.
- FY22 Feasibility and Engineering Assessment for Installation of a Fish Passageway Around the Dundee Old Mill Low-Head Dam in the River Raisin in Dundee, Michigan, and Trout River Dam Seasonal Fish Passage Design Phase (\$28,466). The USFWS's Alpena Fish and Wildlife Conservation Office continued project oversight, environmental compliance, and implementation.
- FY22 Instream Habitat Restoration on the North Branch Manistee River near Flowing Wells and Clay Cliffs Natural Area Bank Protection (\$13,466). The USFWS's Green Bay Fish and Wildlife Conservation Office continued project oversight, environmental compliance, and implementation.
- FY22 Six Mile Creek Headwater Restoration Projects and Streambank Restoration and Trout Habitat Establishment on the Cattaraugus Creek, Arcade, NY (\$30,536). The USFWS's Lower Great Lakes Fish and Wildlife Conservation Office continued project oversight, environmental compliance, and implementation.

### Great Plains Fish Habitat Partnership

#### Communications & Outreach

- Communicated with USFWS's Grassland and Sage Teams to incorporate considerations for prairie aquatic species in the development of restoration strategies.
- Participated with the Prairie Fish and Streams Collaboration on development of sharing information.
- Continued discussions with Partners Council and staff from Midwest Association of Fish & Wildlife Agencies to develop an operational strategy that allows the GPFHP to function effectively under the new NFHP structure.



#### Science

- GPFHP assembled watershed data on barrier inventories for collaboration with SARP with the Southeast Aquatic Barrier Prioritization inventory database. (<https://connectivity.sarpdata.com/>).



- Conducted barrier assessments in priority watersheds.
- Collaborated with Asian Carp initiative to provide watershed information and barrier information linking discussions on network connectivity with invasive species management.
- Continued with updating the 11-year old landscape-scale modeling of restoration and protection watersheds which has guided us since 2011. The framework and cost estimate was developed to conduct this foundational update to our strategic plan over the coming 2 years. Data on fish distribution and landscape stressors was assembled and modeling has begun.

### Conservation Accomplishments

- Lodgepole Creek Riparian pasture was restored along 1.4 miles of riparian area in Wyoming.
- A total of 20 miles of river habitat was reopened on the North Laramie River, WY.
- Stream Management Plan for the South Boulder Creek has been completed that will guide management decisions on a high use resource with conflicting uses.
- Approximately 1.5 miles of river side channel habitat was restored on the Musselshell River.

## Hawai'i Fish Habitat Partnership

### Communications & Outreach

- The Hawai'i Fish Habitat Partnership coordinated an outreach event for World Fish Migration Day, May 21, 2022. Multiple partners including TNC-Hawai'i, Hawai'i Division of State parks and others led outreach activities to observe native migratory fish and view streamside vegetation restoration actions at the He'eia National Estuarine Reserve.
- The World Fish Migration Day worldwide webcast included a [live-streamed segment from Hawai'i](#). The Hawai'i event is considered the "official closing event" of WFMD.
- The Hawai'i FHP is providing financial and technical support for a documentary film production highlighting Hawai'i's freshwater fish and invertebrates with financial support from the US Forest Service, the Association of Fish and Wildlife Agencies and others.
- Over thirty volunteer workdays held by partners with participation by over 500 community and student volunteers on Oahu, Molokai, Kauai and Hawai'i Islands.



### Science

- Supported pilot study for native oyster restoration on four sites on Oahu Island which included age, growth, and mortality monitoring.
- Evaluation of trace metal and organochloride contaminants accumulation in oysters at restoration sites along the Ala Wai Harbor and Kaneohe Bay.
- Technical support for genetics research and conservation assessment for Hawai'i's native freshwater snails.
- Partnered with Hawai'i DLNR Division of Aquatic Resources to use eDNA for detection of non-native fish in Poamoho Stream/Helemano Watershed, Oahu Island.
- Supported application of Index of Biological Integrity for characterizing biological status of Mānoa, Pālolo and Makiki Streams in urban Honolulu.

### Conservation Accomplishments

- Ten active restoration projects in stream, estuarine, wetland, and anchialine pool habitats.
- Habitat restoration actions included removal of two acres of invasive mangrove, removal of non-native marine algae from 3 acres of reef flat, and outplanting native littoral vegetation surrounding two anchialine pools on Hawai'i Island.
- Removal of over 100lbs (3000 individuals) of non-native fish from Mānoa, Pālolo and Makiki Streams located in urban Honolulu.



## Mat-Su Basin Salmon Habitat Partnership

### Communications & Outreach

- Over 100 people attended the 15th annual [Mat-Su Salmon Science and Conservation Symposium](#) – a two day forum to promote information sharing, education and collaboration related to salmon and their habitat in the Mat-Su Basin. Included over 30 oral and poster presentations, salmon themed art display by 11 highschool students, panel discussion about emerging funding opportunities through the Bipartisan Infrastructure Act. and international keynote speaker (virtual) Jonathan Moore, from Simon Fraser University in British Columbia, Canada who presented *Salmon Futures: Stewardship of Salmon Systems in an Era of Rapid Change*. [Presentations on Youtube](#) (96 views). [Article in Mat-Su Valley Frontiersman](#).



