

**FINAL REPORT OF THE SUBCOMMITTEES  
OF  
THE RESERVOIR FISHERIES HABITAT PARTNERSHIP**

**BIG CEDAR LODGE  
TABLE ROCK LAKE, MISSOURI**

**MAY 5 – 8, 2009**

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**DRAFT**

**Reservoir Fisheries Habitat Partnership**

**Organization and Operation**

# **Reservoir Fisheries Habitat Partnership Organization and Operations**

## **Introduction**

The Reservoir Fisheries Habitat Partnership (RFHP) is a self-directed group of partner representatives interested in achieving the Partnerships' mission of serving as a foundation for the implementation of reservoir habitat improvement or management actions, through partnerships and cooperative efforts.

The proposed Executive Committee would be the guiding work group for the Partnership and would have oversight responsibility for all RFHP activities. The activities of the Executive Committee would directly support the RFHP Strategic Plan, which will identify the planning, implementation, and evaluation processes for the implementation of the RFHP.

## **Roles and Responsibilities of the Reservoir Fish Habitat Partnership Executive Committee**

1. The RFHP Executive Committee will promote and facilitate the actions described in the strategic plan. These include, but are not limited to:
  - Supporting the development, implementation, monitoring, and evaluation of reservoir habitat actions at national, regional and local scales;
  - Promoting planning efforts for habitat development among partners and stakeholders by providing criteria and direction to regional reservoir work groups on funding available and categories of potential projects.
  - Supporting and recommending RFHP projects to the NFHP Board for funding;
  - Providing direction and input to any RFHP standing committees or work groups, and creating RFHP ad-hoc task groups as needed;
  - Supporting the regional work groups and projects of the RFHP with financial and/or staff resources as available;
  - Participating in marketing efforts/information campaigns to garner additional resources to meet RFHP objectives;
  - Reporting to partners and stakeholders on the status and accomplishments of the Reservoir Fish Habitat Partnership

## **Executive Committee Membership**

2. The RFHP Executive Committee should not exceed 15 Members. This will include representation as follows:

4 State Members – One for each of the four regional associations of Fish and Wildlife Agencies (Northeast, Midwest, Southeast, and Western); The Chairperson of the Executive Committee will be selected from these members

3 Federal Members – FWS, BurRec, COE

3 NGO Members – NALMS, AFS, TNC

3 Industry Members – BASS, ASA, Hydro

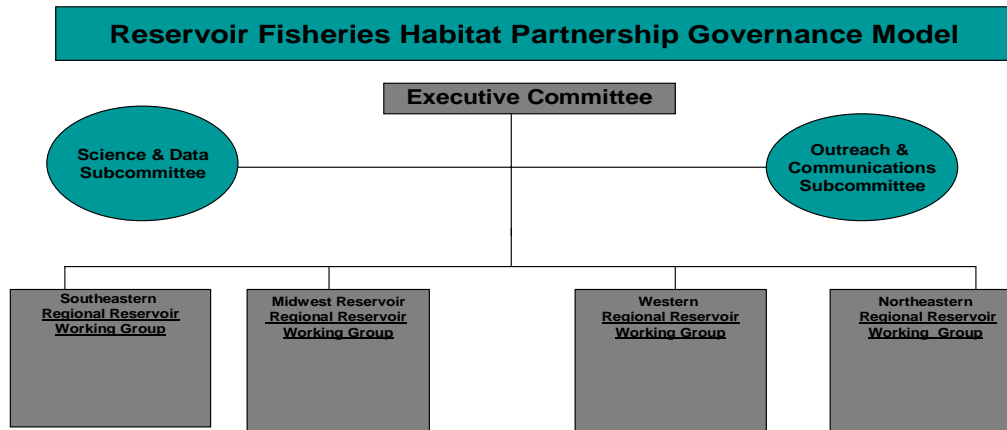
Support staff - (RFHP)

