

Reservoir Fisheries Habitat Partnership Annual Meeting

Hosted by Arizona Game and Fish



November 1-3, 2024

Arizona Game and Fish

Main Office North Phoenix

5000 W Carefree Highway

Phoenix, AZ 85086 United States



Reservoir Fisheries Habitat Partnership Annual Meeting 2024

Schedule at a glance:

- **Thursday – October 31, 2024**
 - Arrive at hotel
- **Friday – November 1, 2024**
 - 9:30 A.M. – Workshop (breakfast items provided)
 - 12:30 P.M. – Lunch (provided by RFHP)
 - 1:30 P.M. – Field Trip
 - Dinner on your own
- **Saturday – November 2, 2024**
 - 8:30 A.M. – Business Meeting (breakfast items provided)
 - 11:30 A.M. – Lunch (provided by RFHP)
 - 1:00 P.M. – Technical Sessions
 - 6:30 P.M. – Awards Banquet at The Stillery
- **Sunday – November 3, 2024**
 - 8:30 A.M. – Technical Sessions (breakfast items provided)
 - 12:15 P.M. – Adjourn (lunch on your own)

Reservoir Fisheries Habitat Partnership Annual Meeting 2024

Friday, November 1, 2024

- 9:30 A.M. - Welcome - **Julie Carter** AZGFD Aquatic Wildlife Branch Chief and **Doug Nygren** Reservoir Fish Habitat Partnership Coordinator
- 10:00 - **Bryant Dickens** - Water Resources Field Engineer for Central Arizona Project
- 10:30 - **Rachel Wirick** - Fisheries Biologist Bureau of Land Management
- 11:00 - **Kevin Grove** - Project Manager/Biologist U.S. Army Corps of Engineers
- 11:30 - **Doug Nygren** - Reservoir Fish Habitat Partnership Coordinator
- 12:00 P.M - Lunch (Provided)
- 1:00 - AZGFD Habitat Building Areas and Habitat Boat
- 1:30 - Field Trip

Saturday, November 2, 2024

- 8:30 A.M. - Business Meeting
- 10:00 - Transition to FOR Business Meeting
- 11:30 - Lunch (Provided)
- 12:00 P.M. - Technical Session
- 2:00 - Break
- 2:15 - Technical Session Resumes
- 4:45 - End of Technical Session
- 5:30 - Awards Banquet at [The Stillery](#)

Sunday, November 3, 2024

- 8:30 A.M. - Technical Session
- 10:30 - Break
- 10:45 - Technical Session Resumes
- 12:15 P.M. - Lunch (on your own)

Reservoir Fisheries Habitat Partnership Annual Meeting 2024 Submitted Presentations

Saturday, November 2, 2024

- 12:00 P.M. Establishing a West Texas community fishery from the ground-up
Michael Homer Jr., Texas Parks and Wildlife Department
- 12:30 White River Reservoirs Fish Habitat Project Leads into the Northwest Arkansas Fish Habitat Alliance
Jon Stein, Arkansas Game and Fish Commission and Beaver Watershed Alliance
- 1:00 Oklahoma Habitat Initiative: Improving Fisheries with Community Involvement
Michael Hollie, Oklahoma Department of Wildlife Conservation
- 1:30 Lake Havasu Fisheries Improvement Program
Payson Ham, Arizona Game and Fish
- 2:15 Arizona Community Fishing Program Fish Habitat Improvement Project 2022-2024
Andy Clark, Arizona Game and Fish Department
- 2:45 Update on the Oklahoma Fish Habitat Initiative: Communication, Challenges, and Habitat Research
David Bogner, Oklahoma Department of Wildlife Conservation
- 3:15 Reef Balls in Freshwater Environments
Jim McFarlane, Reef Innovations
- 3:45 Looking Back at Five Years of MLF FMD Partnerships
Steve Bardin, Major League Fishing
- 4:15 Improving Logistics for Fish Habitat Within the State of Kentucky
Spencer Phillips, Kentucky Department of Fish and Wildlife Resources

Sunday, November 3, 2024

- 8:30 A.M. Reservoir Fish Habitat
Amberle Jones, Arizona Game and Fish Department
- 9:00 On-Going Reservoir Habitat Manipulation Projects in New Mexico
Jake Miller, New Mexico Department of Game and Fish
- 9:30 Bass Pro Shops Open Grant Projects at Pymatuning Reservoir and Blue Marsh Lake
Ben Page, Pennsylvania Fish and Boat Commission
- 10:00 Habitat Enhancement in the Newly Created Ralph Hall Reservoir
Michael Homer Jr., Texas Parks and Wildlife Department
- 10:45 Creating Artificial Habitat Manufacturing and Construction Protocols
Steve Bardin, Major League Fishing
- 11:15 Anonymous Location Data as an Innovative Data Source for a Statewide Recreation Survey
Rebecca Krogman, Iowa Department of Natural Resources
- 11:45 Assessing Fisheries Using Commercial Sonar and BioBase
Steve Bardin, Major League Fishing

