

**SPORT FISHING AND BOATING PARTNERSHIP COUNCIL
PROGRAMATIC EVALUATION
of the
U.S. FISH AND WILDLIFE SERVICE FISHERIES PROGRAM
FY 2004**

EXECUTIVE SUMMARY

In August 2003, the Director of the U.S. Fish & Wildlife Service (FWS) asked the Sport Fishing and Boating Partnership Council (SFBPC) to conduct an independent evaluation of the FWS's Fishery Program (Program) as required by the Office of Management and Budget (OMB) PART (Program Assessment Rating Tool) process. In conducting this evaluation, the SFBPC empanelled a 15-person Evaluation Team that represented a cross section of those organizations interested and experienced in aquatic resource conservation and in the conduct and impact of the Program. The Team began its work in December 2003 and completed the task in May 2005.

The Team began by creating an evaluation tool following the process developed by Dr. Steven Yaffee and colleagues at the University of Michigan. Using this tool, the Team then requested data from the FWS and finally, evaluated the data. Visits to selected field and regional offices were also conducted in order to verify selected data, as well as to help the team add context to the results of the evaluation.

The evaluation was based upon the following nine elements common to both the FWS Strategic Plan and Program Vision:

- Partnerships and Accountability
- Aquatic Habitat Conservation & Management
- Native Species
- Interjurisdictional Fisheries
- Recreational Fishing
- Leadership in Aquatic Science & Technology
- Cooperation with Native American Tribes
- Mitigation Fisheries
- Aquatic Nuisance Species

From these elements the Team developed a set of 12 evaluation questions. The final report contains an evaluation of each of these questions, each with a description of the activity, the basis for the assessment, an evaluation of the data submitted, the overall rating for the activity and, where appropriate, recommendations to improve the Program's effectiveness in the future. The final report contains 23 recommendations.

Question 1—Accountability (to authorities): Highly Effective

At the outset the Evaluation Team was interested in how well the Fisheries Program balances its activities across the myriad specific and general authorities under which it operates. Specifically, the Team was concerned that with the long evolution of the Program, gaps may have arisen between what the Program is doing and what it should be doing.

The Team concludes that the Program is Highly Effective in assuring that there are no gaps, and that it is capable of addressing the large and cumbersome set of authorities that govern its activities.

Question 2—Accountability (to stakeholders and partners): Partially Effective

In this question the Evaluation Team was interested in determining how the Fisheries Program interacts with its partners and stakeholders as it develops its priorities, plans, budgets, and activities. The Team wanted to see evidence of initial upfront consultations and feedback as activities were actually conducted following the annual appropriations cycle. The Team found that there are many ongoing contacts among stakeholders and partners, but most of these are informal and irregular.

The Team concludes that the Program is Partially Effective at fulfilling its responsibilities in this area. In the future, the Program will be more effective if it implements of a more formal and regular consultation process at both national and regional level. A proposed process is described in the full report.

Question 3—Accountability (through communications): Partially Effective

This question examined how the Fisheries Program communicates its plans, activities, and accomplishments to its partners and stakeholders. The Evaluation Team noted improvements from the past. However, the informality and irregularity of current efforts, as well as a lack of a specific tie-in to planned activities, hampers its effectiveness in this arena.

A rating of Partially Effective is assigned. The Report recommends an annual, national accomplishment reporting process, and use of a targeted communications tool across all regions.

Question 4—Aquatic Habitat (excluding FWS lands): Effective

Here the Evaluation Team was interested in the Fisheries Program's impact on stabilizing and improving priority aquatic habitats on non-FWS lands. The Program provided abundant data demonstrating an impressive level of activity, but the data were weak in demonstrating the effectiveness of those actions. The Team also noted that the Program was a leader in developing the emerging National Fish Habitat Initiative.

The Team determines that the Program is Effective in carrying out its habitat-related activities outside FWS lands. The Team expects that continued development of the

National Fish Habitat Initiative, with continued strong federal leadership from the Fisheries Program, will lead to highly effective performance in this area in the future.

Question 5—Native Species: Effective

In examining this question the Evaluation Team was interested in data demonstrating the effectiveness of the Fisheries Program's actions to conserve and enhance native aquatic species. The Program actively works with partners both on endangered species and imperiled species (those of Management Concern). The Team noted the apparent lack of a common suite of species and definitions upon which to evaluate data supplied.

A more complete assessment of needs and prioritization of target species will lead to enhanced performance in the future, but based on the current range of activities the Team rates the Program as Effective in its conservation actions for native species.

Question 6—Interjurisdictional Fisheries: Effective

As with the previous question the Evaluation Team was interested in determining the effectiveness of the Fisheries Program in working with the primary management authorities in conserving interjurisdictional fisheries as described in cooperative fishery management plans. Data demonstrated a significant level of activity in this arena but the Team was unable to assess the reason for, and the potential lost resource value of, activities not accomplished.

The Team determines that the Program is Effective at this activity. This performance area will benefit in the future from greater collaboration with partners to identify status of assigned tasks and barriers to completion.