- Held first annual *Plants for Salmon: Community Riparian Planting Day* on June 4th in Big Lake. A total of 34 people planted over 100 trees, shrubs and herbaceous plants along the shoreline of Fish Creek. Majority of attendees were from the Mat-Su and included 11 youth. Two education presentations from NRCS and USFWS connected riparian plants to soil and water quality and as well as to fish.
- Hosted 7th annual Summer Site Tour - *Salmon Habitat in a Warming Climate: Spotlight on the Deshka River*. A total of 39 community leaders, scientists and guides attended introductory presentation, 33 traveled upriver by boat to visit three additional sites to share collaborative science and provide community leaders with current information on stream temperature and potential impacts to salmon and their habitat in the Mat-Su. Partners have identified cold water refugia which could serve as critical habitat in maintaining the Deshka as a salmon stronghold in a warming future. Media: [Mat-Su salmon habitat partnership tours Deshka River](#)
- The NFHP Board selected the Deshka River as a [2022 Water to Watch](#).
- Provided four presentations about the Mat-Su Salmon Partnership and partner science for Science to Conservation Outcomes initiative, Mat-Su regional fish passage meeting, Mat-Su Salmon

Symposium, and with Cook Inletkeeper Scientist - [Mat-Su Borough Fish Wildlife Commission](#) to highlight the [science to conservation outcomes initiative](#) and inform their consideration to reclassify Deshka River waters as “watershed” lands to support key cold water refugia for salmon.

- Monthly email updates were sent to 450+ person list and communicated with social media followers weekly.

## Science

- Cook Inletkeeper, University of Alaska Anchorage (UAA) and U.S. Fish and Wildlife Service (USFWS) continue to gain information about stream temperature, flow, and fish distribution on the Deshka and [Little Susitna Rivers](#) as they explore these areas as case studies to help understand and forecast what the Mat-Su’s broader salmon habitat may look like in a changing climate. Efforts included maintenance of 85 year-round temperature logging sites across the Deshka with sampling for juvenile salmon at each site twice in the summer, and sampling of 100 juvenile Chinook and coho to calculate daily growth and measure levels of heat stress. On the Little Susitna River, partners collected a third year of stream temperature data, monitored juvenile salmon and compared to Deshka findings.
- Continuing a pilot effort started in late 2021, the Partnership Cook Inletkeeper and USFWS hosted a series of 6 Science to Conservation Outcomes discussions to facilitate moving scientific data partners are filling in to conservation outcomes – specific to stream temp on the Deshka River and Big Lake Basin. From these conversations with land managers, subject matter experts and scientists, a prioritized workplan of tools and actions to conserve cold water refugia was developed. Read [Cook Inletkeeper’s report](#).
- UAA scientists created a georeferenced online mapping tool that shows the expansion of off-highway vehicle (OHV) stream crossings over 15 years. The geodatabase has over 490 stream crossings identified in the Mat-Su Borough and includes information such as anadromous status and lifestage information. Data is summarized by watershed to best understand potential OHV impacts to salmon habitat. This information will help the Partnership prioritize sites that have the greatest effect on salmon habitat.
- 25 highest risk waterbodies for aquatic invasive plant Elodea in the Mat-Su were surveyed by Tyonek Tribal Conservation District, Alaska Department of Natural resources and other partners (8 remote) and (17 on the road system). No new infestations were found.

## Conservation Accomplishments

- Partners added 18 stream miles and 11 new waterbodies to the Anadromous Waters Catalogue, improving salmon distribution information and affording these streams greater protection under state law.
- Two applications for instream flow protection are in progress, 11 applications were submitted to DNR for instream flow reservations in the Mat-Su, with data collection occurring on over 20 streams to acquire the five years of data needed to receive water rights. This continues progress to secure state water reservations on important salmon streams vulnerable to development. 10 year reviews of existing reservations were conducted by DNR on two Mat-Su Creeks. Cottonwood Creek was approved with no change in reserved flow. Talkeetna River was similarly approved, however is currently under appeal by Alaska Miners Association.
- Alaska Department of Fish and Game (ADF&G) completed an updated prioritization of culverts for removal or replacement within the Mat-Su Borough. This updated prioritization utilizes the available NHD (+) elevation data to help better estimate the potential upstream extent of pacific salmon habitat upstream of culvert barriers.
- Four projects by Mat-Su Borough and partners, removed barriers to fish passage (Caswell Creek at Hidden Hills, Cloudy Lake and two on O'Brien Creek), restoring access to 8.7 miles of upstream and 277.4 acres of lake habitat on priority waters. Since 2006, partners have improved fish passage at well over 100 sites.
- Hosted a regional Mat-Su fish passage meeting to promote collaboration, information sharing and increased collective success in applying for and receiving Bipartisan Infrastructure Law federal funding toward improving fish passage and infrastructure in the Mat-Su. Stay tuned for more in 2023.
- 2022 was the second and final year of field studies to collect data on the existing fisheries, habitat availability and more, to inform mitigation needs for restoration of the Eklutna River. Outreach efforts engaged over 100 in-person participants in 2022. Restoration of the Eklutna River began in 2018 with the [successful removal of the abandoned lower Eklutna Dam](#). In 2021, [water was temporarily released from the diversion dam at Eklutna Lake](#) for the first time in 66 years, to support an instream flow study. In 2023 utility operators will release field study results and a draft of proposed mitigation measures.
- Four projects restored 220 ft of streambank and 15 people attended streambank restoration workshops, improving the

understanding and use of bioengineering techniques through the USFWS and ADF&G cost-share program. More than 700 people were directly provided with education on salmonid habitat conservation and rehabilitation through workshops, site visits, phone conversations with landowners, presentations at homeowner association meetings, mailers, and social media postings.

