Texas Freshwater Fisheries Center

Athens, TX

October 27, 2014



**Saturday/Sunday, October 25-26**

9:00-5:00 FOR Partners Workshop

9:00-noon FOR Partners Workshop (continued)

**Monday, October 27**

**7:00-8:00 Breakfast on your own at hotel**

8:00-8:15 Welcome/Introductions-Doug Nygren

8:15-8:30 Report on FOR Partner Workshop-Boxrucker

8:30-9:00 \*Approval of Minutes/Financial Statement-Boxrucker

9:00-9:30 Thinking Big-Lake Wichita Total Renovation

9:30-10:00 \*MSCG’s Update-Boxrucker/Green

**10:00-10:15 Break**

10:15-10:30 FOR Partners Update

10:30-10:45 Strategic/Business Plan update-Boxrucker

10:45-11:00 \*Coordinator Work Plan/2015 Budget-Boxrucker

11:00-12:00 Future of Coordinator Position-Boxrucker

**12:00-1:00 LUNCH (on your own-Athens Marina)**

1:00-2:45 \*2015 Project Selection

**2:45-3:00 Break**

3:00-5:00 FOR Board Meeting

\*Briefing Book

**Call-In Number:**

**Pass Code:**

**Proxies:**  Colton Dennis for Mark Oliver; Mark Porath for Don Gabelhouse; Doug Nygren for Gary Martel

Reservoir Fisheries Habitat Partnership

Annual Meeting Minutes (October 2, 2013)

**Erie, PA**

# Minutes are intended to complement reports in the 2013 Briefing Book

# Meeting Attendees

* Carl Lutz, PA Boat Commission
* Terry Foreman, California Department of Fish and Wildlife
* Gene Gilliland, Oklahoma Department of Wildlife Conservation
* Mike McGhee, Iowa Department of Natural Resources
* Hannibal Bolton, U.S. Fish and Wildlife Service
* Jeff Boxrucker, RFHP Coordinator
* Mark Porath, Nebraska Game and Parks Commission
* Mark Oliver, Arkansas Game and Fish Commission
* Rick Ott, Texas Parks and Wildlife Department
* Leroy Young, PA Fish and Boat Commission (Chief of Fisheries)
* John Arway, PA Fish and Boat Commission (Director)
* Doug Nygren, Kansas Department of Wildlife Parks and Tourism
* Mike Armstrong, Arkansas Game and Fish Commission
* Pat Sollberger, Nevada Department of Wildlife
* Don Gabelhouse, Nebraska Game and Parks Commission
* Mike Swartz, PA Fish and Boat Commission
* Keith Beamer, PA Fish and Boat Commission
* Joe Conroy, Ohio Department of Natural Resources
* Rebecca Krogman, California Department of Fish and Wildlife
* Ben Page, PA Fish and Boat Commission
* Craig Walker, Utah Division of Wildlife and new WAFWA Coordinator (via phone)
* Shane Titus, Seneca Nation
* Cecilia Lewis (via phone)

Meeting called to order by Executive Committee Chair, Terry Foreman at 8:15am EDT.

* Proxies
  + Rick Ott for Dave Terre
  + Doug Nygren for Gary Martel
  + Gene Gilliland for Noreen Clough
  + Terry Foreman for Joe Margraf and Jeff Lucero
  + Jeff Boxrucker for Tim Toplisek

Nine Board members present (including proxies); quorum established

Board changes: Terry Foreman (WAFWA rep) retiring to be replaced by Craig Walker (approved by WAFWA Fish Chiefs at WAFWA meeting in July 2013); Tom Mendenhall (BLM) retired-replaced by John Moore; Noreen Clough (BASS) retired-replaced by Gene Gilliland (effective 1 Jan 2014)

# Old Business

* Motion to accept the 2012 Annual Meeting minutes without changes by Mark Oliver and seconded by Mike McGhee. Motion passed.
* Motion to accept the current financial report made by Gene Gilliland and seconded by Craig Walker. Motion passed.

# FOR Update – Jeff Boxrucker

* About FOR
* 100% of the membership fees go back to project funds.
* In addition to FOR, RFHP was planning on coordinating watershed-level organizations (Partnership for Fish-Friendly Waters). However, coordination with existing watershed groups may be more efficient and effective.
* 35 states signed on through MOU or letters of support, including 27 with points of contact
* FOR partners established:
* 13 chapters
* 11 organizations
* 35 individuals
* 3 corporate sponsors
* FOR is targeting known habitat impairments based on the results of the assessment (Krogman and Miranda). 5/5 Projects proposed/funded
* Note: Invitation to attend and display FOR materials at the Bassmaster Elite Series Tournament August 7-10, 2014 extended by Director John Arway

# Outreach Committee Update – Jeff Boxrucker for Dave Terre

* Outreach tools (Outreach Committee Chair: Dave Terre)
* FOR website: [www.waterhabitatlife.org](http://www.waterhabitatlife.org)
* Brochures
* Sport fishing industry brochure
* Friends brochure
* Snips tools with logo ($8 profit/ea)
* FOR license holders
* Standing banners for shows
* Video produced by TPWD with Alton Jones
* Facebook page
* If you want to talk about FOR with an angler group, request a copy of Jeff’s FOR presentation.
* RFHP sponsored symposium at Annual AFS Meeting (21 presentations)
* Very well-attended, often with standing room only
* Will be featured in Fisheries to 1) summarize the symposium and 2) feature fish habitat
* Two of three objectives in next multi-state grant is to collect best management practices
* Action Item: Send photos of BMPs for your projects to Steve Miranda at [smiranda@usgs.gov](mailto:smiranda@usgs.gov)

## Investment in FOR: What does it take?

* Nebraska has moved to substantial investments (e.g., complete lake renovations) and seen substantial returns (2-6-fold increase in anglers and other recreational users). Partnerships with angler groups and other groups have grown over time, as both trust and program administration have developed. Nebraska has a habitat stamp to support the program and has conducted extensive outreach to constituents.
* Moving from small grant projects to more comprehensive approaches in Iowa involved redefining management biologist positions, reassessing lakes and reservoirs, and teamwork with other groups (e.g., TMDL folks). Iowa has earmarked money to support the program and has observed a $4:$1 return on investment.
* If you’re gonna teach a bear to dance, you’re gonna have to dance with a bear. – Jeff
* Constituent backing is essential to garner political support. Demonstrating success with initial projects will snowball, yielding more political support for additional projects.
* Realistic expectations when/if you do go to the legislature are essential. What is the time frame and the amount for investment payoff? Focus on projects where the payoff is worth the time and money.

# Multi-State Grant

* 2011 final report was completed and forwarded to FWS (Briefing Book)
* Funding currently runs to 2014; we have been excluded from the first two years of the “all-inclusive” NFHP grant. We need a new source of funding, but cannot succeed with a multi-state grant without NFHP’s support.
* There is a misconception that RFHP is funded by sponsors.
* There was also a misunderstanding that RFHP had its own multi-state grant; however our grant expires before the next round of NFHP’s multi-state grant begins.
* Regional agency associations may be a source of support, although some past attempts have not been successful.
* Hannibal suggested that more fisheries chiefs become involved in the NFHP board to lend their voice.
* Fisheries administrators and NFHAP board may be meeting in Denver in the spring – Contact: Mike Stone
* New grant focuses on compiling the BMPs to address regional impairments and make them accessible to fisheries managers
* Action Item: Jeff will send a copy of the new grant to Joe Conroy and Rebecca Krogman.

# How to Incorporate the Assessment into Management

* Rebecca Krogman presented an update on the habitat assessment.
* Feasibility assessment should accompany the habitat-based prioritization to incorporate socioeconomic value of the reservoir, angler use, and local support and resources.
* Gene Gilliland inquired whether the habitat data would be combined with angler data to analyze satisfaction, fishery quality, and fishery type.

# Bylaws Revisions (Briefing Book)

* Motion to accept the bylaws revisions with amendment by Mark Oliver and seconded by Hannibal Bolton. Motion passed.

# RFHP Conservation Priorities (Briefing Book)

* A statement regarding the importance of reservoirs will be added to the beginning of the document, including their role in angler recruitment and participation, water supplies, water quality, and quality of life.
* Priority II(a) will be revised to give priority to projects that address regionally-pertinent impairments.

Break for lunch 12:15-12:55pm.

# Strategic Plan-5 year update scheduled for 2014

* Committee for update
* Karl Hess
* Jeff Boxrucker

# 2012-2013 Work Plan (Briefing Book)

* Work plan was presented with accomplishments.

# 2013-2014 Work Plan (Briefing Book)

* Newsletter editor: Rebecca Krogman
* Director of Strategic Partnerships
* Sub-contract around $36,000 from Jeff’s salary
* If we do not get more stable, long-term funding, RFHP will not exist.
* Purpose: Meet with industry to develop partnerships and funding sources. Approximately $10,000 has been earmarked for travel.
* Gene Gilliland, who will be the new BASS Conservation Director, is a candidate. There may be conflicts of interest in his dual roles.
* Return has been disappointing for another group (WNTI), but Gene already has numerous contacts and the communication skills to hit the ground rolling.
* Current budget
* We currently have $10,000 in the FOR account
* $2,000 is earmarked for FOR small projects
* Coordinator’s salary is funded through May 2014
* Upcoming meetings to attend
* Feb. 21-23, 2014 BASS Conservation Summit
* SDAFS Charleston

# 2012-2013 Project Grant

* Package with FOR as applicant was submitted to FWS and was rejected; they are concerned with environmental compliance and would like to see a component discussing how projects are addressing environmental regulations. Notably, this was not an issue for every project in the package, but the entire package has been returned.
* McKinley Lake, Iowa – State was not involved
* Recommended that state biologist cooperating with applicants fill out federal compliance documents.
* The group must have documented environmental compliance or pending environmental compliance, with a caveat that the compliance paperwork must be complete prior to project final approval. We will emphasize this far more next year to avoid a repeat.
* Approval letters will need to allow piecemeal allocation in order to allow prepared projects to move forward.