3. RFHP State Executive Committee members will be appointed by their respective parent regional fish and wildlife organizations. Other Executive Committee members will be selected by their respective organizations. Executive Committee members should represent the highest feasible level of their organization. This representation should be at the administrative level, so that Executive Committee members have some authority to commit RFHP financial resources, and recommend use of respective agency, organization or industry staff resources or other types of organizational support.
4. Executive Committee members remain seated on the Committee until replaced. A Committee member's failure to attend three consecutive Committee meetings, or teleconferences, may result in the member being replaced upon majority vote of the other members of the Executive Committee. The members' organization will select a replacement. Committee members may appoint a proxy, in writing to the Chair, to attend meetings in their place as needed.
5. The RFHP Executive Committee will have a State agency Chair and 2 Vice Chairs. The position of Chair shall have a two-year term limit and will be automatically filled by alphabetical rotational cycles of the four regional association of fish and wildlife agencies (Midwest, Northeast, Southeast, and Western). RFHP Regional Working Groups (described below) will be responsible for selecting the person to be the Chair. Executive Committee members, in turn, shall nominate and elect 2 Vice Chairs, one from NGO, and one from Industry/Hydropower to serve a two-year term.
6. The RFHP Executive Committee will adopt a set of By-Laws, including such items as described above, by which the Executive Committee will conduct its business, within \_?\_ days after formation.

### *Executive Committee Meeting Management*

1. The RFHP Executive Committee shall schedule at least one meeting per year at the call of Chair. Executive Committee members are expected to attend at their agency's or organization's expense. However, there may be some travel funds available. [In association with the AFWA if possible, Hydropower, NALMS, or BASS Classic for example, if possible to reduce expense?]
2. Each RFHP Executive Committee meeting will have an agenda developed jointly by the Chair and members of the Executive Committee.
3. RFHP Executive Committee meetings will be led by the Chair and will follow Roberts's Rules of Order. The committee will attempt to achieve consensus. In absence of consensus, for Executive Committee actions that require a vote, a quorum consisting of at least a simple majority, **(7 members)** will be required. A vote of 2/3 of the quorum for a motion will carry the motion. All Executive Committee members have the right to vote on motions, and Executive Committee members may designate in writing proxies to vote in their absence.
4. RFHP Executive Committee business will also need to be conducted via e-mail, fax, or teleconference. Teleconference meetings will typically be scheduled on an as-needed basis. Business conducted by the Executive Committee by these means will carry the same authority as business conducted in person.
5. In the event that an Executive Committee member is unable to attend a meeting or conference call, they may designate a proxy via letter, email or fax to the Chair in advance of the meeting in order to have representation in their absence.

**Chart of the RFHP Operational Structure**



**Regional FRHP Working Groups**

***Roles and Responsibilities***

1. Assembling agencies and stakeholders to guide development of local joint-venture projects that address reservoir habitat issues described in the SP.
2. Prioritize projects for submission to EC for NFHAP funding based on the RFHP project criteria
3. Working with reservoir managers (COE, BuRec, TVA for example) and local stakeholders to also develop potential projects for opportunistic non - NFHAP funding.
4. Promote, communicate RFHP Strategic Plan/vision/information
5. Meet the data needs of NFHAP

Because the RFHP encompasses the whole nation there is a need for regional - local level planning and coordination, or addressing other RFHP related issues.. To meet this need, RFHP will retain the concept of using regional working groups based on the four regional associations of Fish and Wildlife agencies. The geographic groups are: 1) **Midwest** 2) **Northeast**; 3) **Southeast**; and 4) **Western**.



[To be added: details on formation, composition and detailed functions of regional working groups]

### **RFHP FRIENDS OF RESERVOIRS**

To maintain partner interest and enthusiasm for RFHP Executive Committee, a “Friends of Reservoirs” group is suggested. If RFHP is to accomplish all of the items that have been laid out, RFHP Executive Committee will need the help of others. The RFHP Executive Committee would invite entities who wish to participate in the partnership or provide assistance in implementing our mission, vision, goal, objectives and strategic actions.

New RFHP Executive Committee partners wishing to participate in the Partners Council may request the RFHP Executive Committee to add them to the “Friends” at any time. Requests will be acted upon by the Executive Committee at their next scheduled meeting or teleconference.

This group could also assist in information exchange and communication between RFHP and partners, and provide feedback to the RFHP Executive Committee for consideration.

### **Coordination and Support**

As funding becomes available, a part-time or full time coordinator for the RFHP, either directly for the RFHP or through a management agency cooperative agreement, will be maintained. The coordinator will provide primary staff support to the RFHP Executive Committee and will be responsible for disseminating information, coordinating and facilitating overall implementation of actions and projects within the RFHP, coordinating outreach activities, and pursuing funding and grant opportunities. In the interim the coordinator will be maintained through the FWS current arrangement.