Reservoir Fisheries Habitat Partnership Annual Meeting 2024 Submitted Presentations

Saturday, November 2, 2024

Establishing a West Texas community fishery from the ground-up

Michael Homer Jr., Texas Parks and Wildlife Department

Small impoundments in communities are important resources to provide fishing recreation and subsistence opportunities. Larger reservoirs are typically less convenient for individuals and families because of travel, lack of shoreline angling access, lack of amenities, as well as the need for vessels. Community fishing ponds are usually closer in proximity to homes, are situated in park spaces that offer a variety of amenities and features and may be less intimidating for families to partake in fishing, especially for those new to the sport. In West Texas, these waterbodies are crucial for attracting new anglers as well as keep active anglers engaged in fishing. In 2020, Texas Parks and Wildlife Department (TPWD) partnered with the City of Early to revitalize a fishery at site planned to create a new park and commerce space. In 2021, the TPWD's Habitat and Angler Access Program awarded \$95,000 to install two fishing piers, create gravel spawning beds, armor shoreline, native vegetation and other fish habitat enhancements. In 2023, the City of Early received additional HAAP funding to create a kayak launch on the pond as well as a fishing pad. Planning, design, and implementation of the pond revitalization were collaborative efforts with the city and contracted engineers. In 2023, Texas B.A.S.S. Nation and Major League Fishing Black Bass Stewardship Group partnered with TPWD and City of Early to further habitat enhancement efforts. This presentation will highlight the project, particularly the planning and implementation processes, successes, challenges, and lessons learned.

White River Reservoirs Fish Habitat Project Leads into the Northwest Arkansas Fish Habitat Alliance

Jon Stein, Arkansas Game and Fish Commission and Beaver Watershed Alliance

The White River Chain of Lakes in Arkansas is comprised of Beaver, Norfork and Bull Shoals lakes. Fish populations in these lakes are managed by the Arkansas Game and Fish Commission and popular sportfish include Largemouth Bass, Spotted Bass, Smallmouth Bass, White Crappie, Black Crappie, Striped Bass, and Walleye. As with most large reservoirs in the southeast, the White River lakes are aging and much of the original habitat has been lost. The AGFC worked with Beaver Watershed Alliance, and the U.S. Army Corps of Engineers to obtain a grant from the Bass Pro Shops U.S. Open Tournaments. Funds were used to purchase specialized equipment for statewide fish habitat projects. A total of 271 fish habitat sites were created from this project in the lakes utilizing over 1,500 trees and white oak crib structures. Education and outreach efforts were also a component of this project. The groups worked together to share project milestones to stakeholders in the Beaver Lake watershed and across Arkansas. A public workshop was conducted to raise awareness of habitat needs along lake shorelines and a video was produced and shared across the region. This project has also enabled the public to actively engage in habitat work to benefit both fisheries and water quality. In addition, this project led to the creation of the Northwest Arkansas Fish Habitat Alliance (NWFHA) to work with local schools to improve fish habitat in several lakes in Arkansas. The first goal of the organization is to raise funding through the Arkansas Game and Fish Foundation to purchase Mossback Fish Habitat and work with high schools to place structures in lakes. The second goal is to assist schools in growing native aquatic plants in greenhouses and plants will be transferred to lakes. With the support of partners, the NWFHA has raised over \$60,000 for 6 (six) fish habitat builds and have over 1,000 aquatic plants currently growing in local school greenhouses. The NWFHA has been very popular for anglers, educators, students and the local community and this program offers a unique way to introduce students to outdoor careers. This presentation will share the habitat work achieved and the outcomes of the project, showcasing the value of habitat work for the community, fisheries and watershed improvement.

Reservoir Fisheries Habitat Partnership Annual Meeting 2024 Submitted Presentations

Saturday, November 2, 2024

Oklahoma Habitat Initiative: Improving Fisheries with Community Involvement

Michael Hollie, Oklahoma Department of Wildlife Conservation

The Oklahoma Habitat Initiative is an effort to improve fisheries habitat statewide with community involvement. Habitat is essential for a healthy fishery. Unfortunately, habitat enhancement can be costly for conservation agencies and often requires more manpower than an agency can provide. Community involvement in Oklahoma has helped to fill some of the monetary and manpower gaps. In 2023, a local community stepped up to provide funding for habitat enhancement on Eufaula Lake, Oklahoma's largest reservoir at 105,500 surface acres. With funding pledged for a minimum of five years Eufaula Lake could see more than \$200,000 worth of habitat improvements. In 2024 the Oklahoma Habitat Enhancement Partnership program was initiated, a pilot program offering a 50/50 cost share for habitat enhancement projects on three reservoirs around the state. This program is designed to provide heavy involvement from constituents on a reservoir of their choosing. As part of the Oklahoma Habitat Initiative, we have also partnered with a community career tech to build artificial habitat structures as part of their skill development curriculum.