Question 7—Recreational Fisheries: Effective

The evaluation was designed to question how effectively the Fisheries Program works with others to provide opportunities for and support of recreational fishing. Though this activity is largely under the control of individual States and there currently are no FWS policy statements describing FWS/Program roles in recreational fishing, there are many things the Program is doing to support recreational use of fisheries. Data indicated that the Program actively supplies technical assistance, supports recreational use of Department of Defense lands, and participates in angler education efforts. The Program provides assistance in helping to avoid conflicts between recreational fish species and endangered fish.

Overall, the Evaluation Team finds that the Program is Effective at carrying out its responsibilities in recreational fisheries.

Question 8—Habitat and Recreational Fishing on National Wildlife Refuge Lands: Partially Effective

The National Wildlife Refuge System (NWRS) contains some of the Nation's most pristine natural settings and resources. The Evaluation Team wanted to determine that the Fisheries Program and the NWRS were properly sharing resources in

managing and enhancing aquatic habitats throughout the NWRs, as well as maximizing opportunities for recreational use of the NWR fishery resource where appropriate. Data indicate that the Program has a significant, but uneven, distribution of activity in the NWRs. Program staff were responsive when asked for assistance, but much of this activity is based upon personal relationships rather than an ingrained institutional basis for cooperation.

The Team finds the Fisheries Program is Partially Effective in its work with the NWRs. Improved effectiveness will depend on a concerted focus on activities implemented jointly by the Refuge Program and the Fisheries Program at national and regional levels.

Question 9—Science and Technology: Partially Effective

Since primary responsibility for research and technology development was removed from the FWS in the early 1990s, it has been increasingly difficult for the Fisheries Program to communicate, acquire, and manage its science-related activities. The Evaluation Team examined how the Program identifies science needs, develops and communicates new technologies, and maintains its existing scientific expertise. It further examined how well the Program's science stands up to the scrutiny of the scientific community.

The Team determines that the Program is Partially Effective in managing its science and technology. Increased communication with the U.S. Geological Survey to identify and follow through on research priorities will yield major improvement in this area.

Question 10—Cooperation with Native Americans: Effective

The Federal government has a special relationship with and responsibility to Native American governments. Thus, the Fisheries Program operates differently with respect to Tribes than it does with other stakeholders. Many of these responsibilities are outlined in the FWS Native American Policy. The Evaluation Team evaluated how well the Program incorporated an understanding of Tribes and their needs into its operations, as well as how the Program makes decisions among its Tribe-related activities. The Team determined that consultations with Tribes are not the result of a systematic process, but are mainly ad hoc in nature. However, where interactions are ongoing, significant progress is being made.

The Team assigns a rating of Effective to this activity. Continued effectiveness will require a more formal and regular consultation process with Tribes from initiation to completion of Program activities (including a systematic method for assessing the Tribes' view of the Program's effectiveness), as well as a demonstrated ability to represent Tribal fisheries interests to other state and federal agencies.

Question 11—Mitigation Fisheries: Partially Effective

When Federal water projects, Congress and the Federal government commit to mitigate for the loss of fishery resources, the responsibility often falls to the Fisheries

Program. In most cases, the Fisheries Program has also taken on these responsibilities without being reimbursed by the water development agency. The Evaluation Team wanted to find out if the Program understands its role in mitigation, is successfully carrying it out, and if it is being reimbursed for appropriate costs. Although this is an important issue, data indicate that mitigation plans (which should guide Program actions) are not present in any cases and that there is little follow up to determine if the mitigation is effective. Also, the Team noted that the Program has expended significant effort to arrive at a mutual agreement for reimbursement. Unfortunately, we also noted that there are still internal problems in determining costs.

A rating of Partially Effective is assigned for this activity. Improved performance in this area will depend upon strong leadership by the Director and the Secretary of the Interior in working across Interior programs and with other federal agencies.

Question 12—Aquatic Nuisance Species: Effective

Fisheries Program activity in aquatic nuisance species is relatively recent (aside from the long-standing work with sea lamprey in the Great Lakes). The Evaluation Team examined how well the Program accomplished its coordination role in the prevention, management, and control of aquatic nuisance species, and how well it is working to reduce their economic and ecological impacts.

The Program's efforts with nuisance species appear to be on-target, focused, and strategically address important species/pathways, as well as leverage significant buy-in from partners. A rating of Effective is assigned for this activity.

The Evaluation Team recognizes that, in the future, the evaluation process will evolve as data collection and reporting systems are improved. This will allow the Fisheries Program to establish a single set of metrics rather than the distinct sets that are being developed. It is neither effective nor efficient to expect the Program to continue to collect different data through different methods simply to satisfy GPRA, PART, the Strategic Plan, or this evaluation. Efforts should be focused on collecting only the most important data to answer the major questions rather than collecting data on things solely because they can be counted.

Several times during the evaluation the Team heard from different sources that the process and communications exhibited by the Fisheries Program through the regional step-down process of developing the Strategic Plan is the way business should be done in the future. The Team agrees and suggests that the Program examine the step-down planning process and adapt it as a regular and ongoing communication process with partners and stakeholders.