### **Accomplishment and Accountability**

There are several levels at which the RFHP will report on accomplishments. Accomplishment reporting will be conducted on an annual basis and reported to Partners, the general public and others interested in the initiative.

Fiscal reporting will be done on an annual basis in accordance with the rules governing operations within NFHAP.

### **Financial support**

When the RFHP is formally recognized by the NFHP Board there will be opportunity for participating Partners to provide a modest amount of financial support for RFHP operations. Other operational and project implementation funds would be sought through small administrative fees applied to grant programs, donations, gifts, and other funding sources that become available.

[To be added: section of fiscal management; role of VA Tech; role of Chair, etc.]

Strategic Plan Pieces addressed by Gov committee:

Purpose and governance

Geographic Scope

Habitat project components

- a. Localized vs. system
- b. In-reservoir
- c. Water level mgmt
- d. Watershed quality

## RFHP Outreach and Partnership Committee-Notes

May 6, 2009

Big Cedar Lodge

### Participants:

Phil Durocher, Texas

Phil Herzig, FWS

Bill Turner, Missouri

Gary Martel, Virginia

Terry Foreman, California

Jeff Lucero, BOR

Tim Toplisek, COE

Stewart Jacks, FWS

Krystyna Wolniakowski, NFWF

Martin MacDonald, Bass Pro

### Minutes:

- The group worked on proofing and editing the list of contacts. The purpose of the exercise was to get a final list of contacts who represent their respective agency or organization and are the appropriate person to send a letter of invite to from the RFHP. Each of the federal, State, Tribal and NGO list had some holes and assignments were made to all in order to fill in missing contact information by May 18.
  - Gary, Phil D., Bill, and Terry will review State Fish Chief list and provide to Phil H.
  - Stewart and Krystyna will provide Tribal contacts.
  - Phil H. will provide list of FWS contacts.
  - Jeff will provide Phil H. with BIA and EPA contacts.
  - Tim will provide USGS, TVA and NPS.
  - Krystyna will also provide BPA and BLM.
- The group also reviewed the draft MOU that was prepared by Karl Hess. The group made recommendations to the draft and Phil D. provided the comments to Karl. A final version was distributed.

- The group reviewed the combination fact sheet/newsletter and made suggestions and comments and provided them to Phil D. Changes will be made and provided to the group for final review.
  
- Next call date: June 2, 2009 – 10AM CST.

**MEMORANDUM OF UNDERSTANDING**  
**between**

**(List of Signatories)**

**For**  
**Establishment of a**  
**Reservoir Fisheries Habitat Partnership**

## MEMORANDUM OF UNDERSTANDING

For

Establishment of a

Reservoir Fisheries Habitat Partnership

### A. PURPOSE

This Memorandum of Understanding (MOU) confirms the intent of the signatories to develop and implement a Reservoir Fisheries Habitat Partnership (RFHP). The purpose of the RFHP is to promote restoration, conservation and enhancement of fish habitat through actions that contribute to: (a) the ecological health and function of reservoirs and associated watersheds; (b) the well-being of fish and other aquatic species, therein; (c) the quality of life of the American people; and (d) public awareness of the conservation issues and challenges facing reservoir and watershed management in the 21<sup>st</sup> Century.

### B. STATEMENT OF MUTUAL BENEFIT AND INTERESTS

The mission of the RFHP is: *“To promote and facilitate the conservation of fish habitat in reservoirs and associated watersheds through partnerships and cooperative efforts, coordination and sharing of information, and public awareness and knowledge of issues and challenges.*

A partnership refers to any voluntary collaboration among organizations working toward a common purpose. A partnership leverages the time, talent, and support of each partner to the mutual benefit and interest of all partners. Benefits of partnership include: (1) shared purpose; (2) enhanced communication; (3) greater access to information and management practices; (4) increased resources for conservation projects; (5) shared efficiencies; (6) innovative solutions to problems; and (7) more effective outreach to increase public support and participation.

The RFHP is established to achieve these benefits and to apply them to the management and conservation of fish habitat in the reservoirs and associated watershed systems of the United

States, for the benefit of the citizens, therein. The parties to this agreement acknowledge the critical role reservoirs play in the condition of fisheries, the economy of communities, the recreational pursuits of citizens, and the security of the nation. The parties further acknowledge the vital role reservoirs play in indicating the health of the watershed upstream and, in turn, managing riverine health downstream.