- Northern pike are invasive in Mat-Su and widespread. Full eradication is not considered feasible. Suppression occurred in Alexander Creek – a formerly premier Chinook salmon fishery and 15 other waterbodies (3,188 pike removed). Alexander Lake was also treated for aquatic invasive plant Elodea.

## Midwest Glacial Lakes Partnership

### Communications & Outreach

- The MGLP completed an outreach document, Shoreline Living Volume 2, and distributed an additional 16,350 copies of both [Shoreline Living](#) documents to partners.
- The MGLP hosted 6 [Lake Conservation Webinars](#) highlighting successful management, science, and outreach from across the partnership, which were viewed a total of 479 times live and over 700 times from online archives.
- The MGLP increased its newsletter [membership](#) to over 2,600 partners in lake conservation across the Upper Midwest and used the newsletter to share conservation grant, science, and outreach information.
- The MGLP funded additional projects conducting outreach for watershed and shoreline conservation expected to contact 54,262 stakeholders.



### Science

- The [MGLP Conservation Planner](#) tool was used 1,841 times by stakeholders to learn about threats and conservation strategies specific to their lake.
- The MGLP added eight new datasets to its new database of partnership lakes that will be used in future assessments of fish habitats and populations.
- The MGLP funded an assessment project to better understand the relationships between fisheries and aquatic vegetation in lakes across the Upper Midwest and improve both vegetation and fisheries management on those systems.

- The MGLP funded an assessment to identify and prioritize lakes of biological significance for watershed conservation in Northern Minnesota.

### Conservation Accomplishments

- The MGLP funded a project to divert stormwater and restore water quality on 352-acre Goguac Lake, a highly-used urban fishery.
- The MGLP funded a project to restore five shoreline properties along priority Minnesota lakes to improve water quality, reduce sedimentation, and rehabilitate fish habitat while serving as demonstration sites for recruiting future projects.

## Ohio River Basin Fish Habitat Partnership

### Communications & Outreach

- The ORBFHP has supported projects that has resulted in over 5,000 miles of stream reconnection with barrier removal or modification projects, and currently supporting 3 funded dam removal projects. Stream connectivity and hydrologic restoration continues to be a focus of the Partnership and provides immense ecological benefits and improves community safety, interest, and recreational opportunities.
- National Fish Habitat Partnership Waters to Watch 2022 Project Selected – Williamsburg Off-Channel Wetland, Ohio.
- Continuing strategic implementation of projects with significant ecological lifts at the watershed scale coupled with proper data collection and analysis to provide cost effective results and case studies for conservation efforts.
- Combined with barrier removal and off-channel reconnection efforts, ongoing communication with local partners has led to an increase interest for in-stream habitat improvement projects for funding consideration.
- Dissemination of the Ohio River Basin Mussel Initiative. This document is used to evaluate mussel recovery projects within the ORB and guided funding 2 additional mussel initiative projects in 2021. This document provides foundational knowledge for partners and a means in which to assist with identifying the most meaningful and impactful projects.
- Dissemination of the Sustainable Watershed Planning Guidebook. This document outlines cost effective means and techniques to produce instream restoration. This document has



improved communication to local communities and in fostering new partnerships by combining scientifically sound planning with cost effective means to achieve meaningful results in a variety of watersheds.

### Science

- Monitoring of the innovative fish passageway structure (fish ladder) at the Stockdale dam in the Eel River of northern Indiana was completed in 2022 with funding secured to study the entire Eel River basin in 2022. Dam removals combined with the fish ladder has reconnected over 1,000 stream miles. To date, this fishway has passed over 45 of the 51 species inhabiting the Eel River along with new species such as freshwater drum and channel catfish. This effort provides a model and techniques or implementing a new tool in fish passage in Midwestern streams and beyond. With the last dam removed in the Eel River, the entire Wabash River fish community assemblage can now inhabit the Eel River. With this study in place, we are poised to provide a case study and extensive data and results following the complete reconnection of the Eel River Basin.
- Multiple new partnerships with local Soil and Water Conservation Districts and similar organizations have been formed during 2022. Utilization of the Watershed Planning Guidebook has been instrumental in establishing new partnerships within the ORB and provides a framework for discussion, design and implementation for projects backed by successful completion of multiple projects following this format. This guide explains how to model and implement this approach and provide several innovative, cost-effective solutions and case studies that make a big impact on hydrologic restoration.
- All dam removals and modification projects have extensive data collection pre and post project completion. This library of evidence in multiple watersheds across the ORBFHP allows the partnership to quickly build support and trust during the entirety of the project. This data focuses on the biological and physical response to removals continues to strengthen the partnership's ability to answer questions, provide accurate expected outcome scenarios post removal and garner broad support from diverse stakeholders.
- The Basin-Wide Mussel Initiative (BWMI) seeks to identify and support projects that increase our understanding of the causes of mussel declines and help develop effective, science-based conservation strategies. In 2022, 2 projects began to study viral pathogens as an explanation for mussel declines in the ORB and large-scale meta-analysis of relationships between mussel assemblage health and stream and landscape conditions in the Ohio River basin. These projects were vetted with the BWMI.