**Project Selection (Briefing Book)**

## Criteria

* This year’s criteria were more usable and clear, good progress. There was some discussion regarding whether criteria should be further revised, but overall the group was happy with the current revision.
* The map used this year was based on an earlier reservoir classification step and will be revised prior to the next year’s round of project selection.

## Final Selection

* 21 projects submitted
  + Break in scoring occurred between projects ranked 10 (205) and 11 (177)
  + Funding from FWS allowed funding of first 7 projects
    - See Briefing Book for project narratives, ranks and scores
* Motion to approve the top seven RFHP projects was made by Mark Oliver and seconded by Don Gabelhouse. Motion passed.
* Motion to approve all three Small Project Grants was made by Mark Porath and seconded by Don Gabelhouse. Motion passed.

Meeting adjourned at 3:15pm.



**Financial Report**

**(1 Sept 2013 - 30 Sept 2014)**

**Friends of Reservoirs** (Bank of America)

Beginning Balance (1 September 2013) **$10,526.65**

Deposits

Grant (Toyota) 8,000.00

Sponsorship (Bass Pro Shops) 1,000.00

SNIPS sales 20.00

Donation (Possum Kingdom project) 100.00

Donation (Possum Kingdom project) 50.00

FOR membership (Cypress Basin Master Naturalist) 25.00

Donation (Possum Kingdom project) 200.00

Donation (Possum Kingdom project) 200.00

Donation (Possum Kingdom project) 150.00

Donation (Possum Kingdom project) 50.00

Donation (Lake Livingston project) 100.00

Donation (Possum Kingdom project) 75.00

Sponsorship (Bass Pro Shops) 1,000.00

FOR membership (IL BASS Federation) 25.00

Donation (Possum Kingdom project) 25.00

Donation (Possum Kingdom project) 100.00

FOR membership (NM BASS Fed/AHH ) 50.00

FOR membership (Rocky Mountain Anglers) 100.00

FOR membership (Lake Houston Sportsman) 25.00

FOR membership (Seneca Nation) 250.00

FOR membership (Conway Donation) 250.00

FOR membership (KS B.A.S.S. Conservation) 25.00

FOR membership (Canyon Bass Club) 25.00

FOR membership (Mineral Wells Bass Club) 25.00

FOR membership (Kinkaid Watershed Project) 25.00

FOR membership (WV B.A.S.S. Conservation) 25.00

FOR membership (Lakeside City, TX) 25.00

Grant (Toyota-NM B.A.S.S. Nation) 2,000.00

Grant (Toyota-NM B.A.S.S. Nation) 2,500.00

Donation (Franklin Fisher) 500.00

FOR membership (San Antonio Metro League of Bass Clubs) 100.00

Sponsorship (Fishiding.com) 1,000.00

Grant (Shimano-NM B.A.S.S. Nation) 5,000.00

FOR membership (Austin FlyFishers) 25.00

FOR membership (Tioga Co. Bass Anglers) 25.00

FOR membership (Friends of Lake Waco) 25.00

Grant (USFWS-FOR Operations) 35,000.00

Grant (USFWS-MDC Mozingo Lake) 20,000.00

Grant (USFWS- TPWD East TX Lakes) 20,000.00

Grant (USFWS- RMA Willard Bay) 10,760.00

FOR membership (VA B.A.S.S. Conservation) 25.00

Donation (Possum Kingdom project) 1,250.00

Donation (Wichita Falls project) 2,000.00

Donation (Possum Kingdom project) 25.00

Donation (Possum Kingdom project) 10.00

FOR membership (Prairieland Anglers-renewal) 25.00

FOR membership (Glade Run Lake Conservancy) 25.00

**Total Income**  **$112,240.00**

Income Summary

Grants $103,260.00

Sponsorship 3,000.00

Membership 1,200.00

Donations (projects) 4,810.00

Sales 20.00

**$112,240.00** Expenses

Bank Fees $ 6.00

Ck # 1017 Small Projects Grant (FOE) 1,000.00

Ck # 1019 Piney Wood Lakes grant advance 1,000.00

Ck# 1020 Grant Award (Toyota) 4,000.00

Ck # 1021 Small Projects Grant (Canyon BC) 1,000.00

Ck# 1022 Rocky Mountain Anglers (2013 project) 10,760.00

Ck# 1024 TPWD (2013 project) 20,000.00

Ck# 1025 MDC (2013 project) 20,000.00

Ck# 1027 Coordinator Salary (July) 5,000.00 Ck# 1028 Coordinator Salary (Aug) 5,000.00

Ck# 1029 Mahoning Creek, PA project 1,286.94 **Total Expenses $69,052.94**

**Ending Balance (30 September 2014)** **$53,713.71**

\*FOR operations [Coordinator salary (October through June), travel, outreach, office expenses] are funded through a MultiState Conservation Grant from the Association of Fish and Wildlife Agencies and are not represented in this report. Separate spreadsheet with those expenditures is included.

**ARKANSAS GAME AND FISH COMMISSION**

**RESERVOIR FISHERIES HABITAT PARTNERSHIP**

Report Highlighting 2013 Activities

Multistate Conservation Grant No. F13AP00148

[www.reservoirpartnership.org](http://www.reservoirpartnership.org); [www.waterhabitatlife.org](http://www.waterhabitatlife.org)

Funds were not distributed until June, 2013 so the activities below occurred between June and December, 2013. Activities are reported under the three stated objectives of the grant.

**Objective 1: *Compile and design Best Management Practices suitable for addressing regional differences in fisheries habitat impairments afflicting U.S. reservoirs.***

* Continue to provide Best Management Practice materials to PI
* Review 4 manuscripts for publication
* Review Statement of Interest for research effort on connectivity for Gulf Coast Prairie LCC
  + Participate in conference call to discuss same
* Conducted site visit to Floating Islands International (Shepard, MT research facility) and discuss utility of technology for use in BMP project
  + Worked with Floating Islands International to develop cost estimates for potential project using FII technology to reduce phosphorous levels in Thunderbird Reservoir, OK by 10% and 20%
  + Met with Oklahoma Water Resources Board and City of Norman to develop proposal for the City of Norman using Floating Islands International Technology to improve water quality on Thunderbird Reservoir
* Assist with Cooperative Agreement between AGFC and MS State Univ
* Arrange for state agency habitat staff to participate in webinar re: Contour Innovations products for evaluating habitat projects
  + Forwarded photos from reservoir habitat symposium to PI
* Conference call to discuss joint project on Muskingum River watershed, OH with Ohio River FHP Coordinator, OH DNR
* Discussed future of Multistate Conservation Grant applications with NFHP Board Chair
* Edited Sedimentation Chapters of BMP website
  + Forwarded to NE Aquatic Habitat Program Coordinator for review

**Objective 2: *Develop a national BMP monitoring system appropriate for evaluating and refining BMPs applied within an adaptive management context.***

* Continue to provide Best Management Practice materials to PI
* Coordinate correspondence among state agency habitat coordinators to expand funding opportunities

**Objective 3: *Strengthen and diversify RFHP strategic capability to implement the National Fish Habitat Partnership Action Plan by recruiting, preparing and supporting an expanded and active chapter membership in its affiliated Friends of Reservoirs Foundation and to recruit sponsoring companies and organizations to solidify funding for RFHP habitat enhancement efforts.***