The parties recognize that successful management of reservoirs and their associated watershed systems will require the ability to work across traditional jurisdictional lines, pool information and resources, and garner national support for efforts that are often multi-state in nature. The parties also recognize that successful fish habitat conservation in reservoir systems will require a broad range of strategies at multiple geographic scales. For this reason and toward this end, the parties agree and confirm to support the RFHP mission.

### **C. COMMITMENT OF THE PARTIES**

The partners to this MOU, to the extent practicable, hereby affirm their mutual understanding and agree to use their best effort to take the following steps:

1. To support the overall mission and purpose of the RFHP, consistent with their own missions, operating plans, and governing laws, regulations, and policies.
2. To collaboratively design and implement the RFHP conservation strategy in order to address the mission and purpose of the partnership.
3. To work together to facilitate current and future mutually agreed upon conservation activities in reservoirs and associated watersheds for the benefit of the American people.
4. To use the resources of their agencies and organizations in a manner consistent with their individual missions and the mission of the RFHP, and in a manner that avoids duplication.
5. To collectively pursue funding initiatives to support the RFHP through private, local, tribal, corporate, state, and federal sources.
6. To collectively pursue interagency/organization agreements, cooperative agreements, grants, and/or contracts to fund projects.
7. To encourage and support the participation of other appropriate agencies and organizations.

### **D. ADMINISTRATION OF MOU**

1. Nothing in this MOU shall alter the statutory authority of the signatory Federal, State or tribal agencies, nor shall this agreement be deemed to cede authority for the management of aquatic resources from one agency to another, nor cause any non-governmental signatory to cede or alter its purpose or mission.

2. Nothing in this MOU shall be construed to obligate the United States or federal agencies, tribes, state or other agencies, or non-governmental organizations party to the MOU to any current or future expenditure of resources, for the purposes of the RFHP, to which they have not voluntarily agreed. To the extent the RFHP may involve the transfer of funds, property, or services in the future, this document creates no obligations apart from those entered into voluntarily by the parties to the MOU.
3. Nothing in this agreement restricts the signatories to the MOU from participating in similar activities or arrangements with other public or private agencies, organizations, or individuals.
4. Any changes to this MOU must be mutually agreed upon by all parties to the MOU. Such changes shall be executed as an addendum to the original MOU.
5. Any party may unilaterally terminate its participation in this MOU by providing the RFHP Steering Committee a written 30-day notice of withdrawal from participation. After such an action, this MOU will no longer be in force for that party.
6. This MOU shall become effective upon the date the RFHP's application for Fish Habitat Partnership is formally approved by the National Board of the National Fish Habitat Action Plan.
7. This MOU shall be reviewed as needed or at least once every 5 years to address changes or additions. Annually, representatives from the signatory parties shall report on the functioning of the RFHP at the AFWA annual conference.

(3) The principal contact for this instrument is:

Name

Title

Address

Phone



Email

## Science and Data Subcommittee Report

Wednesday, May 6, 2008

**SESSION ONE – Analysis of Qualitative Survey for RFHP Trial States by John Taylor**

John Taylor provided an overview of Steve Miranda's initial reservoir assessment which was based on the NID data based. Miranda performed a factor analysis on impairment data from a total of 185 reservoirs greater than 250 acres, in all states. RFHP adopted Miranda's survey and applied the same factor analysis methodology to 8 states: Arkansas, California, Iowa, Kansas, Kentucky, North Carolina, Oklahoma, and Texas. Results from the RFHP study are similar to those of the Miranda study, except that 4, rather 5, factors were found to be determinant in distinguishing reservoirs by types of impairment. The results are available online at [www.reservoirpartnership.org](http://www.reservoirpartnership.org). A summary of the results are shown below and reveal four clusters of reservoir impairments: Factor One – sediment/runoff; Factor Two – water quantity; Factor Three – aquatics plants; and Factor Four – fish habitat.