Lake Havasu Fisheries Improvement Program

Payson Ham, Arizona Game and Fish

The presentation will be on the history of the Lake Havasu fisheries improvement program, what habitat work has been completed, what type of monitoring efforts have happened, and what the plan is moving forward to replace old broken habitats.

Arizona Community Fishing Program Fish Habitat Improvement Project 2022-2024

Andy Clark, Arizona Game and Fish Department

The Arizona Game and Fish Department's Community Fish Program (CFP) has expanded from 21 waters in 11 communities in 2014 to 53 waters in 23 communities around the State of Arizona. Based on a recent creel survey in 2020, the CFP currently serves an estimated 137,000 anglers.

Objective 8 in the CFP Vision Document is to "improve fish habitat and reduce stressors within CFP waters". In addition, management objectives for all CFP Lakes includes maintaining a catch rate of 0.5 fish per hour and angler satisfaction at or above 85%. In 2022, an habitat enhancement plan was proposed and approved for eleven lakes within the CFP due to catch per unit effort (CPUE) falling short of the lake management plan goal of 0.5 fish per hour in the 2020 creel survey. Many of these lakes were known to have double crested cormorant depredation problems as well.

In two years, with the help of dozens of volunteers, up to eight cities and towns and 5 different works units within the Department, the Reservoir Habitat Program was able to install 432 structures including 165 Georgia Cubes, 100 Mossback Safe Havens, 155 Mossback Spawning Beds and 12 Burton's Buckets into 12 lakes within the CFP to boost angler catch rates and minimize cormorant depredation. We'll share and discuss this successful effort and all the challenges and adjustments that were made to pull it off.

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Saturday, November 2, 2024

Update on the Oklahoma Fish Habitat Initiative: Communication, Challenges, and Habitat Research

David Bogner, Oklahoma Department of Wildlife Conservation

The Oklahoma Department of Wildlife Conservation (ODWC) recently started a habitat initiative to improving fish habitat across the state. While the first year was a great success with over 200 Shelbyville cubes built, year two has been a challenge with a lack of funding and missed connections in communication efforts to the public regarding the initiative. Additional efforts within the initiative have focused on habitat research to evaluate habitat structure types and effectiveness. Many previous habitat projects have been limited in scope, investigated on a single body of water or single fish species. Taking advantage of newer live sonar technologies, ODWC is investigating 4 structure types compared to a control on 4 reservoirs across the state of Oklahoma to understand what habitat structures offer the best affordability, longevity, effectiveness, and fish-ability. This presentation will provide lessons learned in each of these areas and an update on current habitat efforts.

Reef Balls in Freshwater Environments

Jim McFarlane, Reef Innovations

Reef Balls, artificial reef structures commonly used in marine environments, have shown promise in enhancing biodiversity and ecosystem health in freshwater settings (1). This presentation explores the potential benefits and challenges of deploying Reef Balls in freshwater lakes, rivers, and reservoirs. We discuss the design and placement considerations, water quality improvements, habitat creation, and aquatic life enhancements associated with freshwater Reef Ball of recent project of interest.

Looking Back at Five Years of MLF FMD Partnerships

Steve Bardin, Major League Fishing

Improving Logistics for Fish Habitat Within the State of Kentucky

Spencer Phillips, Kentucky Department of Fish and Wildlife Resources

Getting to the point of placing habitat in a lake, is often the easiest step of the process. Staffing, material sources, regulatory constraints, and equipment can all be bottlenecks to accomplishing a fish habitat project. Our fish habitat branch is now a decade old, with the message always being to go big. Since the initial start of largescale fish habitat projects in Kentucky in 2014, the accumulation of equipment has greatly increased our efficiency to put material into our major reservoirs. Major changes in how the Kentucky fish habitat branch functions has occurred within the last year. We hope that this change will lead to successes for projects throughout our entire state, although it might be through non-conventional means.

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Reservoir Fish Habitat

Amberle Jones, Arizona Game and Fish Department

Over the past decade, the Region 6 Aquatic Wildlife Program and the Aquatic Habitat Program have implemented habitat enhancement initiatives across five of the six primary lakes, utilizing both artificial structures and natural materials like Christmas trees. This presentation will provide an overview of each project, highlighting key lessons learned throughout the process. Additionally, it will summarize the creel and fish survey data, comparing pre- and post-enhancement results to assess the impact of these efforts on the aquatic ecosystems and angler satisfaction.