* Prepare for, attend, and represent the Reservoir Fisheries Habitat Partnership at the National Fish Habitat Partnership Board Meeting, 25-27 June
* Participated in October NFHP Board Meeting via conference call
* Respond to White River Blueways correspondence and conference call
* Developed and printed sponsorship brochure
* Develop potential sponsors mailing list and make initial contacts with several companies
* Continue planning for reservoir habitat symposium at the AFS meeting
* Updated SAM registration to continue to receive federal grants
* Prepare for and attend ICAST show in Las Vegas,
  + Set up and man booth (along with Terre/Gilliland)
  + Met with Bass Pro Shops Conservation Director to discuss funding FOR initiatives
  + Discussed FOR and need for reservoir habitat restoration efforts and funding needs with fishing tackle industry representatives
  + Distributed brochure as needed
* Completed MSCG final report
* Drafted by-laws revisions (approved at Annual Meeting)
* Drafted RFHP Conservation Priorities (approved at Annual Meeting)
* Sent out annual renewal notices to FOR partners
* Responded to questions concerning RFP for project funding
* Handled needed administrative changes to MSCG for billing purposes
* Drafted agendas for and coordinate RFHP conference calls
* Updated RFHP website
* Drafted business plan for RFHP and FOR
  + Revised first draft of Business Plan as per River Network comments
  + Sent to FOR Committee for review
* Contacted 2013 project leaders re: compliance documents
  + Held several discussions with FWS over specifics of compliance documents for each project
* Discussed replacement of RFHP Board position with NALMS leadership
  + Reed Green (USGS) and NALMS President-elect will be new NALMS representative on Executive Committee
* Participated in webinar on Economic Evaluation tool developed for NFHP
  + Plan will be used for fund-raising purposes
* Discuss RFHP and FOR programs with Chris Cantrell, Fisheries Chief AZ Game and Fish Dept.
* Conducted interview with outdoor writer for B.A.S.S. Times Magazine
* Conference call with City of Wichita Falls to discuss formation of FOR Chapter
* Received project proposals (21 total)
  + Distributed to Working Groups (WG) for scoring
  + Summarized scores
  + Summarized proposals for distribution to Executive Committee
  + Lead discussion of project selection at Annual Meeting
  + 8 projects selected to advance to USFWS for funding
  + Notified successful and unsuccessful candidates for 2014 project funding
* 2013 Annual Meeting of RFHP
  + Made all arrangements with local hotel
  + Prepared Briefing Book
  + Led discussions of agenda items
  + Made revisions to documents as recommended by Executive Committee
* Developed agenda for and led discussion at FHP workshop at AFS Annual Meeting
* Moderated session on reservoir habitat issues for Annual Meeting of AFS (Little Rock, AR)
  + 21 presentations
  + 70-80 attendees for all sessions
  + Followed up with FWS on status of 2013 project funding
* Wrote article on Reservoir Habitat symposium at Annual Meeting of AFS for *Fisheries* magazine
  + Discussed feature article on reservoir habitat with Dr. Miranda for publication in *Fisheries* in 2014
* Made presentation to Fish Chiefs at SEAFWA on recruiting members to FOR
* Discussed cooperative venture with Nature Conservancy to incorporate Reservoir Partnership in TNC’s Sustainable Rivers Program (modify USACE water release schedule to positively affect downstream water quality and aquatic habitat)
* Discussed cooperative project funding possibilities with B.A.S.S. Conservation Director

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **2013** | **MSU Contract** | **Salary** | **Expenses** | **Total** |
| Jan |  |  |  |  |
| Feb |  |  |  |  |
| Mar |  |  |  |  |
| April |  |  |  |  |
| May |  |  |  |  |
| June |  | $ 10,000.00 | $ 727.67 | $ 10,727.67 |
| July |  | $ 10,000.00 | $ 2,478.10 | $ 12,478.10 |
| August |  | $ 10,000.00 | $ 1,203.44 | $ 11,203.44 |
| Sept |  | $ 10,000.00 | $ 2,931.09 | $ 12,931.09 |
| Oct |  | $ 10,000.00 | $ 4,491.83 | $ 14,491.83 |
| Nov | $ 77,380.00 | $ 10,000.00 | $ 500.00 | $ 10,500.00 |
| Dec |  | $ 10,000.00 | $ - | $ 10,000.00 |
| 2014 |  |  |  |  |
| Jan |  | $ 10,000.00 | $ - | $ 10,000.00 |
| Feb |  | $ 10,000.00 | $ 918.54 | $ 10,918.54 |
| March |  | $ 10,000.00 | $ 617.41 | $ 10,617.41 |
| April |  | $ 10,000.00 | $ 458.75 | $ 10,458.75 |
| May |  | $ 10,000.00 | $ 808.91 | $ 10,808.91 |
| June |  | $ 10,000.00 | $ 337.30 | $ 10,337.30 |
| July |  |  | $ 1,219.37 | $ 1,219.37 |
| August |  |  | $ 64.68 | $ 64.68 |
| Sept |  |  | $ - | $ - |
| Oct |  |  |  |  |
| Nov |  |  |  |  |
| Dec |  |  |  |  |
| 2015 |  |  |  |  |
| Jan |  |  |  |  |
| Feb |  |  |  |  |
| March |  |  |  |  |
| April |  |  |  |  |
| May |  |  |  |  |
|  |  |  |  |  |
| **Total** | $ 77,380.00 | $ 130,000.00 | $ 16,757.09 | $ 224,137.09 |
|  |  |  |  |  |
|  |  | **Original Grant Amt** | **Expenditures** | **Funds Remaining** |
|  |  | $ 250,000.00 | $ 224,137.09 | $ 25,862.91 |

**Tackling Reservoir Habitat Problems with Best Management Practices Applied with Adaptive Management**

**Progress Report (September 30, 2014)**

**Subgrant agreement between Arkansas State Game and Fish Commission and Mississippi State University Research Technology Corporation**

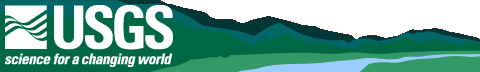
**Objective(s)** – (1) to compile and design best management practices (BMPs), and flexible BMP systems, suitable for addressing fish habitat problems afflicting US reservoirs; and (2) to develop a national BMP monitoring system appropriate for evaluating and refining BMPs applied within an adaptive management context.

**Progress** - Progress during this reporting period has focused primarily on Objective 1. Work on Objective 2 began June 1 when M.S. student Clayton Raines began employment.

Work on objective 1 has involved developing BMPs for various common reservoir habitat problems. Habitat problems and BMPs are being organized into a habitat manual. The manual will consist of approximately 15 chapters, listed in the table below. Progress has been made on several of these chapters as identified by the completion state column in the table.

We expect to continue to develop these chapters in the next reporting period, as well as begin work on objective 2.

|  |  |
| --- | --- |
| **Chapter title** | **Completion state (%)** |
| Introduction | 10 |
| Sedimentation | 95 |
| Water clarity | 95 |
| Water quality | 95 |
| Water regime | 95 |
| Structural habitat | 25 |
| Eutrophication | 0 |
| Aquatic plants | 0 |
| Watershed | 0 |
| Riparian zone | 80 |
| Littoral zone | 0 |
| Connectivity to adjacent aquatic habitats | 0 |
| Invasive species | 0 |
| Permitting requirements | 0 |
| Decision making | 90 |



**Statement of Work:** Reservoir Fisheries Habitat Partnership – National Reservoir Measures and Metrics Database Development (as part of 2015 NFHP MSCG)

**Submitted to:**  Jeff Boxrucker, Coordinator, Reservoir Fisheries Habitat Partnership

**From:** Reed Green and Kirk Rodgers, U.S. Geological Survey, Lower Mississippi-Gulf Water Science Center

**Date:** October 16, 2014

**Background:** In 2010, a project was initiated with U.S. Fish and Wildlife Service and the newly formed Reservoir Fisheries Habitat Partnership (RFHP) to develop a national (48-state) database of publically accessible reservoirs greater than 250 acres, assembling physical, geographical, and morphological descriptors (metrics) for each reservoir for use in developing a nationwide reservoir classification system. A draft reservoir measures and metrics database was delivered to RFHP in September, 2011.

**Purpose and Scope:** The purpose of this project is to revise the 2011 draft National Reservoir Measures and Metrics Database of publically accessible reservoirs, greater than 250 acres that will include physical and geographical descriptors and measures, and calculated morphological measures (metrics) aggregated from existing public databases and information sources. An earlier 2011 draft database was prepared using the USACE National Inventory of Dams from 2009 as its basis. Since then, the USGS National Anthropogenic Barriers Database ([NABD, 2012](https://www.sciencebase.gov/catalog/item/512cf142e4b0855fde669828)) has been published which contains around 3,600 dams greater than 250 acres linked to the National Hydrography Dataset and all its metadata. The revised RFHP National Reservoir Measures and Metrics Database will use the NABD as its basis. The completed revised database will be provided by September 30, 2015.

**Remaining Tasks:**

1. Filter reservoirs in the NABD greater than 250 acres.
2. Join NABD and NHD waterbody databases.
3. Join EPA river reach and USGS SPARROW databases.
4. Apply metric equations for each reservoir (see attached list of descriptors, measures, and metrics).
5. Publish the database as a USGS Data Series Report.

**Funding:**

Revise the National Reservoir Measures and Metrics Database $50,000

Reservoir Fisheries Habitat Partnership

2016 Multistate Conservation Grant Proposal Outline

**Title:** Determining the Potential for Increasing Fish Productivity by Adding Brush Fish Structure to Reservoirs.

**Objective:** To determine if adding brush structures to reservoirs can increase periphyton production, fish abundance and growth rates.

**Sponsor:** Reservoir Fisheries Habitat Partnership/Friends of Reservoirs

**Methodology**

Potential Participating States: Arkansas, Missouri, Oklahoma, Texas, Iowa, North Carolina, Ohio, Pennsylvania, Utah, Arizona

Project Oversight:

Project Leaders: Coordinator, Reservoir Fisheries Habitat Partnership

Dr. Esteban Miranda, Mississippi State University

Ph.D. Student, MS State University

Individual Points of Contact for each state participating

Oversight Team’s primary responsibilities are to ensure that methodologies are consistent among states and that results are communicated at professional meetings and published at the conclusion of study.