<u>Reservoir Impairments</u>	<u>Factor1</u>	<u>Factor2</u>	<u>Factor3</u>	<u>Factor4</u>
Suspended Sediments	0.87252	0.11274	-0.06307	0.12311
Sedimentation	0.80269	0.19717	0.10448	0.02632
Shoreline Erosion	0.54628	0.35750	-0.00217	0.03685
Excessive Nutrients	0.55988	0.41903	0.12661	-0.00436
Point-source Pollution	0.23343	0.66796	0.21051	-0.00767
Contaminants	0.18289	0.68743	0.12898	0.16226
O2/Temp Stratification	0.11223	0.22450	0.04644	-0.07258
Mistimed H2O Levels	0.21865	0.54346	0.06785	0.29099
Insufficient H2O Storage	0.35650	0.41089	0.18197	0.38334
Excess Aquatic Plants	0.08654	0.11369	0.98775	-0.08523
Lack of Aquatic Plants	0.09304	0.04433	-0.34819	0.70652
Lack of Woody Debris	0.01054	0.04131	-0.01525	0.64505
Disconnectivity	0.45549	0.35573	0.05934	0.08370

Invasive Plant Species	0.02597	0.27964	0.65697	-0.12827
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The primary concern regarding the analysis was lack of clarity and guidance in defining and presenting the 14 impairments in the survey. For example, confusion was expressed over the precise meaning of disconnectivity. Additionally, clarification was requested for the use of the term invasives; as currently used it appears to omit animal invasive species. More precise definitions and guidance will reduce variability in the survey and analysis, allowing for duplication of results and comparability across time. An additional suggestion was to incorporate general watershed variables in the survey. Currently, the Miranda survey addresses in-reservoir impairments only, ignoring upstream land uses and downstream issues, such as flow.

Recommended Actions by Subcommittee:

- (1) Develop definitions and guidance for the survey
- (2) Incorporate additional watershed variables into the survey, including land uses and downstream flow
- (3) Repeat modified survey for the 8 States; repeat factor analysis
- (4) Expand Survey to other States (optional for purposes of Strategic Plan)

**SESSION TWO – Analysis of Metric Data for RFHP Trial States by Jeff Boxrucker**

Jeff Boxrucker provided a review of the metrics data collected by the 8 RFHP trial States (see above). Availability of data for the metrics was a major challenge. Corps reservoirs had the greatest amount of available data. In many cases data simply did not exist. Hydraulic or retention time data is important but difficult to obtain. Secchi and Chlorophyll A data are highly variable and were judged non-essential. Percent of water column anoxic was suggested as a superior measure of reservoir impairment for fish, although that data is not available for all reservoirs. Conductivity data is available but highly variable and probably not useful for reservoir assessment.

Watershed metrics were collected but were not specific to key land use categories. A revised set of metrics should include relative percentages of the watershed in urban or agriculture use, as well as the percentages in forest and grassland. These percentages will likely be more indicative of potential watershed impairments. For agricultural land uses, not all activities will have the same impairment potential. Some agricultural areas may have feed lots, others may not. Similar concerns can be extended to forest cover types: some timber stands may be unhealthy and ineffective in reducing sedimentation.

The question was raised as to how far up or down the watershed our analysis of reservoir health should extend: basin, sub-basin? The consensus of the subcommittee was that our initial assessment would be limited by necessity to the sub-basin or lower level – and in some cases to the portions of the watershed immediately adjacent to a reservoir. However, the long-term goal of the partnership should be to extend reservoir assessment to the basin scale.

Discussion also focused on the issue of biological metrics and, in particular, the categorization of fish community types present within the reservoir. Simply listing the current fish community type is inadequate. We also need to know the desired fish community type for the reservoir. We also must carefully define fish community types (warm, cool, and cold water): we need carefully constructed rule sets. Eventually we will want to extend the analysis of fish community types (current and desired) to up and downstream of the reservoir. We will focus our assessment on reservoirs proper, but in our strategic plan we should make our intent clear to extend our assessment work across the watershed, above and below the reservoir. Additionally, more information is needed in our metrics' template for T&E species. Our assessment of reservoir issues should distinguish between T&E species above, within, and below impoundments. Finally, invasive species information needs to be more detailed: are the species a threat and, if so, what is the level of the threat?

#### Recommended Actions by Subcommittee

- (1) Modify the metric spreadsheet to incorporate changes suggested in the subcommittee meeting
- (2) Provide clear definitions and guidance for each metric included in the spreadsheet
- (3) Submit the spreadsheet to the 8 RFHP trial States for data collection
- (4) Integrate metrics assessment with Miranda survey assessment
- (5) Extend metric assessment to other States (optional for purposes of Strategic Plan)

### **SESSION THREE – Adoption of Classification Scheme by Gary Whelan**

Gary Whelan led discussion on the role of classification in reservoir assessment and management. His presentation is available online at [www.reservoirpartnership.com](http://www.reservoirpartnership.com).