The Evaluation Team also notes the growing usefulness of the Fisheries Information System (FIS) as a tool in managing and reporting accomplishments from the Fisheries Program. It is clear that the FIS is currently not a decision-support tool, but the Team hopes it will evolve to become such. Part of this evolution should include stricter quality

control of data input into FIS. This arises from the Team's experience with the inconsistent quality of data output from the system.

The Fisheries Program is rated Effective in conducting its overall aquatic resources management activities. This rating is based upon the collective judgment of the Evaluation Team after careful review of the data and discussions with Program staff, stakeholders, and partners. The Team also recognizes that in some cases, regardless of actual performance, higher ratings could not be assigned due to the Program's inability to provide clear concise data. This is not surprising given that this is the first independent evaluation undertaken of the Fisheries Program.

Finally, the Evaluation Team notes that both the profile and performance of the Fisheries Program have been raised over the past few years as a result of a renewed interest in the Program and in efforts from the Congress, the Administration, U.S. Fish and Wildlife Service, and the greater fisheries community. This evaluation clearly presents the benefits of this increased visibility. The Team hopes that the importance of the Program will not diminish through the transition period to and selection of a new Director.

INTRODUCTION

1. Charge

The Office of Management and Budget (OMB) requires a number of actions from the U.S. Fish and Wildlife Service as part of Administration's Program Assessment Rating Tool (PART) review. Two specific requirements are:

1. Performance indicators that clearly link program outputs with high priority objectives and the organization's mission; and
2. Independent reviews of sufficient scope and quality that are conducted on a regular basis to support program improvements and evaluate its effectiveness and relevance.

In August 2003 the U.S. Fish and Wildlife Service (FWS) Director requested the assistance of the Sport Fishing and Boating Partnership Council (SFBPC) in conducting an evaluation of the FWS's Fisheries Program. The FWS asked the SFBPC for assistance because of its long involvement with the FWS's Fisheries Program as a committee chartered under the Federal Advisory Committee Act (FACA)¹.

2. Methodology

In response to the Director's request, the SFBPC established a Fisheries Program Evaluation Team comprised of officials from States, Tribes and conservation organizations (Table 1). During the course of the project, the Evaluation Team enlisted

¹ Sport Fishing and Boating Partnership Council. 2002. *A Partnership Agenda for Fisheries Conservation: Report of the Fisheries Program Strategic Plan Steering Committee*. Washington, D.C.: U.S. Fish and Wildlife Service.

agency expertise for their technical assistance and knowledge of the Fisheries Program. The Evaluation Team's assignment consisted of two specific work elements:

1. Develop evaluation criteria and an assessment process by April 2004; and
2. Conduct a review of FY 2004 Fisheries Program activities using the developed criteria and process to be completed by March 2005.

With the Fisheries Program Vision and Strategic Plan as a basis upon which to build the assessment, the Evaluation Team began developing an assessment framework. The process was adapted from "Measuring Progress", an evaluation template developed by Dr. Steven Yaffee and colleagues at the School of Natural Resources, University of Michigan. The process is abstracted below and described in detail in Appendix 1.

Table 1. SFBPC Fisheries Program Evaluation Team

James Anderson Executive Director Northwest Indian Fisheries Commission	Douglas Boyd Board Member Coastal Conservation Association
James Boyd Senior Fellow and Director Resource for the Future	Noreen Clough Conservation Director BASS/ESPN Outdoors
Jonathan Higgins Senior Ecologist, Global Priorities Group The Nature Conservancy	Robin Knox Director of Fisheries Colorado Division of Wildlife
Elizabeth Maclin Director, Rivers Unplugged Campaign American Rivers	Christine Moffitt Assistant Unit Leader, USGS Idaho Cooperative Fish and Wildlife Research Unit University of Idaho
Steve Moyer Director of Government Affairs Trout Unlimited	Gordon Robertson Vice President American Sportfishing Association
John Rogers Evaluation Project Co-Manager The Conservation Fund	Eric Schwaab Resource Director Intl. Assoc. of Fish and Wildlife Agencies
Wendy Smith Southeast River Program World Wildlife Fund	Whitney Tilt Evaluation Project Co-Manager Sonoran Institute
James Zorn Policy Analyst Great Lakes Indian Fish and Wildlife Commission	

Step 1: Develop Evaluation Criteria and Assessment Process

In December 2003, the Evaluation Team began to examine the Fisheries Program's activities, its stated goals and objectives, strategies for achieving its objectives, and its assets and liabilities. Table 2 provides a list of the Team's activities. The Team structured its examination on the nine areas of emphasis common to both the FWS Draft Strategic Plan and the SFBPC Partnership Agenda report:

- Partnerships and Accountability
- Aquatic Habitat Conservation & Management
- Native Species

- Interjurisdictional Fisheries
- Recreational Fishing
- Leadership in Aquatic Science & Technology
- Cooperation with Native American Tribes
- Mitigation Fisheries
- Aquatic Nuisance Species

Step 2: Developing an Assessment Framework.