## Conservation Accomplishments

■ In 2022, the ORBFHP was successful in allocating funding for projects that include a dam removal, in-stream habitat restoration and research and monitoring of over 100 mainstem miles of stream habitat that is now accessible following a dam removal in the Eel River. These projects build upon and push forward watershed and instream restoration goals of the Partnership. A few notable items and highlights in 2022 are listed below.

- Funding secured for the Eel River Basin Recolonization. The last 2 remaining low head dams within the Eel River Basin were removed in the Fall of 2021, reconnecting over 1,000 stream miles to the Wabash River. This project will allow for the needed research and monitoring efforts to track changes in fish assemblages as new species, such as freshwater drum and channel catfish, now have access to hundreds of miles of connected stream habitat. Zero mainstream fish barriers remain within the Eel River.
- Funding secured for Callen Run Dam Removal that will reconnect 12 miles of High-Quality Coldwater habitat on Callen Run, a tributary to the Wild & Scenic Clarion River
- Off-channel wetland construction phase was completed on the Williamsburg Off-Channel Wetland, a Waters to Watch project. This effort will reduce erosive peak flows, help stabilize hydraulic conditions and lessen erosive flows and sediment transport while providing off-channel habitat and overwintering areas for fish species.
- Sugar Creek Dam removal post-construction monitoring. Over 1,100 stream miles reconnected. Zero mainstream fish barriers remain within Sugar Creek.
- Silver Creek – dam removal is on schedule and removal planned for 2023.

- Richmond Dam Removal near Richmond, Indiana. Removal is now scheduled for fall of 2023.
- Native mussel conservation research. This work continues to further native mussel conservation, understanding and reasons for decline within the Ohio River Basin with implications and findings useful across the nation.

## Pacific Lamprey Conservation Initiative

### Communications & Outreach



- PLCI's Lamprey Technical Workgroup hosted the 5th Annual Lamprey Information Exchange. Due to the pandemic, it was held as a virtual webinar series from January through May 2022. Approximately 1,000 people participated in technical sessions about eDNA, climate change, improving passage, restoration, and supplementation.
- PLCI's Policy Committee convened Lamprey Summit V on December 13, 2022. 150 PLCI partners gathered in Portland, Oregon to discuss the current status of Pacific Lamprey and to strategize on collaborative conservation work for the next five years.
- The 6th annual Lamprey Information Exchange was held in person on December 14, 2022 in Portland, Oregon. 150 participants learned about emerging science and technology in lamprey conservation from all 18 Regional Management Units (RMUs).
- PLCI formed the Lamprey Communication Committee in partnership with staff from the Great Lakes Fishery Commission and other partners. The committee discusses ways to work collaboratively on native lamprey conservation and promotion of healthy ecosystems.



- NFHP Waters to Watch 2022 Project Selected – Susitna River Drainage, AK.
- PLCI partners convened a lamprey session at the national AFS meeting in Spokane, WA in August and participated in numerous other meetings, workshops and outreach events.
- PLCI continued to work with the Alaska FHPs, PMEP, CA Fish Passage Forum.

### Science

- The Information Exchanges (above) are significant science achievements for the PLCI as speakers and participants shared emerging science, methods and technology.
- The Lamprey Technical Workgroup published two white papers in 2022: Practical Guidelines for Incorporating Adult Pacific Lamprey Passage at Fishways (<https://www.pacificlamprey.org/wp-content/uploads/2022/08/2022.06.06-Lamprey-Psg-White-Paper.pdf>); Review of Factors Affecting Larval and Juvenile Lamprey Entrainment and Impingement at Fish Screen Facilities ([https://www.pacificlamprey.org/wp-content/uploads/2022/10/Review\\_of\\_Factors\\_Affecting\\_Lamprey\\_Entrainment\\_Impingement\\_2022.pdf](https://www.pacificlamprey.org/wp-content/uploads/2022/10/Review_of_Factors_Affecting_Lamprey_Entrainment_Impingement_2022.pdf)).
- PLCI RMUs collected status and threat data to inform the 3rd Pacific Lamprey Assessment. Preliminary findings were presented at Lamprey Summit V and the Information Exchange. The published Assessment will be released in 2023.
- Regional Implementation Plans were updated for all 18 RMUs. These plans are watershed-level strategic plans that outline threats and needed conservation actions.
- PLCI partners are conducting numerous research studies on lamprey habitat, passage, restoration effectiveness, artificial propagation, population genetics and monitoring.
- PLCI partners published numerous peer-reviewed publications.