1. Select one reservoir in each state (6 states total) for study
   1. Reservoir selection is left to participating states
   2. Select 1 treatment cove and 1 control cove in each reservoir
2. Target species will be determined upon consultation with participating states
   1. Target species should be those that are the focus of individual agency brush addition efforts

Year 1 (Pre-Treatment)

1. Measure periphyton deposition/growth rates in the control and treatment coves
   1. Pretreatment estimates will be done using standard methods to determine baseline levels of periphyton production in both treated and untreated coves
2. Measure fish abundance using electrofishing
   1. Electrofishing output needs to be standardized among states using standard power curves
   2. Measure CPUE of target species
      1. 5-minute units of effort
      2. Amount of effort will be determined based on *a priori* decision on level of power needed to produce desired results (i.e., detect a 20% change in the mean)
   3. Measure growth rates of target species using otoliths

Year 2 (Treatment)

1. Add structure to Treatment Coves
   1. Structure used to be determined by participating states (should be of the type that the agency typically uses). Type used needs to be communicated to and approved by the Oversight Team.
   2. If possible, use of commercially available structure should be used by at least one participating state
      1. Likely most appropriate in the West (AZ, UT) where natural brush is at a premium
   3. Install brush to cover 20% of shoreline of Treatment Cove
      1. Placement of brush will be left to participating states
         1. Distance between structures to be codetermined prior to installation
      2. Depth of structures needs to be limited to the effectiveness of electrofishing sampling (<6-10 feet)
2. Measure periphyton deposition/growth rates in the control and treatment coves
   1. Control cove estimates will be done using standard methods to determine baseline levels of periphyton production in both treated and untreated coves
   2. Treatment cove estimates will be made by measuring periphyton growth on portion of added structure and extrapolating to whole of treatment cove
3. Measure fish abundance using electrofishing in the control and treatment coves
   1. Electrofishing output needs to be standardized among states using standard power curves
   2. Measure CPUE of target species
      1. 5-minute units of effort
      2. Amount of effort will be determined based on *a priori* decision on level of power needed to produce desired results (i.e., detect a 20% change in the mean)
   3. Measure growth rates of target species using otoliths in the control and treatment coves

Year 3 (Treatment)

1. Measure periphyton deposition/growth rates in the control and treatment coves
   1. Control cove estimates will be done using standard methods to determine baseline levels of periphyton production in both treated and untreated coves
   2. Treatment cove estimates will be made by measuring periphyton growth on portion of added structure and extrapolating to whole of treatment cove
2. Measure fish abundance using electrofishing in the control and treatment coves
   1. Electrofishing output needs to be standardized among states using standard power curves
   2. Measure CPUE of target species
      1. 5-minute units of effort
      2. Amount of effort will be determined based on *a priori* decision on level of power needed to produce desired results (i.e., detect a 20% change in the mean)
   3. Measure growth rates of target species using otoliths in the control and treatment coves

**Budget:**

Year 1:

Ph.D. Assistantship $ 40,000

Payments to States (6 @ 30,000) $180,000

**Total** $220,000

Year 2:

Ph.D. Assistantship $ 40,000

Purchase artificial structure $ 30,000

Payments to States (6 @ 30,000) $180,000

**Total** $250,000

Year 3:

Ph.D. Assistantship $ 40,000

Payments to States (6 @ 30,000) $180,000

**Total** $220,000

**Total Project Costs (3 years) $690,000**

**FOR Partners (2014)**

Chapters:

Cypress Basin Texas Master Naturalist Chapter-TX

Mineral Wells Bass Club-TX

City of Lakeside City-TX

Austin Fly Fishers-TX

Friends of Lake Waco-TX

Kinkaid Area Watershed Project, Inc.-IL

Glade Run Lake Conservancy-PA

Friends of Cave Run Lake-KY

Friends of Claytor Lake-VA

Group Affiliates

Idaho B.A.S.S. Nation

Arizona B.A.S.S. Nation

Illinois B.A.S.S. Nation

North Carolina B.A.S.S. Nation

West Virginia B.A.S.S. Nation

Virginia B.A.S.S. Nation

San Antonio Metropolitan League of Bass Clubs-TX

International Federation of Fly Fishers-MT

RESERVOIR FISHERIES HABITAT COORDINATOR

2013-2014 Work Plan (Accomplishments in Red)

* Update RFHP Strategic Plan (original 2009)
  + Establish committee
    - No volunteers were found for committee
    - Minimal progress was realized
      * Updated portions of narrative
* Work with Outreach Committee to promote/market RFHP/FOR
  + Promote/market RFHP to resource professionals and users nationwide
    - 17 new FOR members added in 2014 (total membership is 41 Chapter and Group Affiliates)
    - Lake Bloomington, IL project was named as one of NFHP’s “Ten Waters to Watch”
    - Attend scientific meetings
      * Make presentations highlighting RFHP programs/accomplishments at professional meetings
        + Hosted full-day symposium on reservoir habitat projects at 2013 AFS Annual Meeting
        + Present RFHP’s activities in SE at 2014 SEAFWA meeting
        + Make presentation on “Importance of Reservoirs on the Aquatic Landscape” to the Gulf Coast Prairie LCC Steering Committee
        + Attended spring FAS meeting in Denver
    - Represent RFHP at regional AFWA meetings
      * Present RFHP activity update to SEAFWA Fisheries Resource Committee
      * Provided written report on RFHP activities for the MWAFWA Directors’ meeting
      * Dave Terre present MSCG proposal to WAFWA Fish Chiefs
        + Obtained letter of support
    - Write a minimum of 3 articles for popular angling publications
      * *In-Fisherman, North American Fisherman, BASS Times*
      * Wrote article of reservoir habitat symposium for *Fisheries* magazine
    - Provide regular updates for website to webmaster
      * Updates on new FOR members given to webmaster and FaceBook guru
    - Produce quarterly newsletter, generate distribution list and distribute
      * No newsletters were produced
      * No comments received re: lack of newsletters
  + Promote FOR Foundation
    - Popular angling media outlets
      * Explore feasibility of promotions on TV/Radio programs with B.A.S.S. and Bass Pro Shops
        + Discussions were held but no promotions realized
      * Professional angler spokesperson
        + None identified
    - Angling industry (ICAST, Bassmasters Classic, ASA, trade shows)
      * Attended B.A.S.S. Conservation Summit
      * Set up booth at SW Native American Fish and Wildlife Conference
    - Develop displays/advertisements for catalogues
      * Bass Pro Shops
        + Discussed “Conservation Month” in Bass Pro Shops stores; nothing definitive developed so displays not purchased
    - Hire “Director of Strategic Partnerships”
      * Work with DSP to develop fundraising strategy
        + Multiple discussions held with B.A.S.S. Conservation Director to fill that role

Decided to delay decision until 2015 when CD has better understanding of time commitment to B.A.S.S.

* + Manage funds for MSCG outreach activities
    - Form committee to develop FOR/RFHP Business Plan
      * Business Plan finalized; folder developed to contain business plan, executive summary and sponsorship brochure (distributed to Board at 2014 Annual Meeting)
* Work with Mississippi State researchers to compile and disseminate reservoir restoration BMPs as part of the 2013 MSCG
  + Work is ongoing (progress report in Briefing Book)
  + Work with MSU PI to develop 2016 MSCG proposal on evaluation of structure addition to increase productivity (outline in Briefing Book)
    - Request NFHP to submit to AFWA (if fail to do so, will submit on behalf of FOR)
    - Letter of support received from WAFWA (letters of support from MWAFWA and SEAFWA being solicited)
* Solicit projects for funding
  + Refine project selection criteria (as needed)
    - Review of RFHP-sponsored project compliance documents was moved to the Federal Aid Office (Hannibal Bolton)
      * Significantly reduced review time
    - Distribute RFP (late June-early July)
      * RFP sent out 25 June
    - Proposal deadline (1 September)
    - Distribute project proposals to Regional Working Groups for scoring
      * Six proposals received (FL, IA, IL, KY, PA, VA)
      * Three small grant proposals received (IL, TX,VA)
    - Summarize projects and scores for 2014 RFHP Annual Meeting
      * Summary in Briefing Book
    - Provide information to FWS
      * FWS allocated $135,875 to RFHP for 2014 projects
        + Six projects funded (IL, KS, NC, NM, TX (2), UT; total $102,500
        + Remaining $33,375 used for Operations
      * Work with project partners on securing environmental compliance documents
      * Provided Statement of Work for Operations project
      * 2013 project funds were distributed
        + Three projects funded (MO, TX, UT); total $50,760
        + $30,000 for Operations
  + Explore opportunities for joint funding of projects with other FHP’s (SARP, Fishers and Farmers, Great Plains)
    - Foundation grants available for water quality improvement
      * Apply for grants for watershed restoration projects in systems with reservoirs with water quality issues (as identified in the assessment)
      * Applied for Shell grant on behalf of Tioga County Bass Anglers (FOR partner; $68,000)
      * Working with Friends of Lake Wichita and City of Lakeside City (FOR partner) on securing funding for complete restoration of Lake Wichita ($50 million + venture)
        + Presentation on project presented to Board
    - Contact OH River Basin FHP and OH DNR to look into joint project on Muskingum watershed (OHRBFHP priority watershed and 11 impoundments that were in RFHP assessment)
      * Preliminary discussions ongoing
    - Held several discussions with Andrew Warner (TNC) to discuss RFHP’s participation in Sustainable Rivers Program
      * Effort spawned from MOU between USACE and Bass Pro Shops
        + Little traction
    - Met with International Federation of Fly Fishers to discuss potential for joint projects
  + Ensure timely reporting and accounting of funded projects
    - All reports submitted by deadlines
* Disseminate assessment results
  + Work with Principle Investigator to house assessment summaries on web
    - PI and RFHP webmaster working to house assessment results
  + Present results at scientific meetings
    - Results presented at 2013 AFS Annual Meeting
  + Encourage publication of results
    - Environmental Stressors Afflicting Tailwater Stream Reaches Across the United States published in *River Research and Applications*
    - Two additional publications pending
* Liaise with other NFHAP Partnerships
  + Advance goals of NFHAP
    - Attend NFHP Board Meetings (either in person or via webinar)
      * Attended Spring NFHP meeting in Denver
        + Made presentation on state-funded reservoir fisheries habitat programs
      * Participated in fall NFHP meeting via conference call
      * Participated in FHP bimonthly conference calls
    - Serve on Partnership Committee
      * Partnership Committee was inactive in 2014
    - Serve on Habitat Conservation Committee
      * Habitat Conservation Committee was inactive in 2014
    - Provide RFHP accomplishments to FWS/NFHP for funding allocation
      * Spent several weeks preparing packet (50+ pages)
      * RFHP scored 1 out of possible 3 (received $135,875 for 2014)
  + Provide reservoir assessment data for national fish habitat assessment
    - Data from assessment was made available
    - Prepared proposal for 2014 NFHP MSCG funding to expand assessment data
      * Will receive $75,000 to expand metric database
        + Propose contract with USGS (Reed Green) for $50,000
        + RFHP operations for $25,000
* Serve as Business Manager for RFHP
  + Work with Executive Committee to:
    - Establish budget for operations of RFHP (excluding project funding)
      * In Briefing Book
    - Produce financial report for annual meeting
      * In Briefing Book
    - Compile income/expense statement and provide to accountant for completion of FOR tax return
      * 2013 income tax return was filed with IRS by accountant
  + Continue bi-monthly Executive Committee conference calls
    - Calls held per schedule with exception of September
  + Work with FWS Coordinator to schedule/arrange accommodations for RFHP meetings
    - Work with FWS Coordinator to produce and distribute minutes of semi-annual meetings
      * 2013 minutes in Briefing Book
    - Work with local arrangement venue to schedule needs for Annual Meeting
      * 2014 meeting in Southeast
        + Possible venues