There are three principal reasons for classifying reservoirs:

- (1) A classification system is the foundation for performing assessment of reservoir condition. It provides the “standard type” against which to measure condition of any particular reservoir.
- (2) A classification system allows for transfer of management technology between reservoirs of the same type.
- (3) A classification system is the best way to determine if resource objectives are appropriate for specific reservoirs.

The reservoir classification system proposed for RFHP is derived, in part, from a physiographic index published by “In Fisherman” magazine. The index is a surrogate for impoundment complexity. The classification system proposed for RFHP uses the classification framework of “In Fisherman” combined with 4 additional variables:

- (1) Geographic-physiographic typology
- (2) Acreage (variable related to processing time of reservoir)

- (3) Volume (variable relating to processing time of reservoir)
- (4) Retention Time (variable relating to stratification, productivity, hydraulic retention time, storage ration)
- (5) Location in watershed (low or high in system – affects productivity of reservoir)

Several of the 8 trial States (see above) provided classification data on their reservoirs for the five variables. However, the States did not have sufficient time to collect data for all of the variables, though each State responding was able to categorize its reservoirs using the “In Fisherman” typology. Because of insufficient data, the proposed classification model requires further development and verification.

Data issues remaining for the classification system include:

- (1) Volume data incomplete
- (2) Storage volume data incomplete data due to lack of definition of the variable
- (3) Retention data incomplete
- (4) Mean discharge potentially useful variable to add
- (5) Location in watershed incomplete due to lack of clarity in definition and guidance (i.e., at what scale are we determining location – tributary scale or reservoir scale – and how do we account for stacked reservoirs?)
- (6) Add normal pool elevation

Once classification system is established and refined, we can perform reservoir assessments by reservoir classification type. This will permit a more robust and meaningful clustering of reservoir impairments in the factor analysis and metric analysis set forth by John Taylor and Jeff Boxrucker (above). The one limitation to this methodology is that data may be more difficult to acquire for smaller reservoirs.

Regarding the location of reservoirs, Mike Houst proposed identifying reservoirs by sub-basin, using the HUC as the watershed framework for positioning them. In some cases, however, it may be more appropriate to use the catchment in positioning a reservoir. In the case of Kansas, there are 60 reservoirs greater than 250 acres. Of those 60, 5 reservoirs had location issues in regard to their extension beyond state boundaries. Question: do States include in their determination of reservoir location areas that lie beyond their borders. We need clear rule set to guide designation of reservoir location, including location of stacked reservoirs.

#### Recommended Actions by Subcommittee

- (1) Refine classification variables with clear guidance and definition
- (2) Repeat collection of data for classification variables from the 8 trial states
- (3) Test, confirm, refine and finalize classification system
- (4) Apply classification system to assessment and analysis of reservoir condition

## **SESSION FOUR – Scoring and Ranking Projects by Dave Terre**

Once reservoir classification and assessment is completed, the partnership must determine how it will score and rank projects for funding and implementation. Criteria for scoring and ranking will come from the Governance sub-committee; however, the science and data subcommittee will provide the scientific component of project selection and prioritization. The job before the science and data subcommittee is to identify the biological and environmental parameters upon which a robust and defensible process for scoring and ranking can be established.

Our assessment will allow us to identify priority reservoir issues, and help us determine which projects can provide the greatest outcome per unit investment. Our classification system will help us identify the major reservoir types represented within our membership, and guide us in strategic selection of projects within each of those types. Other criteria will be used, including assurance of regional representation in project selection and probability of success. We must use science and data to identify habitat issues for project selection and then to evaluate projects for expected resource outcomes.

Our assessment methodologies (Miranda survey and Boxrucker metrics) will be instrumental in identifying worthy projects and prioritizing them. In addition, the classification system will ensure that our priorities range across all reservoir types, addressing the full spectrum of highest priority reservoir challenges, and providing guidance on predicting the probability of project success. Added to these ranking calculations will be various social and economic considerations, including urban and national security needs and issues, T&E species, State Wildlife Action Plans (SGCNs), and funding leveraging and optimization.

Two methods were discussed regarding project ranking and selection: (1) identify projects first and then find partners or (2) partners identify projects and submit to RFHP for scoring and ranking. The sense of the subcommittee is that both the top-down and the bottom-up approach can be consistent with whatever selection methodology the partnership develops.