### Conservation Accomplishments

- Three projects funded by NFHP started implementation in 2022.
- The PLCI Columbia River Basin Project, through Bonneville Power Administration, funded six projects in 2022 and is currently implementing them in multiple RMUs. Projects include a restoration workshop series, lamprey salvage research, climate change impacts, genetic monitoring tools, disease research and lamprey passage restoration.
- PLCI partners signed a new Conservation Agreement in 2022. Originally signed in 2012, 37 signatories and 16 supporting organizations recommitted to the PLCI Agreement.

## Pacific Marine and Estuarine Partnership (PMEP)

### Communications & Outreach

- PMEP hosted a PMEP Data Tools Training in collaboration with the South Slough National Estuarine Research Reserve Coastal Training Program.
- PMEP chaired a special session of the American Fisheries Society meeting focusing on the importance of nearshore fish habitat.
- PMEP partners made presentations and provided PMEP information at 21 national and regional meetings reaching 500 people. Events included the Hatfield Research Seminar Series, MidCoast Watersheds Council Community meeting, American Fisheries Society annual meeting, and a meeting of the habitat committee of the Pacific Fishery Management Council.
- PMEP work was featured in newspapers, newsletters and blogs including those of Restore Americas Estuaries, Pacific Birds, and San Francisco Bay Joint Venture.
- PMEP published two newsletters reaching over 450 subscribers



### Science

- PMEP published [State of the Knowledge of U.S. West Coast Nearshore Habitat Use By Fish Assemblages and Select Invertebrates](#). The report documents the current state of knowledge of U.S. West Coast nearshore habitat use by fish assemblages and select marine invertebrates.
- As a companion to the Nearshore Report, PMEP compiled and standardized spatial data on nearshore habitats within defined nearshore zones. The datasets associated with this project can be downloaded and are available for use by resource managers and restoration practitioners.
- PMEP is supporting a project to compile data on tidal swamp restoration projects along the US West Coast to add this information to our data on tidal wetland loss and restored areas.
- PMEP supported a Nature Conservancy project assessing and mapping seagrass and macroalgae kelp habitats in Oregon marine reserves.
- PMEP supported a regional scale assessment of fish habitat along the nearshore of greater Puget Sound being conducted by the Washington Department of Natural Resources using existing video footage of nearshore habitats.
- PMEP supported a project of the Oregon Department of Fish and Wildlife to evaluate Olympia oyster restoration methods.



### Conservation Accomplishments

- Removal of 3 barriers to tidal connectivity
- Restoration of access to 2 acres of estuary, tidal scrub/shrub and tidal forest wetland rearing habitat
- Restoration of access to 1.5 miles of spawning and rearing habitat
- Restoration of 6.05 acres of fish habitat
- 8 active projects in 2022

### Reservoir Fisheries Habitat Partnership

#### Communications & Outreach



- Hired an Outreach Coordinator to focus on communications, outreach, and sponsorships (Rebecca Krogman).
- Developed and began to implement 12-month outreach and communications plan of work..
- Expanded and updated website to provide more member tools, online application and reporting, and updated member and sponsor profiles.
- Initiated more regular news sharing on both our website and social media.
- Hosted a "Shelbyville Cube" fish structure and "artificial stump" building workshop during the 2022 Annual Business Meeting.
- Hosted the 2022 Annual Business Meeting for Friends of Reservoirs at Lake Shelbyville, Illinois; attendance ~85 people.
- Reached 52,011 people through our Facebook page and 816 followers.
- Initiated an Instagram page to reach a different audience about fish habitat and grants; reached 28,628 people through our Instagram page and 90 followers.

#### Science

- Improved the ease of access to the online "Best Management Practices Manual," a full-length text on best management practices and interventions for reservoirs; added a complete chapter on Climate Change.
- Monitoring at fish habitat project locations (e.g., spring and fall electrofishing at Barkley Reservoir, Kentucky/Tennessee).

- Annual meeting included formal presentations on best habitat management practices and evaluations.

### Conservation Accomplishments

- Coordinator worked with NFHP Committee to optimize Bass Pro Shops funding (\$1.6 million) for reservoir projects. There were 30 proposals submitted and 9 projects were funded.
- Developed a partnership with Barefoot Bay to provide funding opportunity to Friends of Reservoirs Chapters.
- Small Grant funding donations resulted in issuing nine \$2,000 grants and three grants for commercially produced habitat materials valued at \$1,500 each.
- FY20 NFHP Funded Projects are completed.
- FY21 are either ongoing or complete. The Arkansas Beaver Lake project is complete with a final report submitted.
- Examples of work complete in 2022:
  - Lake Carlsbad, New Mexico: Installed 40 artificial fish structures
  - Tioga Lake, Pennsylvania: Installed 36 short vertical plank structures and 30 porcupine cribs
  - Barkley Reservoir, Kentucky/Tennessee: Added 8 deepwater fish attractors, 320 artificial shallow water fish attractors, and 140 artificial spawning structures. Planted bald cypress trees.
  - Saguardo Lake, Arizona: Collected over 1,000 holiday trees for use as fish habitat