From the goals, strategies, and activities identified in Step 1, the Evaluation Team selected the most important elements of the Fisheries Program to be evaluated. The Team then developed an Evaluation Assessment Tool with a specific set of questions and indicators (measures) to answer the query “What would success look like?” and “What progress has been made toward success?” (Appendix 2)

Table 2. List of Evaluation Team Meetings and Field Visits

December 9-10, 2003, Organizational Meeting, Washington, DC
February 4-5, 2004, Team Meeting, Denver, CO
March 1-3, 2004, Work Group, Minneapolis, MN
March 8-11, 2004, Team Meeting, Denver, CO
April 12-15, 2004, Work Group, Washington, DC
June 15-17, 2004, Work Group, Washington, DC
July 19-20, 2004, Work Group, Minneapolis, MN
August 24-25, 2004, Team Meeting, Madison, WI
September 29-30, 2004, Work Group, Washington, DC
November 30-December 3, 2004, Team Meeting, New Orleans, LA
December 14-16, 2004, Work Group, Springfield, MO
January 10-13, 2005, Team Meeting, Orlando, FL
February 14-16, 2005, Work Group, Minneapolis, MN
February 28-March 3, 2005, Team Meeting, Denver, CO
March 22, 2005, Field Visit, Region 6, Lakewood, CO
March 23, 2005, Field Visit, Bozeman FTC, Bozeman, MT
March 24, 2005, Field Visit, Region 5, Hadley, MA
March 29, 2005, Field Visit, Washington Office, Washington, DC
March 29-April 1, 2005, Work Group, Minneapolis, MN
March 30, 2005, Field Visit, Region 2, Albuquerque, NM
April 8, 2005, Field Visit, Region 1, Portland, OR
April 26-27, 2005, Work Group, Minneapolis, MN

The Evaluation Team invested significant effort in developing a concise set of evaluation questions designed to capture the greatest amount of measurable information. The evaluation questions are collectively designed to serve as a tool to conduct a focused evaluation of the Fisheries Program. The questions concentrate on principal concerns that emerged during the FWS strategic visioning process, and the SFBPC process of gathering stakeholder and partner input. The evaluation questions intentionally focus on areas of greatest importance to the Program’s responsibility to carry out its mission, as

well as its accountability to aquatic resources and to the public. The resulting set of questions do not represent every query that could conceivably be asked during an evaluation, rather they address what is most important to management of the fishery resource.

Step 3: Conducting the Evaluation.

Once the assessment tool was complete, the Evaluation Team met with the FWS to explain the Team's data request, answer questions, and to establish a timetable and format for delivery of the information.

When the data were received, the Evaluation Team began to evaluate the FWS Fisheries Program in light of data provided. In several cases, the Team requested clarifications and/or additional data with select data sets remanded to the agency with additional instructions.

Selected data are summarized throughout the report and/or appended. All data provided to the Evaluation Team are archived and available for review.

3. Strategic Plan Goals, GPRA, and SFBPC Evaluation.

In 2004, a National Fisheries Program Strategic Plan for FY 2004-2008 was drafted. The plan identifies key performance measures and related outputs that seek to capture the core functions of the Fisheries Program. These measures gauge the Program's progress towards meeting Department of the Interior (DOI) and FWS annual and long-term performance goals. The Program also addresses a set of existing Government Performance and Results Act (GPRA) measures. The SFBPC evaluation effort has developed an additional set of benchmarks and performance measures in the course of its evaluation. The challenge for the Program will be to develop, implement, and refine performance measures that track progress toward the diverse set of natural resource management activities and other goals contained in each of the Strategic, GPRA, and PART evaluation documents. The Evaluation Team hopes that upon completion of this evaluation, FWS will work with OMB and others to codify these various sets of metrics into a single set of performance criteria and measures along with appropriate modifications to data collection systems. This will greatly enhance the Program's accountability to FWS, DOI, Congress and the general public, improve data collection and quality, and reduce redundancy and overall labor required by Program staff.

4. Structure of this Report

This assessment is presented as an Executive Summary, Introduction, Set of 12 evaluation questions, and Conclusion. Each of the 12 questions provides:

- a) *Description of Activity* outlines the role and mandate for Fisheries Program involvement, and how the activity is administered.
- b) *Basis for Assessment* describes evaluation question(s), information requested by the Evaluation Team from FWS, and data received.
- c) *Evaluation* presents assessment results and discussion, as well as a set of indicators, information requests, baselines and targets. The baseline is set to FY 2004, and targets to FY 2008, except where otherwise noted.

- d) *Ratings* were assigned from the following rankings, with a single overall rating awarded for each activity, and one for the Program overall:
 - 1) Highly Effective
 - 2) Effective
 - 3) Partially Effective
 - 4) Not Effective
 - 5) Unable to Evaluate
- e) *Recommendations* were made for consideration by the FWS as it continues to refine and focus its Fisheries Program.