SEAFWA (FL)

Big Cedar

Other host

* + - * + 2014 meeting held at Texas Freshwater Fisheries Center, Athens, TX (October 27)

FOR partner workshop held 2-days prior to RFHP meeting (October 25-26)

Special thanks to TPWD staff for local arrangements

RESERVOIR FISHERIES HABITAT COORDINATOR

2014-2015 Work Plan

* Update RFHP Strategic Plan (original 2009)
  + Establish committee to develop goals and objectives for next 5 years
  + Coordinator will edit narrative and distribute to committee for review
* Work with Outreach Committee to promote/market RFHP/FOR
  + Promote/market RFHP to resource professionals and users nationwide
    - Attend scientific meetings
      * Make presentations highlighting RFHP programs/accomplishments at professional meetings
    - Represent RFHP at regional AFWA meetings
    - Provide regular updates for website to webmaster
  + Promote FOR Foundation
    - Popular angling media outlets
      * Explore feasibility of promotions on TV/Radio programs with B.A.S.S. and Bass Pro Shops
      * Professional angler spokesperson
    - Angling industry (ICAST, Bassmasters Classic, ASA, trade shows)
    - Develop displays/advertisements for catalogues
      * Bass Pro Shops
    - Hire “Director of Strategic Partnerships”
      * Work with DSP to develop fundraising strategy
* Work with Mississippi State researchers to compile and disseminate reservoir restoration BMPs as part of the 2013 MSCG
* Work with USGS staff to develop a Statement of Work for the 2015 NFHP MSCG
  + Science and Data objectives (expand reservoir metric database)
  + Distribute funds and ensure timely completion of objectives
* Prepare Letter of Intent for 2016 MSCG
  + Prepare full proposal if LOI is accepted
* Solicit projects for funding
  + Refine project selection criteria (as needed)
    - Distribute RFP (late June-early July)
    - Proposal deadline (1 September)
    - Distribute project proposals to Regional Working Groups for scoring
    - Summarize projects and scores for 2015 RFHP Annual Meeting
    - Provide information to FWS
  + Explore opportunities for joint funding of projects with other FHP’s (SARP, Fishers and Farmers, Great Plains)
    - Foundation grants available for water quality improvement
      * Apply for grants for watershed restoration projects in systems with reservoirs with water quality issues (as identified in the assessment)
  + Ensure timely reporting and accounting of funded projects
* Disseminate assessment results
  + Work with Principle Investigator to house assessment summaries on web
* Liaise with other NFHAP Partnerships
  + Advance goals of NFHAP
    - Attend NFHP Board Meetings (either in person or via webinar)
    - Serve on Partnership Committee
    - Serve on Habitat Conservation Committee
    - Provide RFHP accomplishments to FWS/NFHP for funding allocation
  + Provide reservoir assessment data for national fish habitat assessment
* Serve as Business Manager for RFHP
  + Work with Executive Committee to:
    - Establish budget for operations of RFHP (excluding project funding)
    - Produce financial report for annual meeting
    - Compile income/expense statement and provide to accountant for completion of FOR tax return
  + Continue bi-monthly Executive Committee conference calls
  + Work with FWS Coordinator to schedule/arrange accommodations for RFHP meetings
    - Work with FWS Coordinator to produce and distribute minutes of Annual Meeting
    - Work with local arrangement venue to schedule needs for Annual Meeting
      * 2015 meeting in West
        + Possible venues

Utah?

|  |  |
| --- | --- |
| **Reservoir Fisheries Habitat Partnership-Budget (2014-2015)** | |
| **2013 Multistate Conservation Grant** | |
| **Funds Remaining** | **$ 25,862.91** |
| 2014 Annual Meeting | **2,000.00** |
| Brochures   * reprint FOR membership brochure * revise sponsor brochure for non-angling industry sponsors | **$ 2,500.00** |
| Displays for Bass Pro Shops Conservation Month???? ($10,000) |  |
| Travel |  |
| * SDAFS | 1,000.00 |
| * Solicit Sponsors | 10,000.00 |
| **Total Travel** | **$ 11,000.00** |
| Other Expenses |  |
|  |  |
| * Postage | 200.00 |
| * Web Hosting | 600.00 |
|  |  |
| **Total Other** | **$ 800.00** |
| Director of Strategic Partnerships Salary (????) | **$ 9,000.00** |
| **Funds Remaining** | **$ 562.91** |
|  |  |
| **2013 FWS Project Award** | **$ 35,000.00** |
| Coordinator Salary (July-September, 2014) | $ 15,000.00 |
| Coordinator Salary (Oct-Dec 2014) | $ 15,000.00 |
| Travel |  |
| * NFHP (2 meetings) | $ 2,000.00 |
| * AFS (2015) | $ 2,000.00 |
| **Funds Remaining** | **$ 6,000.00** |
|  |  |
| **2014 FWS Project Award** | **$ 33,475.00** |
| Coordinator Salary (Dec-May) | $ 30,000.00 |
| Travel |  |
| * RFHP Meeting (2015) | $ 475.00 |
| * SEAFWA (2014) | $ 1,500.00 |
| * AFS (2016) | $ 1,500.00 |
|  |  |
| **2015 NFHP MSCG (Science and Data)** | **$ 75,000.00** |
| Coordinator Salary (June-October, 2015) | $ 25,000.00 |
| Subcontract USGS | $ 50,000.00 |
|  |  |
| **2015 FWS Award for Operations???** | **$ 30,000.00** |
| **Shell Grant (Tioga County Bass Anglers-tentative)** | **$ 1,900.00** |
| **Sponsor Solicitation (projected)** | **$ 30,000.00** |

|  |  |
| --- | --- |
| **I. AQUATIC HABITAT RESTORATION/PROTECTION** | **Points = 130** |
| ***I.1 Would the habitat project in question address the regional priority impairments identified in the RFHP habitat impairment assessment. Refer to the map and table attached.*** |  |
| 1st and/or 2nd Regional Priority Impairment = 50 |  |
| 3rd and/or 4th Regional Priority Impairment = 25 |  |
| 5tht and/or 6th Regional Priority Impairment = 10 |  |
| Does not address any of the top 6 Regional Priority Impairments = 0 |  |
|  | |
| ***I.2 Are objectives and performance measures clearly defined in the proposal? (e.g., ft2 of shoreline restored; quantified amount of structure added; number of native plants planted; changes in water quality parameters; changes in fish sampling catch rates in affected area, rates of recruitment, or population size structure; angler catch rates, harvest rates, and measures of directed fishing effort; measures of recreational use or economic benefit; etc)*** |  |
| Clearly defined objectives and performance measures with reasonable likelihood of performance measures being met = 40 |  |
| Clearly defined objectives and performance measures with low likelihood of performance measures being met = 20 |  |
| Loosely defined objectives/performance measures=10 |  |
| No performance measures=0 |  |
|  | |
| ***I.3 Are monitoring plans included in the proposal? (Are monitoring plans sufficient to evaluate the stated performance measures in the proposal? \*Note: monitoring may be outside of the time scope of the project but should be included to receive maximum points. Are monitoring plans of sufficient duration to determine if project objectives are met?)*** |  |
| Monitoring and evaluation adequate to evaluate performance measures = 40 |  |
| Monitoring and evaluation stated but insufficient to meet performance measures = 20 |  |
| No monitoring and evaluation included = 0 |  |