### Southeast Alaska Fish Habitat Partnership (SEAKFHP)

#### Communications & Outreach



- USDA Southeast Alaska Sustainability Strategy Roundtable – SEAKFHP partners provided input to policy actions impacting restoration efforts on the Tongass National Forest: [USDA Announces Southeast Alaska Sustainability Strategy, Initiates Action to Work with Tribes, Partners and Communities | USDA](#)
- Juneau Maritime Festival, May 7, 2022 – engaged over 500 participants who stopped by the SEAKFHP information booth to learn more about local watersheds: [12th annual Juneau Maritime Festival | Juneau Empire](#)

- World Fish Migration Day, May 21, 2022 – SEAKFHP hosted a virtual film festival and a parade of partners to highlight the importance of aquatic connectivity: [World Fish Migration Day was held Saturday – May 21st! | Southeast Alaska Fish Habitat Partnership](#)
- Alaskan Brewing Company Coastal Code Fall Watershed Cleanup to celebrate International Coastal Cleanup Day, September 17, 2022: over 50 participants participated in a targeted watershed cleanup: [September 17th is International Coastal Cleanup Day! | Southeast Alaska Fish Habitat Partnership](#)

### Science

- SEAKFHP supported the 2022 AFS Alaska Chapter Virtual meeting held Feb 28-March 4, 2022 by providing a training on the [Southeast Alaska Wetlands Assessment Tool](#) and hosting the film festival: [2022 Changing Tides: Outlook for the future | Insights from the past – AFS Alaska Chapter Film Festival | Southeast Alaska Fish Habitat Partnership](#)
- SEAKFHP helped coordinate and facilitated the 2022 Alaska Stream Crossings Workshop held March 14-18, 2022, a video archive is available here: [2022 AK Stream Crossing Workshop is LIVE! | Southeast Alaska Fish Habitat Partnership](#)
- SEAKFHP continues to support the Southeast Alaska Coastal Data Project, archiving southeast Alaska coastal datasets and other valuable aquatic resources within the [SEAKFHP AGOL library](#). This project provides access to important datasets for southeast Alaska including decision support tools for partners working to conserve regional aquatic habitats.

### Conservation Accomplishments

- SEAKFHP partners completed 1.25 miles of stream habitat restoration as part of the Margaret Creek Restoration Project; including successfully engaging and training an indigenous restoration team poised to support future projects in the region: [Tongass Turns to Restoration – Trout Unlimited Alaska’s Indigenous Communities at Work in The Tongass – Trout Unlimited](#)
- The [Hoonah Native Forest Partnership](#) began efforts to restore ~180 meters of stream in the Humpback Creek watershed enhancing channel complexity, and increasing spawning and rearing habitat for coho, chum, and pink salmon.
- Trout Unlimited’s [Alaska Fish Habitat Mapping and Community Science](#) project added 14 miles of anadromous fish habitat to the Alaska Anadromous Waters Catalog.

- SEAKFHP partners completed the last of nine fish passage improvement projects in the City of Gustavus completely reconnecting the Good River Watershed: [Bridging the River | U.S. Fish & Wildlife Service \(fws.gov\)](#)  
[Reconnecting Streams Across Southeast Alaska \(arcgis.com\)](#)

## Southeast Aquatic Resources Partnership (SARP)

### Communications & Outreach

- SARP supported 8 different Aquatic Connectivity Teams at various levels depending on the needs of each team from a participant all the way to a co-lead of the teams. SARP works with these teams to identify high priority barriers for removal or remediation by providing technical support and works with partners to determine feasibility of project success. States with teams include VA, NC, SC, GA, FL, AL, TN, and AR. We are working with TX to establish a team in that state.
- SARP helped facilitate Aquatic Connectivity Team meetings in AR, GA, SC, and NC.
- SARP presented its connectivity tool at the 2022 meeting of the Tennessee River Basin Network and the April 2022 NFHP meeting.
- SARP relaunched its Facebook page in 2022 to better communicate with partners.
- SARP updated its website in 2022 to be more modern. Content will be updated in 2023.
- SARP gave 8 presentations at 7 different scientific conferences including the National American Fisheries Society, NC Chapter of the AFS, Oregon Chapter of the AFS, Southeastern Fishes Council, Southeastern Association of Fish and Wildlife Agencies, and Southern Division of the AFS, and the National Fish Passage Conference.



### Science

- SARP updated its connectivity tool with new species data.
- SARP began the process of expanding its barrier inventory and prioritization tool into several new states in the Pacific region and Great Plains intermountain west region.
- SARP conducted 3 road crossing barrier assessment training courses in South Carolina, Arkansas, and Utah.

- 2,489 potential stream barriers were assessed in 2022. using SARP's protocol and entered into SARP's online database.
- There were over 17,000 stream barrier prioritizations using SARP's online tool in 2022.