On-Going Reservoir Habitat Manipulation Projects in New Mexico

Jake Miller, New Mexico Department of Game and Fish

New Mexico has numerous small reservoirs (80-200 ha) that are over 50 years old and in need of habitat manipulations/installations, especially woody debris. Historically, when issues in sportfish populations pertaining to growth rates, relative abundances, and body conditions have been observed, the only management tool available has been the manipulation of stocking strategies, change in recreational harvest limits, or removal/relocation of stunted fish. The New Mexico Department of Game and Fish (NMDGF) decided to start exploring the possibility of lacustrine habitat manipulation projects to improve sportfish population dynamics in 2018 and implemented the first project in 2020. In this presentation I intend to share the background information that influenced the NMDGF to start implementing these projects, a summary of the previous projects and information on the current project and habitat structure changes. Hopefully the sharing of this information will help the NMDGF and other groups/agencies learn how future habitat manipulation projects can be improved to benefit fish populations and anglers.

Bass Pro Shops Open Grant Projects at Pymatuning Reservoir and Blue Marsh Lake

Ben Page, Pennsylvania Fish and Boat Commission

In 2021 the National Fish Habitat Partnership announced that it would be distributing \$1.6 million in grants toward on-the-ground fish habitat projects on lakes across the U.S. The grant program was established through proceeds from the Bass Pro Shops U.S. Open Amateur Bass Fishing Championships. Nine of thirty proposals were awarded grant funding. Among those fish habitat proposals were Pymatuning Reservoir (\$109,000) and Blue Marsh Lake (\$134,000). The PA Fish and Boat Commission utilized the funding for project materials and worked with its local partners to place offshore wood structures with volunteers as well as stabilize hundreds of feet of eroded shoreline using heavy machinery.

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Habitat Enhancement in the Newly Created Ralph Hall Reservoir

Michael Homer Jr., Texas Parks and Wildlife Department

Lake Ralph Hall, a 7,600-acre reservoir currently under construction in Fannin County, Texas, was selected as the site for one of nine projects funded under the Bass Pro Shops/National Fish Habitat Partnership U.S. Open Grant Program in 2022. Project partners, the Upper Trinity Regional Water District and Texas Parks and Wildlife Inland Fisheries Division, received \$250,000 through the grant program for the placement of fish habitat in the reservoir and the construction of a 250-foot coastal style, riprap armored jetty available to shore-based anglers. The Upper Trinity Regional Water District also provided an additional \$250,000 and in-kind services to match the initial project award. Fish habitat components have included the consolidation of cleared timber into large brush piles, and the construction of approximately 50,000 square feet of gravel spawning beds, 40 log/rip-rap structures, and the placement of 203 concrete Reefballs in the footprint of the future reservoir. The location of fish habitat will be provided to Texas anglers using TPWD's interactive habitat map online. Native aquatic vegetation including submersed and emergent species are also being raised for planting in the reservoir when it is impounded. The habitat improvements are intended to provide additional structure to provide better quality fishing in the reservoir.

Creating Artificial Habitat Manufacturing and Construction Protocols

Steve Bardin, Major League Fishing

Anonymous Location Data as an Innovative Data Source for a Statewide Recreation Survey

Rebecca Krogman, Iowa Department of Natural Resources

Anonymous location data (ALD) provide travel and movement information based on mobile and "smart" devices' geolocations. When applied to a recreational location like a lake, ALD can provide metrics such as travel distance from home, trip duration, trip timing across days and seasons, and total visitation. These are essential metrics for recreational use studies, which have traditionally collected such data via mailed, telephone, or intercept survey. In Iowa, recreational use of public lakes and reservoirs is monitored every five years to identify areas for priority work, measure change over time, and assess recreational user opinions, behaviors while visiting, and needs. The Department of Natural Resources' (DNR's) Iowa Lakes Survey was conducted as an incentivized mailed survey in 2002-2005, 2009, 2014, and 2019, and was due to be completed again in 2024. However, as has been seen across survey science, response rates were declining, and DNR decided to conduct its 2024 Iowa Lakes Survey using a completely novel methodology: a combination of ALD and intercept survey of recreational visitors. With the travel metrics captured by ALD, intercept surveys could focus on preference and experience questions, making them shorter and more targeted. DNR initiated the 2024 Iowa Lakes Survey in April 2024 with intercept surveys being conducted statewide for 12 months. These data will be combined with ALD for the same time period to yield recreational information that is both comprehensive and representative of Iowa's resource users. Preliminary data from the spring and summer will be presented.

Assessing Fisheries Using Commercial Sonar and BioBase

Steve Bardin, Major League Fishing