**RFHP Project Selection Criteria-Revised May 2013**

|  |  |
| --- | --- |
| **II. QUALITY OF LIFE FOR AMERICANS** | **Points = 50** |
| ***II.1 Would the habitat project in question help the RFHP achieve its objectives to provide, protect and enrich quality of life for all Americans?***  ***Check all that apply:***   * ***Develop environmental amenities, nature experiences, and wildlife-based activities and opportunities on lands adjacent to reservoir systems to engage and inform local communities and visiting public on the values and benefits of healthy reservoir systems.*** * ***Promote conservation of fish and aquatic resources to boaters and other water-based recreationists.*** * ***Maintain and enhance public access.*** * ***Support recreational industries and related economic activities that advance watershed health and contribute to conservation of fisheries and aquatic habitats in reservoir systems.*** |  |
| Yes, three or more objectives = 15 |  |
| Yes, two objectives = 10 |  |
| Yes, one objective = 5 |  |
| No = 0 |  |
|  | |
| ***II-2 Would the project restore/enhance habitat that would directly support an economically important or high-use fishery (as documented in past studies or the published literature) or other types of fisheries within the project area?*** |  |
| Yes, multiple important fisheries = 20 |  |
| Yes, single important fishery = 15 |  |
| Yes, less significant or multiple developing fisheries = 10 |  |
| Yes, less significant or a single developing fishery = 5 |  |
| No = 0 |  |
|  | |
| ***II.3Would project outcomes lead to improvements in water quality or quantity for human health, recreational use, or ecological health of the reservoir system?*** |  |
| Yes, direct and immediate improvement = 15 |  |
| Yes, indirect or delayed improvement = 10 |  |
| No = 0 |  |

|  |  |  |
| --- | --- | --- |
| **III. PARTNERSHIPS, FUND LEVERAGING, AND PROMOTION** | **Points = 80** | |
| ***III.1 Would the habitat project in question help the RFHP achieve its objectives to establish partnerships between management agencies and reservoir stakeholders; leverage outside sources of funding; and advance public awareness and understanding of the value of healthy reservoir systems?***  ***Check all that apply:***  o ***Establish national and regional technological assistance, data sharing and information network capacities to support development and adoption of best management practices among managers and among individuals and organizations engaged in the conservation of fish habitat in reservoir systems***  o ***Support and participate in watershed planning initiatives to promote implementation of best management practices for conservation of fisheries and fish habitat in reservoir systems***  o ***To ensure practitioner awareness of and access to RFHP and its support capacities, establish outreach to reservoir managers, relevant authorities and communities within reservoir systems, and other private and public stakeholders engaged in conservation of those systems and their fisheries***  o ***Develop and formalize institutional relationships between RFHP and principle partners to establish landscape-level networks of communication and governance that will facilitate effective, efficient, and sustaining conservation of aquatic habitat in reservoir systems***  o ***Identify and develop long-term funding opportunities for RFHP projects and operations***  o ***Advance public awareness of the economic, societal and ecological value and benefits of healthy reservoir systems***  o ***Advance public understanding of the connections between habitat quality in reservoir systems and land-use practices within their associated watersheds***  o ***Nurture a public that is well-informed and involved in current and emerging resource issues in reservoir systems*** |  | |
| Yes, > 5 objectives = 15 |  | |
| Yes, 3 - 5 objectives = 10 |  | |
| Yes, 1 - 2 objective = 5 |  | |
| No = 0 |  | |
| ***III.2 How many partners are involved in the project? (Partners must be listed in the budget table and provide cash and/or in-kind contributions to be considered.)*** |  | |
| >5 = 15 |  | |
| 3-5 = 10 |  | |
| 1-2 = 5 |  | |
| 0 = 0 |  | |
| ***III.3 Will this project bring together a diverse cross-section of partner types (State government, Federal government, City or County government, water controlling authorities, universities, angler groups or clubs, civic groups or clubs, private industry, or local businesses). If so, how many partner types are directly involved in the project?*** | |  |
| >5 = 15 | |  |
| 2-5 = 10 | |  |
| 1 = 0 | |  |
| ***III.4 Are state and/or federal fish and wildlife management agencies actively engaged (providing financial or in-kind contribution) in this project and is the project compatible with a reservoir, watershed or land use management plan? If so, provide a copy or a link to the plan.*** | |  |
| Yes and plan = 10 | |  |
| Yes, but no plan = 5 | |  |
| No = 0 | |  |
| ***III.5 What amount of funds are leveraged from other sources?*** | |  |
| >5:1 = 15 | |  |
| 5-2:1 = 10 | |  |
| > 1 < 2:1 = 5 | |  |
| <1:1 = 3 | |  |
| No leveraging = 0 | |  |
| ***III.6 Does the project involve a Friends of Reservoirs group or member? Name the FOR group or member.*** | |  |
| Yes = 10 | |  |
| No = 0 | |  |
| ***Point Total for Goal Category I (maximum of 130)*** | |  |
| ***Point Total for Goal Category II (maximum of 50)*** | |  |
| ***Point Total for Goal Category III (maximum of 80)*** | |  |
| ***Grand Point Total for Project (maximum of 260)*** | |  |



|  |  |  |
| --- | --- | --- |
| **REGION**  **PRIORITZED REGIONAL IMPAIRMENTS**  (Top 2 Impairments in each Region-50 pts; 3rd and 4th-25 pts; 5th and 6th-10 pts) | **IMPAIRMENT** | **POINTS** |
| **Western Mountain/Xeric** | Water Regime (low retention, mistimed fluctuations, extreme drawdowns) | **50** |
| Lack of Structural Habitat (woody and vegetation) |
|  | Excessive Nutrients (algae blooms) | **25** |
|  | Siltation/Turbidity |
|  | Connectivity (lack of connection with embayments/backwaters, tributaries) | **10** |
|  | Degraded Shoreline Areas (excessive shallows, mudflats, disturbed riparian) |
| **Northern Plains** | Lack of Structural Habitat | **50** |
|  | Excessive Nutrients |
|  | Water Regime | **25** |
|  | Siltation/Turbidity |
|  | Connectivity | **10** |
|  | Degraded Shoreline Areas |
| **Upper Midwest** | Excessive Nutrients | **50** |
|  | Siltation/Turbidity |
|  | Excessive Vegetation (typically invasive/non-native plants) | **25** |
|  | Lack of Structural Habitat |
|  | Connectivity | **10** |
|  | Degraded Shoreline Areas |
| **Southern Plains** | Lack of Structural Habitat | **50** |
|  | Siltation/Turbidity |
|  | Degraded Littoral Areas | **25** |
|  | Connectivity |
|  | Excessive Nutrients | **10** |
|  | Water Regime |
| **Temperate Plains** | Lack of Structural Habitat | **50** |
|  | Siltation/Turbidity |
|  | Excessive Nutrients | **25** |
|  | Connectivity |
|  | Degraded Shoreline Areas | **10** |
|  | Water Regime |
| **Coastal Plains** | Excessive Vegetation | **50** |
|  | Siltation/Turbidity |
|  | Lack of Structural Habitat | **25** |
|  | Connectivity |
|  | Degraded Shoreline Areas | **10** |
|  | Excessive Nutrients |
| **Northern Appalachians** | Lack of Structural Habitat | **50** |
| Siltation/Turbidity |
|  | Excessive Nutrients | **25** |
|  | Excessive Vegetation |
|  | Degraded Shoreline Areas | **10** |
|  | Water Regime |
|  |  |  |
|  |  |  |
| **Southern Appalachians** | Lack of Structural Habitat | **50** |
| Siltation/Turbidity |
|  | Excessive Vegetation | **25** |
|  | Connectivity |
|  | Excessive Nutrients/Water Regime | **10** |

**RESERVOIR FISHERIES HABITAT PARTNERSHIP**

**Project Proposal Summary-2015**

Hurley Creek/McKinley Lake Water Quality Project, Iowa: submitted by City of Creston Iowa

The watershed was first studied in 2004 following a citizen's group effort to restore the 42-acre urban McKinley Lake as a quality fishery and recreational lake. McKinley Lake is fed by the Hurley Creek watershed. The lake's dam was erected in the 1930s and has been accumulating sediment since that time, mostly due to agricultural land uses, practically eliminating much of the open water area. In 2010, the City hired Snyder & Associates, which has designed other water quality, storm water management, and wetland projects, to assess the inlet area. The open channel does not allow water to slow and thus release sediments and nutrients. The vegetated areas contain mostly cattails, which are identified as low-value wetland plants. Hurley Creek stream banks upstream of the lake inlet are widening due to severe bank erosion; some areas have been stabilized and efforts will continue to reduce this source of sediment into the lake. Between the unprotected area and the current inlet area is a marginal forested wetland of about 2 acres. The end result will be an approximately 7 acre wetland that will include sediment basins, a forested treatment area, and two lower cells. This project will occur over two or three phases due to the high cost of over $1 million. The most logical first step is the creation of the pre-treatment sediment basin of approximately 1.5 acres. The basin provides a significant sediment- and nutrient-reduction benefit at an affordable cost; this investment alone will have the following results: 40-60% sediment removal and 30-40% phosphorus removal.