5. Data Control and Field Verification

Most of the information the Evaluation Team used in conducting this assessment was submitted to the Evaluation Team through the Fisheries Program central office in Arlington, VA. Data consisted of individual responses prepared by the regions and summaries prepared in Arlington. The Team believed that it was important to discuss the submissions with some of those who worked in preparing them and that these discussions would assist us in quality control, adding context, and understanding discrepancies. Accordingly, the Team conducted field visits to the Washington office, and selected regional offices and field stations. Dates for these visits can be found in the timeline in Table 2. During these visits the Team explored a number of issues that arose during the evaluation. Some of the issues were region-specific and others program-wide. These discussions were informal and wide-ranging, and the results affected the ultimate evaluation, though specific data are not necessarily referenced in all parts of the review.

6. Nomenclature, Acronyms/Abbreviations, List of Tables and Appendices

Some of the terms used in this report have a number of interpretations that could lead to confusion. Accordingly, a set of definitions is provided here along with a glossary of acronyms used in this report.

Benchmark: A comparison allowing assessment of change in an indicator established in this report as FY 2004 performance.

De Facto: Activity undertaken by actual or exercise of power as if lawfully constituted.

De Jure: Activity undertaken authorized by right or lawful title.

Indicator: An attribute that can be measured or described and is used to answer one or more evaluation questions.

Interjurisdictional fisheries: Populations managed by two or more States, nations, or Native American Tribal governments because of geographic distribution or migratory patterns of these populations. The term is management designation, not merely a description of species distribution.

Partner: An agency, organization, or individual that shares common interest in fisheries that is willing to offer and/or share financial and intellectual resources with FWS and its Fisheries Program.

Stakeholder: A State, Tribe, or other entity with a role or set of rights outlined in law or treaty that intersects with the role and responsibility of the FWS Fisheries Program.

Acronyms/Abbreviations

AFS	American Fisheries Society	NMFS	National Marine Fisheries Service, NOAA
ARD	Assistant Regional Director	NOAA	National Oceanic and Atmospheric Administration
BIA	Bureau of Indian Affairs	NWR	National Wildlife Refuge
BPA	Bonneville Power Authority	NWRS	National Wildlife Refuge System
BR	Bureau of Reclamation	OCAP	Operating Criteria and Procedures, dam operations
BRD	Biological Resources Division, USGS	OMB	Office of Management and Budget
CCP	Comprehensive Conservation Plan, FWS, National Wildlife Refuge System	PART	Program Assessment Rating Tool
CHMP	Comprehensive Hatchery Management Plan	PFW	Partners for Fish and Wildlife Program
CNO	California-Nevada Office, FWS (part of Region 1)	QAQC	Quality Assurance Quality Control
DOD	Department of Defense	R1	Region 1, Pacific Region, FWS (CA, HI, ID, NV, OR, WA)
DOI	Department of the Interior	R2	Region 2, Southwest Region, FWS (AZ, NM, OK, TX)
DQA	Data Quality Act	R3	Region 3, Midwest Region, FWS (IA, IL, IN, MI, MN, MO, OH, WI)
FHC	Fish Health Center	R4	Region 4, Southeast Region, FWS (AL, AR, FL, GA, KY, LA, MS, NC, PR, SC, TN)
FIS	Fisheries Information System, FWS	R5	Region 5, Northeast Region, FWS (CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV)
FMP	Fishery Management Plan	R6	Region 6, Rocky Mountain Region (CO, KS, MT, ND, NE, SD, UT, WY)
FP	Fisheries Program of the U.S. Fish and Wildlife Service	R7	Region 7, Alaska Region
FTC	Fisheries Technology Center	RO	Regional Office, FWS
FONS	Fisheries Operational Needs System, FWS	RP	Recovery Plan
FWS	U.S. Fish and Wildlife Service	SARP	Southeast Aquatic Resources Partnership
GPRA	Government Performance and Results Act	SFBPC	Sport Fish and Boating Partnership Council
HACCP	Hazard Analysis and Critical Control Point	SOP	Standard Operating Procedure
IAFWA	International Association of Fish and Wildlife Agencies	TVA	Tennessee Valley Authority
IJ	Interjurisdictional	USGS	U.S. Geological Survey
INRMP	Integrated Natural Resource Management Plan	WAG	Work Activity Guidance, FWS
LAPS	Land Acquisition Priority System, NWRS	WMD	Wetland Management Districts, part of NWRS
NCTC	National Conservation Training Center	WO	Washington Office, FWS
NFBW	National Fishing and Boating Week		
NFH	National Fish Hatchery		
NFHS	National Fish Hatchery System		
NGO	Non-Governmental Organization		

Tables

1. SFBPC Fisheries Program Evaluation Team
2. Summary of Evaluation Team Meetings and Field Visits
3. Principal Legislation and Other Authorities
4. Regionally Specific Authorities
5. Sample FONS Requests
6. Summary of Aquatic Species of Interest to Fisheries Program
7. List of Fish Technology and Fish Health Centers
8. National Fish Hatcheries with Mitigation Responsibilities
9. Reimbursed and Non-Reimbursed Mitigation Costs.
10. Priority ANS Species by Region

Appendices

1. Evaluation Template
2. Evaluation Assessment Tool
3. Aquatic species, of interest to Fisheries Program, and their status
4. Policy for conserving species listed or proposed for listing under the Endangered Species Act while providing and enhancing recreational fisheries opportunities
5. FWS Native American Policy
6. List of Tribes, by Region
7. Mitigation Projects, legislative history, and their costs by region
8. Fish Species Distributed by National Fish Hatchery System, FY 2004
9. Unfunded FY 2004 FONS projects, totaling \$14.2 million