### Suggestions for project selection include:

- (1) See how major grant programs handle project selection
- (2) Focus on projects that deal with diversity of impairments
- (3) Perform risk analysis: what is probability of project success
- (4) Projects must have clear connection to assessment and strategic plan
- (5) Projects must entail outcomes that benefit fish and fish habitat, benefit the watershed system, and are measurable
- (6) Projects must yield information that demonstrates progress
- (7) In project selection we need to reach out to partners like TVA who may not see an immediate need to work with us

- (8) RFHP regions should use national RFHP strategic framework to develop their own framework/methodology for prioritization of projects; regionally selected projects then submitted to national RFHP board for final scoring and ranking
- (9) National selection elements and criteria ensure logical consistency between RFHP regions

Recommended Actions by Subcommittee:

- (1) Develop preliminary criteria to discuss in June at the NFHAP Partners Workshop in Leesburg, VA
- (2) Coordinate with SARP in development of scoring system
- (3) Coordinate with Governance Subcommittee in development of standardized selection elements and criteria
- (4) Incorporate selection elements and criteria in Strategic Plan

**SESSION FIVE – RFHP Collaboration with NFHAP on National Fish Habitat Assessment by Gary Whelan**

Gary Whelan discussed the data challenges faced by the National Fish Habitat Action Plan and Michigan State University in using the NHD+ data base for the National Fish Habitat Assessment and the RFHP assessment, and how the two assessments could be mutually supportive. His full presentation is available online at [www.reservoirpartnership.org](http://www.reservoirpartnership.org).

To illustrate the challenges posed by the NHD+ data base, Gary used Texas as a case study. He identified four major gaps in the NHD+ data base using the Texas data:

Gap One: Many of the lake bodies in NHD+ are not identified as reservoirs. Among the 29,579 lakes and ponds in Texas, 415 are greater than 200 acres. However, only 7 of the 415 are identified as reservoirs in NHD+. NHD+ cannot distinguish lakes from reservoirs. NFHAP needs help from RFHP to identify which bodies of water are reservoirs. This is a straight forward task that should be relatively simple to complete.

Gap Two: Many waterbodies in NHD+ are not attached or associated with a catchment; waterbodies lack catchment attribution – waterbodies disconnected from the stream network that makes up the catchment. This is a serious issue for NFHAP and RFHP. We must identify catchment to understand land uses impacting reservoir system health. NFHAP needs RFHP assistance to attribute full and correct catchments to each impoundment – must aggregate local catchments into overall catchment that feeds the impoundment. In Texas, for example, there are 29,579 bodies of water of which only 6,209 have catchments attributed to them. Over 80% of Texas lakes and reservoirs lack catchment attribution in NHD+.

Gap Three: NHD+ sometimes displays single impoundments as two or more separate waterbodies due to database's inability to distinguish political boundaries or other mapping artifacts from natural waterbody boundaries. This should be a reasonably simple error to detect and correct through manual manipulation. RFHP is asked to help identify impoundments that are artificially divided into distinct waterbodies by NHD+

Gap Four: NHD+ does not include recently constructed reservoirs that post-date creation of the database. Quad maps used in NHD+ need to be updated and polygons inserted for missing reservoirs. RFHP should be able to help in this task.

Summary: Degree of difficulty entailed in addressing the gaps listed above:

- (1) Reservoirs not properly identified – easy to address
- (2) Split waterbodies – manual task, easy to address but time consuming
- (3) Missing waterbodies – harder to address – requires GIS expertise
- (4) Local catchment attribution – biggest challenge – high difficulty; requires advanced GIS skills

NFHAP asks RFHP's assistance in correcting NHD+. The advantage to RFP in providing assistance to correct NHD+ will be access to the most comprehensive and current land use data. That land-use data will be essential to completion of the RFHP reservoir assessment.

## **ADDITIONS**

- (1) Remove size restrictions to reservoirs in reservoir definition
- (2) Mention in Strategic Plan that the partnership will target man-made impoundments initially. Over time, if no other partnerships emerge to address other lentic waters, the partnership will consider:
  - Including impounded natural lakes
  - Including all natural lakes
  - Follow-up on suggestion by Christopher Estes to address the issue of Ice in northern reservoirs

**(3) TIMELINE FOR COMPLETION RFHP  
STRATEGIC PLAN AND FHP APPLICATION**

The three subcommittees – Governance, Partnership & Outreach, and Science and Data – met in plenary session. The unanimous decision of the parties present was to expeditiously complete the RFHP Strategic Plan and submit an application for Fish Habitat Partnership to the NFHAP Board during the 5<sup>th</sup> round for application submissions, due on August 21, 2009. To meet requisite deadlines, a timeline and set of work assignments were developed.