**This was the #1 ranked project in 2012 and 2013; City of Creston did not complete compliance documents so project was withdrawn both years. City manager was told that would hold funding until Jan1. for completion of compliance documents.**

**Funds requested: $15,000; total cost: $585,100 total score: 226; rank: 1**

Smithville Lake, MO Habitat Enhancement Partnership: submitted by the U.S. Army Corps of Engineers

Smithville Lake is a 7,190-acre U.S. Army Corps of Engineers (USACE) reservoir located just north of Kansas City, Missouri. Smithville is known for its hundreds of irregular shaped coves that furnish 175 miles of shoreline. Smithville was completed in 1982 and currently attracts thousands of water enthusiasts, including thousands of anglers each year. The lake’s primary purpose is flood control and, as a result, often experiences large water level fluctuations. Like many reservoirs across the country, fish habitat in the lake has significantly diminished since the reservoir was constructed. Repeated and long-term water level fluctuations have dramatically increased shoreline erosion, increased sedimentation rates and limited aquatic vegetation growth. Re-vegetation efforts in the past 10 years have been met with limited success. More than 4,000 acres of standing timber was left intact when the lake was built to provide fish habitat which has since degraded and provides only limited habitat for fish. The lack of stabilized shorelines and suitable fish habitat is limiting the lake’s potential to serve as a productive and diverse fishery. In order to greatly increase the quality of the fishery and reduce the sedimentation rate, Smithville Lake needs additional hardwood and rocky fish habitat at various depths and significant shoreline protection. The project proposal includes armoring 2,000 feet of shoreline with 4,333 tons of rip-rap on the lakes most highly eroded points. The stabilization of the shoreline will decrease the sedimentation rate, increase water quality as well as provide the lake with additional shallow water habitat. The project also involves the installation of 12 large boulders in the reservoir coves. Rock sizes will vary to diversify habitat structure ranging from 24 inch up to 42 inch rip-rap boulders. The large boulders will provide excellent diverse habitat for fishing and recruitment purposes that will last indefinitely. In addition, woody cover will be enhanced in the lake by hinge-cutting approximately 300 selected trees near the waterline along the bridge abutments and installing approximately 75 large hardwood brush piles consisting of five trees per brush pile. The focus of the hinge-cutting and brush pile work will be conducted around the three main bridges and bridge abutments on the lake. Their locations provide excellent access to shoreline fisherman and boaters. The RFHP grant funding would also be used to repair/enhance an existing 190 feet fishing jetty/wave break. The existing jetty was constructed at only two feet above normal pool. The grant would provide funding to raise the height of the jetty to four feet above normal pool and extend the jetty another 60 to100 feet. The jetty top would be graveled for easy access to the public for fishing. The new and improved jetty would extend a minimum of 250 feet into the lake and serve as a fishing pier for shoreline fisherman and provide additional fish habitat in up to nine feet of water. The fishing jetty would also serve as a wave break to drastically reduce the sedimentation rate of sand being deposited into the lake from the Little Platte Park swim beach.

**Funds requested: $20,000; total cost: $135,620; total score: 203; rank: 2**

Cave Run Lake, KY Large Scale Habitat Project: submitted by Kentucky Department of Fish and Wildlife Resources

Cave Run Lake is located in northeast Kentucky near the town of Morehead. The

impoundment of the Licking River was formed in 1974 for flood protection, water supply, and public recreational benefits. The U.S. Army Corps of Engineers and U.S. Forest Service jointly operate and manage the lake. KDFWR is responsible for managing the fishery resources through routine sampling, stocking, and regulations. Cave Run Lake is located in the Western Allegheny Plateau with a predominately forested watershed. The majority of the watershed is located within the Daniel Boone National Forest and owned and managed by the U.S. Forest Service. Nutrient and alkalinity levels are relatively low in the region. This forms the oligotrophic and clear water conditions in the lake. Land use within the watershed consists of silviculture, agricultural, and oil and gas operations. Due to the scenic beauty and exceptional fishery, Cave Run Lake is a popular destination for outdoor recreational enthusiast. On average, 25,000 fishing trips occur annually on the lake. In 2013, the Cave Run Lake Fisheries Habitat Committee was formed to address habitat needs in the lower lake. The committee consisted of state agencies, federal agencies, fishing clubs, fishing guides, and nonprofit groups. KDFWR believed it was crucial to form this partnership to effectively and efficiently complete a large scale habitat project. The proposed project will involve placing approximately 2,000 individual habitat structures across 4 sites over the 2 year timeline. The Cave Run Lake Fisheries Habitat Committee established guidelines for placing habitat at depths between 8 and 20 feet at summer pool.

**Funds requested: $10,000; total cost: $41,000; total score: 196; rank: 3**

Glade Run Lake Fish Habitat Improvement Project, PA: submitted by the Glade Run Lake Conservancy (FOR member)

Glade Run Lake, approximately 52-acres, is located in Middlesex Township, Butler County, Pennsylvania. The lake is within the headwaters of Connoquenessing Creek, a tributary of the Beaver River and has a drainage area of approximately 3.5 square miles. In July 2011, the lake was drawn down due to deficiencies in the dam and currently stands empty. The exposed lake bottom is barren with the exception of a few small trees, brush and warm season grasses that have grown over the past four years. Glade Run Lake was created for recreation and conservation purposes through the Dingell-Johnson Act in 1954. After construction of the dam and spillway, the approximate 150-acre property was deeded to the Commonwealth of Pennsylvania. It is administered by the Pennsylvania Fish and Boat Commission (PAFBC). Glade Run Lake is located only approximately 20 miles from the estimated 2.2 million residents of the greater Pittsburgh area. By PAFBC estimates, it is considered a popular recreational site to over 16,000 fishing, boating, and nature observers annually. Visitors to the lake contribute an estimated $2 million dollars to Pennsylvania and the local business community. Located in the Southern Appalachian Region, the proposed fish habitat improvement project directly addresses the lack of suitable structure for fisheries within Glade Run Lake. This lack of structure has been noted by the during their yearly population surveys. GRLC plans to add over 500 wood and rock fish habitat structures within various portions of the lake. The structures proposed include porcupine cribs, rock stars, rock rubble humps, felled trees, channel catfish spawning boxes, and pea gravel spawning beds. These structures will provide cover for fish and increase angler success.

**Funds requested: $20,000; total cost: $290,987; total score: 191; rank: 4**

Stream Stabilization of Tributary 2 entering Evergreen Lake, IL: submitted by Friends of EverBloom (FOR Member)

Evergreen Lake was constructed in 1971 as a supplemental water reservoir for the City of Bloomington, population 74,975, as well as for recreational use. It was formed by an impoundment of Six Mile Creek upstream of its junction with the Mackinaw River. In 1995, the city modified the Evergreen Lake dam to increase the normal pool elevation by five feet, resulting in a 36 percent increase in storage capacity. Currently, the lake has a surface area of 900 acres, 22.5 miles of shoreline, a maximum depth of 53 feet, a mean depth of 22 feet, and a storage volume of 15,480 acre-feet. The population of McLean County is 161,202. The two largest communities in McLean County are the City of Bloomington (pop. 74,975) and the Town of Normal (pop. 50,519). Both of these municipalities are in the southern part of the watershed. In 1986, the McLean County Department of Parks and Recreation identified improving the fishery of Evergreen Lake as a primary objective in meeting the goal of expanding recreational usage at COMLARA County Park. Phosphorus and total suspended solids are listed as a cause of impairment for Evergreen Lake. In order to address these impairments, a watershed plan was developed and a committee meets on a regular basis to discuss issues in the watershed and projects that are being completed. In April 2005, Stream Technical Resource and Management Service (STREAMS) surveyed the extent of erosion in the lower portion of the waterways that feed into Evergreen Lake. Six Mile Creek and seven unnamed tributaries were surveyed for one to four miles outwards from the lake, until the start of the upper, actively managed, drainage systems, for a total of 16.3 miles of streambeds. The survey showed that the inventoried erosion sites contribute approximately 2,100 tons of sediment to Evergreen Lake per year. In addition, more than 90 percent of lake sediment due to streambank erosion originates within 4 miles of the lake. Tributary 2 to Evergreen Lake enters the lake approximately 1300 ft. west and 900 ft. north of the intersection of County Roads 2300N and 1300E which is 1.5 mi. west and 1 mile north of Hudson, IL in McLean County. A streambank erosion study completed by Midwest Streams, Inc. in 2005 reports a total of 357 tons of sediment delivered annually from this 4.38 sq. mi. tributary. The total annual sediment delivery from streambank erosion was estimated at 2135 tons, therefore Tributary 2 represents about 18% of the total streambank erosion above Evergreen Lake. In order to reduce the sediment loading and improve aquatic habitat in the lower 3500 ft. under City of Bloomington ownership the proposal is to install a series of Rock Riffle Grade Control Structures. By constructing seven (7) Rock Riffles a riffle-pool sequence can be restored in this degraded channel which will accomplish several important goals.

1. Stream degradation will be halted.
2. Stream will be reconnected with the existing floodplain
3. Pool depth will be increased
4. Riffles will increase aeration of flow improving dissolved oxygen levels
5. Lateral bank erosion will be reduced by slowing velocities in the pool areas
6. Effective bank height will be reduced increasing bank stability

**Funds requested: $20,000; total cost: $71,900; total score: 191; rank: 4**

###### Restore native aquatic vegetation in littoral zones of Claytor Lake, VA subsequent to hydrilla control: submitted by Pulaski County.