### Conservation Accomplishments

- SARP helped the state of NC secure funding to acquire two parcels on the Little Tennessee River in North Carolina. These parcels total approximately 75 acres and will protect over 8100 feet of river frontage and over 22 acres of mountain wetlands. Species benefitted include the federally listed Appalachian Elktoe, Spotfin Chub, Littlewing Pearlymussel, and Virginia Spiraea.
- SARP worked with partners to restore riparian land on a large farm in the Chattahoochee River Georgia. Through this collaborative effort, Best Management Practices were implemented on approximately 200 acres, protecting 34 acres of riparian zone and 6 springs. Specific to the funding under this grant, 14 acres of the riparian zone and 5 springs were protected.
- SARP worked with the US Fish and Wildlife Service, Tennessee Wildlife Resources Agency, and Campbell County Highway Department to complete two projects to restore aquatic habitat connectivity for the federally threatened blackside dace and Tennessee Species of Greatest Conservation Need Cumberland arrow darter. Perched culverts at road/stream crossings on Baker and Brahma Lane were inadequate infrastructure for road traffic and created migration barriers for aquatic species. Working with our partners, we designed and installed bottomless box bridges that facilitate aquatic organism passage throughout Coontail Branch, connecting over 2 miles of previously unoccupied habitat, while creating safer road conditions for the public.
- SARP and partners including the US Fish and Wildlife Service initiated removal of a dam on Sweetwater Creek in the Apalachicola drainage Florida. This project will result in opening 33 miles of habitat.
- SARP worked with the Florida Department and Agriculture and Consumer Services, and Jackson County Soil and Water Conservation District to execute and complete 17 cost share agreements. These activities consist of conservation tillage and livestock best management practices for erosion control.

## Southwest Alaska Salmon Habitat Partnership

### Communications & Outreach



- Our primary outreach activity is the Bristol Bay Fly Fishing & Guide Academy generally held in early June at a sport fishing lodge. The Academy is a week-long intensive course using fly fishing as a means for imparting to young adults from the remote Bristol Bay region of Alaska an appreciation of fish habitat and the larger issues of fisheries science, resource management, ecology, land use and conservation. A variety of federal and state agency, university, lodge and NGO personnel serve as voluntary instructors. The partnership coordinator organizes and raises private and government support for the annual academy. Our thirteenth annual Academy was held in 2022 at Bear Trail Lodge. 8 young people participated.
  - Partner Bristol Bay Heritage Land Trust sailed an old restored Bristol Bay sailing gillnetter from Homer, across Cook Inlet, down Lake Iliamna River and the Kvichak River to Naknek, a journey of 300 miles. In addition to celebrating the 135 year-old commercial fishery, it also highlighted the importance of Alaska's largest lake and the global center of sockeye spawning habitat. The journey took 19 days and stopped at every Alaska Native village along the way. Presentations were made and rides aboard the sailboat were very popular in all of the communities visited
- ### Science
- Partners Alaska Department of Fish & Game completed data collection for instream flow reservations on the Kokwok and lowithla Rivers and Napatoli Creek tributaries to the Nushagak River. The Department was also funded to continue flow data collection on the Aniak River, a major tributary of the Kuskokwim River.
  - Our annual gathering of state and federal government agency and partner NGO and university biologists, the Southwest Interagency Meeting, scheduled for Dillingham, AK was held virtually in 2022 along with the Western Alaska Interdisciplinary Science Conference, which was also held virtually. The Partnership helps plan for these events. Partnership project updates were provided and several papers resulting from past Partnership funded projects were presented. It is the annual gathering where scientists and researchers discuss needs, present results and describe goals for the approaching field season in SW Alaska.

## Conservation Accomplishments

- Partners Bristol Bay Heritage Land Trust and The Conservation Fund successfully raised \$20 Million to close on three conservation easements to protect critical salmon habitat on Lake Iliamna. Lake Iliamna is the world's largest Sockeye spawning and rearing lake. The 44,147 acres conserved by the easements has an estimated value of \$21 Million (depending on price) to Bristol Bay Commercial Fishermen every year. This is a major conservation achievement in Alaska. All of the funds raised for the purchase of the easements came from non-government sources. Link: [www.conservationfund.org/projects/pedro-bay-rivers-project-alaska](http://www.conservationfund.org/projects/pedro-bay-rivers-project-alaska)

## Western Native Trout Initiative

### Communications & Outreach

- In 2019, the Western Native Trout Initiative (WNTI) launched a major new program called the Western Native Trout Challenge. <https://westernnativetroutchallenge.org/> The program celebrates the native trout and char species of the West and invites anglers to catch each species in its native or historic range and is a lifetime challenge for each individual who registers. Participants catch native trout and char in each of 12 western states. WNTI provides education, resources, inspiration, and prizes. The purpose of the Challenge is to strengthen angler awareness of these unique native species, help anglers understand native trout conservation, and grow the community of trout fishing aficionados. As of December 2022, 1,214 anglers have registered for the Western Native Trout Challenge. Idaho Tourism published a native trout fishing guide in 2022 that features our Western Native Trout Challenge. In 2022, WNTI partnered with Tenkara Rod USA to produce nine short videos of their adventures attempting to complete the Western Native Trout Challenge. Another nine videos will be produced in 2023. The videos can be watched here: <https://westernnativetroutchallenge.org/media/>
- The next two Get To Know Your Native Trout posters in WNTI's series were printed and distributed for Bonneville Cutthroat Trout and Yellowstone Cutthroat Trout.
- WNTI co-hosted a symposium with the Fish Habitat Section of the American Fisheries Society, Western Native Trout: Managing the Threats and Building Resiliency - at the annual American Fisheries Society conference in 2022. Presentations focused on western native trout species and their habitats in the face of climate change, including aspects of wildfire ecology and management, building resiliency in native trout



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populations and habitats during drought, promoting habitat recovery and restoration opportunities following stochastic events, and reducing the impacts of non-native species on sensitive native trout populations. There were 18 presentations that provided updates on research and/or management actions related to managing the threats and building resiliency in western native trout species.