**TIMELINE**

<u>ACTIVITY</u>	<u>DUE DATE</u>	<u>RESPONSIBLE PARTY/GROUP</u>
<b><sup>1</sup>Completion of Reservoir Assessment</b>	<b>July 1, 2009</b>	<b>Assessment Team</b>
<i>Revised Miranda Survey</i>	<i>June 19, 2009</i>	<i>Assessment Team</i>
<i>Revised Metrics</i>	<i>June 19, 2009</i>	<i>Assessment team</i>
<i>Classification System</i>	<i>June 19, 2009</i>	<i>Assessment Team</i>
<i>Factor Analyses</i>	<i>June 26, 2009</i>	<i>Assessment Team</i>
<i>List Gaps/Priorities to Fill Gaps</i>	<i>June 26, 2009</i>	<i>Assessment Team</i>
<i>Draft Reservoir Assessment</i>	<i>July 1, 2009</i>	<i>Assessment Team</i>
<b>Completion of Strategic Plan</b>	<b>August 14, 2009</b>	<b>Strategic Plan Team</b>
<sup>2</sup> <i>Mission/Vision Statement</i>	<i>May 29, 2009</i>	<i>Strategic Plan Team</i>
<i>Reservoir Stories Due</i>	<i>May 31, 2009</i>	<i>TX, IA, MO</i>
<sup>3</sup> <i>Governance, Purpose and Partners</i>	<i>June 12, 2009</i>	<i>Strategic Plan Team</i>
<i>Goals/Objectives</i>	<i>June 19, 2009</i>	<i>Strategic Plan Team</i>
<i>Conservation Strategies/Actions</i>	<i>July 3, 2009</i>	<i>Strategic Plan Team</i>
<i>Implementation/Project Selection</i>	<i>July 3, 2009</i>	<i>D. Terre/J. Boxrucker</i>
<i>Evaluation/Reporting/Revisions</i>	<i>July 10, 2009</i>	<i>Strategic Plan Team</i>
<i>First Draft of Strategic Plan</i>	<i>July 24, 2009</i>	<i>Strategic Plan Team</i>
<b>Completion of FHP Application</b>	<b>August 14, 2009</b>	<b>Application Team</b>
<i>Charter/Governing Diagram-Text</i>	<i>July 1, 2009</i>	<i>Governance Sub-Com</i>
<i>Outreach to Potential Exec Com</i>	<i>July 15, 2009</i>	<i>Outreach Sub-Com</i>
<i>MOUs for 40 States Collected</i>	<i>July 15, 2009</i>	<i>Outreach Sub-Com</i>
<i>Outreach to All FHPs</i>	<i>July 15, 2009</i>	<i>Outreach Sub-Com</i>
<i>Application Abstract</i>	<i>July 15, 2009</i>	<i>Application Team</i>
<i>First Draft FHP Application</i>	<i>July 31, 2009</i>	<i>Application Team</i>
<i>Intl Review Plan/Application</i>	<i>August 7, 2009</i>	<i>Review Team (TBA)</i>
<i>Steering Committee Review</i>	<i>August 14, 2009</i>	<i>Steering Committee</i>
<i>Submission to NFHAP Staff</i>	<i>August 21, 2009</i>	<i>Application Team</i>
<i>Final Corrected Submission</i>	<i>September 21, 2009</i>	<i>Application Team</i>

<sup>1</sup>Assessment will include initial 8 trial states; strategic plan will layout a one year schedule for completion of a national assessment.

<sup>2</sup>Definition of reservoirs is no longer limited by size.

<sup>3</sup>The reservoir partnership is watershed based. Its intent is to address conservation challenges affecting reservoirs, or affected by reservoirs, as far above and below stream as necessary for their resolution.



**ASSESSMENT, STRATEGIC PLAN, APPLICATION, AND REVIEW TEAMS  
ASSIGNMENTS**

Assessment Team

Jeff Boxrucker  
Michael Houts  
John Taylor  
Dave Terre  
Stan Todd  
Gary Whelan

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Terry Foreman  
Don Gabelhouse  
Doug Nygren  
Mike Oetker  
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