1. ACCOUNTABILITY (to Authorities)

Description of Activity

Fisheries Program activities have been developed over time in response to a broad range of legislative authorities, treaties, compacts, court orders, mitigation agreements, and cooperative agreements. Principal among the legislative authorities are the Fish and Wildlife Coordination Act of 1934, the Fish and Wildlife Act of 1956, the Fish and Wildlife Improvement Act of 1978, and the Fish and Wildlife Conservation Act of 1980. These and other federal statutes mandate a large portion of current Program activities. An additional set of Program activities arises from the specific requirements of area-specific authorizations, compacts, court orders, and other directives such as the Alaska National Interest Lands Conservation Act and the Boldt decision in Washington State.

Table 3. Principle Legislation and Other Authorities

Airborne Hunting Act	Fish and Wildlife Improvement Act of 1978
Anadromous Fish Conservation Act	Fisheries Restoration and Irrigation Mitigation Act of 2000
Comprehensive Environmental Response Compensation and Liability Act	Indian Self-Determination and Education Assistance Act of 1976
Department of Transportation Act	Invasive Species (Executive Order 13112)
Endangered Species Act of 1973	Lacey Act
Estuarine Protection Act	Marine Mammal Protection Act
Exclusive Economic Zone of the USA	Magnuson/Stevens Fishery Conservation and Management Act of 1976
Federal Aid in Sport Fish Restoration Act	National Aquaculture Act of 1980
Federal Power Act	National Environmental Policy Act of 1969
Federal Trust Responsibility toward Tribes, including: Supreme Court Decisions (e.g. Cherokee Nation v. Georgia, Worcester v. Georgia, Morton v. Mancari)	National Wildlife Refuge System Administration Act of 1966
Executive Order 13175 (Federal Agency Trust Responsibilities)	Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990
Interior/Commerce Secretarial Order 3206 (Tribal Rights, Trust Responsibility & Endangered Species)	Reorganization Plan No.4 of 1970
Federal Water Pollution Control Act	Rivers and Harbors Act of 1899
Federal Water Project Recreation Act	Recreation Use of Conservation Areas Act
Fish and Wildlife Act of 1956	Sikes Act
Fish and Wildlife Coordination Act	Snyder Act
Fish and Wildlife Conservation Act of 1980	Sport Fishing and Boating Safety Act
	Watershed Protection and Flood Prevention Act

Basis for Assessment

In an effort to determine whether or not the Fisheries Program addresses the most important fisheries issues as expressed in its authorities and mandates, the Evaluation Team developed three indicators:

1. Fisheries Program has analyzed and clearly understands its authorities.
2. Fisheries Program activities are consistent with its authorities.
3. Fisheries Program is undertaking appropriate actions on all aspects of fisheries covered by its authorities consistent with budget and staffing.

The data provide evidence that the Fisheries Program has devoted time and energy to integrating the broad array of mandates into its policies and activities. As the list of authorities in Table 3 clearly illustrates, FWS and the Program operate under a multitude of laws, regulations, court decisions, and Executive Orders. Viewed separately, each authority endows a general or specific set of actions and/or responsibilities on the FWS and the Program. Each authority also reflects the state of scientific and political thinking at the time of enactment (from 1899 to present).

Table 4. Regionally Specific Authorities

Alaska National Interest Lands Conservation Act	Pacific Northwest Electric Power Planning and Conservation Act
Alaska Native Claims Settlement Act	Pacific Salmon Treaty Act of 1985
Atlantic Coastal Fisheries Cooperative Management Act	Pere Marquette River Amendment
Atlantic Salmon Conservation Act of 1982	Salmon and Steelhead Conservation and Enhancement Act
Atlantic Striped Bass Conservation Act	State of Alaska v. Babbitt (Katie John I)
Central Valley Project, California	Treaties with Tribes in Various Parts of the Country and Various Court Decisions Interpreting Treaties, including:
Chehalis River Fishery Resources Study	Belloni Decision (U.S. v. Oregon)
Colorado River Storage Project Act	Boldt Decision (U.S. v. Washington)
Connecticut River Basin Atlantic Salmon Compact Act	Fond du Lac Decision (Fond du Lac v. Carlson/Minnesota)
Elwha River Ecosystem and Fisheries Restoration Act	Fox Decision (U.S. v. Michigan)
Emergency Striped Bass Study Act	Mille Lacs Decision (Minnesota v. Mille Lacs)
Fish-Rice Rotation Farming Program of 1958	Voigt Decision (Lac Courte Oreilles v. Wisconsin)
Great Lakes Fishery Act of 1956	Trinity River Basin and Wildlife Restoration
Great Lakes Fish and Wildlife Restoration Act	Trinity River Fishery Restoration
Klamath River Basin Fishery Resources Restoration Act	Water Resources Development Act of 1976
Mississippi Interstate Cooperative Resource Agreement	Yakima Fishery Enhancement Project
Mitchell Act	
New England Fishery Resources Restoration Act of 1990	