- The Wildlife Forever State-Fish Art Contest partnered with WNTI in 2022 to highlight the diversity of native trout in the western United States. This partnership connects youth to the assortment of native trout utilizing the Art of Conservation®. In honor of this collaboration, the Fish Art Contest created a new Western Native Trout Award. Winners were selected in four grade categories, Kindergarten-3rd grade, 4th-6th grade, 7th-9th grade, and 10th-12th grade and awarded a prize package from the Western Native Trout Initiative.

<https://www.wildlifeever.org/home/fish-art/winners2022/western-native-trout-award-winners-2022/>

- To share accomplishments achieved in conserving western native trout across the West, WNTI posted 367 media stories on the partnership's Facebook page, which generated more than 100,000 "likes". WNTI maintains an active presence on other social media channels with over 15,500 followers on Instagram and 915 followers on Twitter.

<https://www.facebook.com/westernnativetrout>  
<https://www.instagram.com/westernnativetrout/>

### Science

- WNTI continues to identify data gaps in scientific information for the numerous watersheds and priority areas across its focal region and explore partnerships to fund or otherwise incorporate existing or ongoing assessments into WNTI planning and strategic prioritization.
- As reported last year, the WNTI Steering Committee identified prioritized conservation activities for 2017-2023 and work is continuing through 2027 to develop formal "conservation portfolios" specific to each Species of Emphasis that will support WNTI's conservation goals and objectives and help secure non-federal partners and funding. Strategic prioritization work has now facilitated the creation of conservation portfolios for Bonneville Cutthroat Trout, Interior Redband Trout, Rio Grande Cutthroat Trout, Colorado River Cutthroat Trout, and Yellowstone Cutthroat Trout. Portfolio building for Gila Trout, Bull Trout and Golden Trout will occur 2022-2027. WNTI is coordinating project portfolio implementation with its partners, while continuing to search for new funders.
- Updated Story Map on WNTI's website with project data through 2022 <https://westernnativetrout.org/projects-map/>

## Conservation Accomplishments

- In 2022, WNTI and their partners funded four habitat restoration projects benefiting focal species with a total of \$320,000 National Fish Habitat Partnership funds, leveraged with \$790,726 in other partner contributions for a total projects value of \$1,110,726. An additional \$483,500 in other grants funded an additional 10 projects.
- Projects funded through National Fish Habitat Partnership funds in 2022:
  - WNTI operational support
  - Cache la Poudre River Headwaters Greenback Cutthroat Trout Restoration: Corral Creek, *Colorado*
  - Blackfoot River Yellowstone Cutthroat Trout Habitat Improvement, *Idaho*
  - Rainey Creek Restoration Bridge-to-Bridge Phase 2 (Yellowstone Cutthroat Trout), *Idaho*
- Projects funded through grants from other funders in 2022:
  - Muddy Creek Fish Passage and Habitat Enhancement, *Oregon*
  - Deep Creek Middle Diversion (Interior Redband Trout), *Oregon*
  - Honey Creek Four Lower Diversions (Interior Redband Trout), *Oregon*
  - Evanston Town Historic Dam (Bonneville Cutthroat Trout), *Wyoming*
  - Stauffer Creek Fish Passage Construction Phase 2 (Bonneville Cutthroat Trout), *Idaho*
  - Stauffer Creek Oxborrow Diversion removal (Bonneville Cutthroat Trout), *Idaho*
  - North Eden Creek (Bonneville Cutthroat Trout), *Utah*
  - Dry Fork Smiths' Fork culvert removal (Bonneville Cutthroat Trout), *Wyoming*
  - Beaver Creek/WUda Ogwa (Bonneville Cutthroat Trout), *Utah*
  - Steve's Creek (Bonneville Cutthroat Trout), *Idaho*
- Additional information for 2022 WNTI funded projects can be viewed at:
 

<https://westernnativetrout.org/2022-nfhp-funded-projects/>
- WNTI also awarded \$23,550 out of its small grant program (funded with donations) for six projects in ten western states and one Canadian province, which will be matched by \$29,360 in other public and private funding. The community-based projects were selected because of their emphasis on citizen science and outreach to help address challenges facing the restoration and recovery of our focal western native trout species.
- WNTI Small grants project funded in 2022:
  - Get to Know Your Native Trout Colorado River Cutthroat Trout poster, *Colorado/Wyoming*
  - Rainey Creek Restoration Kiosk, *Idaho*
  - Native Trout Education, *Idaho*
  - Native Fishes of Idaho, *Idaho*
  - Yellowstone Cutthroat Trout and River Etiquette Sign Project, *Montana*
  - Coastal Cutthroat Trout Outreach and Communication Poster Project, *Alaska, British Columbia, California, Idaho, Oregon, Nevada, Washington*  
<https://westernnativetrout.org/2022-small-grants-projects/>