Claytor Lake, located in southwest Virginia's Pulaski County, is a mainstem New River hydropower impoundment winding through 21 miles of the New River Val ley. Its fishery is regionally important providing recreational opportunities and is the economic centerpiece of Pulaski County, influencing 20% of the county's property values and providing 10% of the county's tax revenues. In 2003, Virginia Department of Game and Inland Fisheries (VDGIF) documented 40 acres of hydrilla *(Hydrilla verticillata)* in the upper lake area. In subsequent years, hydrilla expanded i n the absence of a coordinated control effort, covering approximately 400 acres by fall 2010. Left uncontrolled , even given Claytor Lake's limited littoral habitat , hydrilla may have expanded to 1,200+ acres (over 25% of surface acreage). During the fall of 2007 , a baseline aquatic vegetation survey was contracted by Appalachian Power Company, indicating the aquatic vegetation community was dominated by the exotics slender naiad *(Najas minor)* and hydrilla. At that time, native aquatic vegetation (primarily water weed *(Elodea canadensis)* and water celery *( Vallisneria americana)* were located in key littoral habitat areas. Hydrilla has subsequently been controlled or eliminated with the limited use of triploid grass carp. Limited attempts at reestablishing native vegetation in historical areas of presence have shown limited success. The objectives of this project are to:

1. Restore native aquatic vegetation beds in key littoral areas, establishing founder colonies and providing seed beds for establishment of native aquatic vegetation species.
2. Maintain native aquatic vegetation beds by maintaining the lowest possible stocking rates of triploid grass carp, since major stands of hydrilla have been controlled.
3. Monitor juvenile fish and waterfowl use of native aquatic vegetation restoration zones.

**Funds requested: $20,000; total cost: $46,064; total score: 168; rank: 6**

Evaluation of Best Management Practices for Habitat Augmentation for Warmwater Fisheries: Submitted by the University of Florida

Recreational fisheries managers often use the addition of woody debris and brushpiles to improve fish habitat and angler catch rates in lakes and reservoir. It is often hoped that game fish populations will increase in response to new fish habitat. However, it is equally possible for new fish habitat to solely attract fish and not increase population abundance. Attraction of game fish to structures may be a desired outcome if fish exhibit pelagic behavior within a given system, affording targeted fishing opportunities. However, managers usually also wish to increase sport fish population abundance by enhancing habitat. However, tests of whether sport fish abundance can increase with brush augmentation are rare, and it is unknown whether brushpile additions can influence the abundance of fish in reservoirs or lakes. In order to achieve best management practices for use of brush as habitat augmentation, there is a key need to evaluate how fish populations and fisheries respond to brush pile additions. We aim to evaluate this habitat enhancement management strategy in four small lakes in north central Florida by adding brush to increase habitat in two of the lakes while holding two lakes as controls. Monitoring of the population of Florida Bass (*Micropterus floridanus*) and Bluegill (*Lepomis macrochirus*) will continue within these lakes, building on five years of ongoing monitoring efforts. The spatial distribution of these two species will be tracked to observe the degree of attraction of fish to added habitat. Further, we will use mark-recapture methods to monitor changes in bass and bluegill abundance in response to the addition of woody debris to two of four lakes. Using this information, we will evaluate how habitat enhancement restructures the population size, structure, and distribution of Florida Bass and Bluegill as well as potentially identify changes in the community of species within the lakes. We will also conduct recreational angling in the lakes and evaluate how additions of brush habitat influence angler catch rates. Benefits from this BMP evaluation will identify realistic management goals when considering brush enhancement for warmwater fisheries. Because this is a common management strategy in reservoirs, identifying realistic management outcomes is critical to success brush augmentation projects. This work will provide the first experimental evaluation of BMP’s for brush augmentation in warmwater fisheries. Understanding these interactions via intensive monitoring will help in differentiating between population changes in game fish and community restructuring as a result of habitat additions. Thus, this study will allow managers and scientists to develop BMP’s for adding woody habitat to warmwater fisheries. **\*\*Coordinator Note: this evaluation is intended to accompany the 2016 MSCG proposal that RFHP intends to submit either through NFHP or FOR.**

**Funds requested: $20,000; total cost: $71,000; total score: 147; rank: 7**

**SMALL PROJECTS GRANT PROPOSALS**

**Small Grant Proposal for Growing Native Aquatic Plants In Virginia: B.A.S.S. Nation of Virginia**

Native aquatic vegetation that can serve as nursery habitat for juvenile sport and forage fish as well as provide shoreline protection and erosion control, is lacking in many Virginia reservoirs. Restoration efforts have been hampered because plants obtained from commercial sources have been of poor quality and harbored potential invasive species. Sources outside the region cannot supply plants that are adapted to the climate of this area, resulting in poor survival. There is a need to develop local plant sources that can produce the numbers and species required for restoration efforts in several reservoirs. Our goal is to partner with local high school horticulture programs to construct and operate nurseries that will propagate plants, assist in the restoration efforts and provide valuable lessons to the students in the role of plants in aquatic ecosystems. This pilot project will use existing facilities at Magna Vista High School to create nursery pools and tanks, obtain and pot propagules and culture the plants to maturity, splitting and repotting as necessary to maximize production space. This will be an ongoing project that should be self-sustaining after the initial start-up. This can be duplicated at other interested high schools. A lesson plan with a time-line for this project will be developed for this project so that it provides added value to the existing horticulture program. A selection of mature plants will be harvested and introduced into appropriate herbivore-resistant enclosures in one of several area reservoirs. The short-term goal is to establish sufficient nursery capacity to provide plants that VDGIF, Appalachian Power and other shoreline management teams can use in restoration efforts. If this pilot project is successful, we hope to expand the concept to other high schools and increase plant production capacity. It will teach the high school students native aquatic plant culture techniques that may provide the basis for starting a small for-profit business enterprise. This project will also introduce the students to ecological principles outside the greenhouse and to conservation practices that can help control shoreline erosion, provide fish habitat and improve water quality.

**Funds requested: $1,000; total cost: $16,636; rank: 1**

**Lake Fork Button Bush Initiative Phase 4: Lake Fork Sportsman’s Association**

Lake Fork is a 27,264-acre impoundment located on Lake Fork Creek, a tributary of the Sabine River, approximately five miles northwest of Quitman, Texas and 70 miles east of Dallas, Texas. It was impounded in 1980 as a fresh-water reservoir to serve the Dallas area and numerous other regional cities. Largely due to its age and recent prolonged periods of area-wide draught, Lake Fork has lost much of the natural vegetation important to the well-being of the reservoir as a fishery. Beginning in 2011, the Lake Fork Sportsman’s Association and Texas Parks & Wildlife (TPWD) began a cooperative effort to plant shallow-water Buttonbush at strategic locations around the reservoir to provide cover for spawning fish and their fry. In late 2010, TPWD recommended that LFSA consider a Lake Fork Buttonbush Habitat Program. Phase 1 began in March 2011 when LFSA purchased 1000 bare-root plants ($300) and planted them at various locations around Lake Fork. Drought conditions in 2011 limited the success. Phase 2 occurred in November 2011 with the purchase of 400 mature plants in 1-gal containers ($2100). The spring rains of 2012 were significantly better and most of the Phase 2 plants survived. For Phase 3, LFSA and the Yantis Texas High School Agricultural Program (YHSAgs) teamed together to raise 500 bare-root plants in 1-gallon buckets within the YHS-Ags greenhouse. The goal was to achieve a mature plant similar in size to those planted in Phase 2, but at reduced cost. In late 2012 and early

2013, 500 plants, pots, soil and irrigation supplies were purchased for approximately $1300 and turned over to YHS-Ags for planting and maintenance. Insufficient irrigation during the summer of 2013 resulted in the unfortunate loss of approximately 80% of the first 500 greenhouse plants. Plans were then made to ensure a viable summer irrigation program and a second batch of 500 plants and supplies were purchased in December 2013 for approximately $1300, bringing the out-of-pocket cost for Phase 3 to $2600. The revised Phase 3 program worked extremely well and almost all of the 500 new plants survived along with about 100 of the original batch. All of the approximate 600 Phase 3 plants are scheduled to be transplanted at Lake Fork this coming winter. LFSA is requesting a $1000 grant to continue the cooperative cultivation effort with Yantis High School. **Funds requested: $1,000; total cost: $9,874; rank: 2**

**Native Aquatic Vegetation Enhancement at Clinton Lake, IL: IL BASS Federation**

Clinton Lake, constructed to serve as a cooling lake for a power plant, was formed by damming Salt Creek just downstream of the confluence with the North Fork of Salt Creek about six miles east of Clinton, Illinois. The lake has a narrow horseshoe shape with the original design having about 130 miles of shoreline and 74,200 acre feet of water. Clinton Lake itself is privately owned, and leased to the Illinois Department of Natural Resources (IDNR). The 9300 acre park has a variety of activities available such as camping, hunting, and boating, though fishing on the 4800 acre lake is the most common recreational activity. In 2012, an aquatic vegetation survey was conducted by the Illinois Department of Natural Resources to document the current species and distribution of submersed aquatic vegetation. The survey documented large areas void of submersed aquatic vegetation. Aquatic plants can provide valuable invertebrate, fish and wildlife food and cover, improve water clarity and quality, reduce shoreline erosion and sediment resuspension, and help prevent the spread of exotic plants. Data collected from Clinton Lake suggests the lack of submersed vegetation is affecting year class strengths for several game species. Native aquatic plants will be cultured from propagules collected from local sources. Procedures will be followed as outlined by Dr. Gary Dick of the U.S. Army Corps of Engineers.Cultured plants will be planted into 8’ diameter cages made of 4-ft tall, 2-in x 4-in mesh, vinyl coated wire. Each cage will be secured using 3-18” rebar hooks. Three to five mature plants will be planted in each enclosure. Species selected for planting include: white water lily, spatterdock, sago pondweed, and American pondweed. Approximately 40 enclosures will be used for the project. Success of the plantings will be documented during vegetation surveys and routine monitoring of the enclosures.

**Funds requested: $500; total cost: $5,600; rank: 3**