The Fisheries Program faces the challenging task of maintaining a delicate balance amidst the plethora of authorities developed over the past 100+ years. By and large, this history of fisheries-related authorities has accumulated a set of Program responsibilities with little apparent concern or direction on how the agency should deal with any resulting inconsistencies. While this is an understandable outcome of a century of legislative evolution, it does make the agency’s job of complying much more challenging. Hence, the Program is directed to operate hatcheries as mitigation for Federal Water Projects that results in the stocking of non-native sport fish that may adversely impact aquatic species listed under the Endangered Species Act. Tribal interests often refer to the “Dual Mandate Dilemma” where the FWS must implement specific enabling laws and mandates from Congress, while honoring treaty obligations and trust responsibilities. The agency must attempt to reconcile both obligations while being judged on how well it achieves its other natural resource obligations.

The Fisheries Program is equally aware of the need to ensure that its activities are consistent with its authorities’ directives. In fact, it becomes clear that the Program’s efforts to conduct certain mandated activities, such as mitigation fisheries, may be viewed by some in the fisheries community as inconsistent with the Program’s perceived role in

conservation of native species (see Question 11), yet the Program continues to conduct activities in both mitigation and native fish conservation, striving to be consistent with all its authorities.

The question of whether or not the Fisheries Program is “undertaking appropriate actions on all aspects of fisheries covered by its legislative authorities consistent with budget and staffing” is a difficult question to reduce to a set of metrics. Questions 2-12, however, were crafted to capture the breadth of mandated activities. The evaluation of each provides insight into how well the Program conducted its activities consistent with budget and staffing.

Evaluation

The Evaluation Team finds that the FWS and Fisheries Program have committed significant resources to aligning these authorities. The Roles and Responsibilities report, “Achieving Balance” report², the Three A’s Report (Alignment, Appropriateness, Accountability), SFBPC Stakeholders and Hatchery reports, and the National Fisheries Program Strategic Plan for FY 2004-2008 are four illustrations of Program efforts to assign priorities, align programs, and address areas of potential natural resource conflict. The concept of a National Fish Habitat Initiative (Question 4) was initiated by the fisheries community in recognition that the FWS and other state and federal programs were not investing sufficient efforts to stem the severe decline in the quality and quantity of fisheries habitats. The Program is an integral part of this developing initiative.

The Evaluation Team notes that Fisheries Program’s priorities and activities from year to year are heavily influenced by the annual appropriations process (from FWS to DOI to the Administration to the Congress) and the resulting funds provided by Congress. The budget, along with accompanying language, has as profound an effect on Program “mandates” as the authorities listed above.

The Evaluation Team found no gaps between the Fisheries Program’s mandates and its activities. It also appears that the Program is appropriately setting priorities in light of these authorities, the current state of knowledge, and the needs of the fishery resource. The Program has shown itself capable of addressing a large and cumbersome set of authorities, and is working with the Administration, Congress, stakeholders, and partners to help ensure its activities appropriately and acceptably balance overlapping complementary, and sometimes competing, authorities and responsibilities.

Rating: Highly Effective

2. ACCOUNTABILITY (to Stakeholders and Partners)

Description of Activity

The staff authority of the Fisheries Program resides in the Assistant Director for Fisheries, while line authority flows from the FWS Director/Deputy Director to the seven Regional Directors. In the regional offices, the Regional Directors and the Assistant

² Policy for Conserving Species Listed or Proposed for Listing Under the Endangered Species Act While Providing and Enhancing Recreational Fisheries Opportunities.

Regional Directors for Fisheries (ARDs) provide oversight for all aspects of the Fisheries Program at the regional level. The Administration's Program Assessment Rating Tool mandates that all managers, down to the Program Manager level, should be held accountable for specific performance goals/targets. All Regions are incorporating these specifics into individual work plans in FY 2005. In the Washington Office (WO), the Division Chiefs for the National Fish Hatchery System and Fish and Wildlife Management and Habitat Conservation serve in the same capacity as the ARDs for their respective areas.

At the national, regional, and field station levels, the Fisheries Program is acutely aware of the need to involve State, Tribal, and other stakeholders and partners in every facet of its mission. Sound management dictates efficient utilization of expertise from all stakeholders and partners. As noted in the Program *Vision*, potential activities to be conducted by the Program are evaluated on the following criteria:

- The strength of Federal authority and responsibility
- The extent to which efforts will complement others in the fisheries and aquatic resources conservation community
- The likelihood that efforts will produce measurable resource results
- The likelihood that efforts will produce significant economic or social benefits
- The extent of partner support

In addition to these criteria, Fisheries Program activities, as well as annual and long-term project selection, are influenced by priorities set by the Secretary of the Interior and the FWS Director, and are ultimately determined by Congressional appropriations. Region-specific mandates/priorities are also taken into account.

Basis for Assessment

In examining Fisheries Program's accountability to stakeholders and partners, the Evaluation Team asked the question, "How does the Program work, both internally and externally with States, Tribes, Federal Agencies, and partners as it develops its priorities and activities?" To assess this, the team sought evidence that the Program was regularly communicating with its partners and stakeholders and, more importantly, that the Program was utilizing this input to develop its plans, budgets and activities.

Data supplied indicate that, at a minimum, Fisheries Program staff meet periodically with States, Tribes and other stakeholders and partners, either to coordinate ongoing activities or to discuss future needs and priorities. Active participation in major initiatives, national and regional forums, and professional societies (such as the Southeast Aquatic Resource Partnership, the Connecticut River Salmon Commission, and American Fisheries Society) allow for free exchange of ideas and the ability to coordinate activities at all levels. In addition, Fisheries Program personnel participate substantively at technical and policy levels in Interstate Fishery Commission and Regional Fishery Management Council forums. At the field, regional, and national levels, Fisheries Program personnel interact with many different constituents on a daily basis.

All regions provided convincing data that partner needs were incorporated into their Fisheries Operational Needs System (FONS) requests. For example, in Alaska, the Region's highest priority FONS project in FY 2004 sought funding to implement the Yukon River Salmon Agreement. This project was included in the President's FY2005 budget request to Congress. Similar examples are documented in data from all regions.

The Evaluation Team was provided a copy of the Fisheries Program 2004 budget justification. It was annotated to demonstrate where partner input and priorities were considered in formulating the request. Inspection of this document reveals a large number of issues that are important to partners. The following three examples are illustrative:

Table 5. Sample FONS Requests

Mammoth Springs NFH (AR) FONS #2001-001	\$56,000
<p>Reintroduction and Restoration of Lake Sturgeon to Their Historic Southern Range Project will acquire selected lots of lake sturgeon from genetically diverse brood stock, genetically typed at the Warm Springs Fisheries Technology Center (GA), and moved to the Mammoth Springs National Fish Hatchery (AR) where spawning, rearing, and stocking techniques for captive propagation will be developed. This project will advance the restoration of lake sturgeon to their historic southern range in Tennessee, Georgia, and North Carolina in cooperation with State partners.</p>	
LaCrosse Fish Health Center (WI) FONS # 2000-004	\$95,000
<p>Lake Sturgeon Restoration on the Menominee Indian Reservation, Wisconsin Project will enhance the FWS's lake sturgeon recovery and restoration efforts on Tribal lands. Funding will be used to ensure (via improved analytical and screening protocols) that diseases are not introduced to FWS facilities with wild fish and, subsequently, transferred to Tribal waters. This project will reduce disease epizootics in lake sturgeon eggs and juvenile fish reared at FWS hatcheries and, hence, maintain the health and genetic integrity of adult lake sturgeon restored in Tribal waters.</p>	
Iron River NFH (WI) FONS #: 2003-001	\$54,000
<p>Egg Isolation Agreement to Benefit US Fish and Wildlife Service Fish Hatchery System Project will produce and maintain additional captive spawning populations of lake trout and brook trout. An MOU will be renegotiated with Keweenaw Bay Indian Community in 2003, and an additional one negotiated with the Red Cliff Indian Community to maintain wild gametes (fertilized eggs) in Tribal isolation facilities, and increase the number of strains held at one time. The expected benefit of this project will be to enhance the genetic variability of captive spawning populations and protect them from imported diseases.</p>	

FONS projects that identify partners contributing in-kind and financial resources present clear examples of priorities developed with partner input. FONS includes 638 projects that identified partners contributing \$50.3 million to projects.

Work Activity Guidance (WAG) documents were viewed by the Evaluation Team as a good example of how some elements of the Fisheries Program communicate priorities and activities to subordinate offices. WAGs provide direction from the ARD Fisheries to field offices regarding annual priorities. Region 6 prepares an extensive WAG which is

useful in tracing the flow of work back to partner input. Not all regions utilize WAGs, however, preferring to provide direction to the field via supervisory meetings or other methods.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP meets regularly with States, Tribes and partners in determining priorities and activities.	Evidence of planning process with States, Tribes, and partners for each region.	Evidence of meetings, but not of a formal and comprehensive process.	Formal process established to identify and meet with all stakeholders and interested partners.
FP communicates stakeholder and partner input as part of its internal FWS/DOI program development.	Regional FONS projects for FY 2004 demonstrating stakeholder input.	Demonstrated.	Continued demonstration.
FP program activities reflect FWS, DOI and appropriate Tribal/State/partner input.	FWS FP Budget Request reflects priorities.	Demonstrated.	Continued demonstration.
	Input reflected in WAGs and funded FONS projects.	Demonstrated in FONS and those regions with WAGs.	Continued demonstration in FONS and WAGs in all regions and Washington Office..
Key performance measures and related outputs are integrated into Strategic Plan and work plans as mechanism for accountability.	Developed during Evaluation, and not requested from FP.	All regions are said to be working to incorporate performance measures into individual work plans.	All program supervisors down to project leader are held accountable for specific performance measures in work plans.

Abundant data were provided to the Evaluation Team demonstrating that meetings and other forms of discourse were undertaken with States, Tribes and partners. Most of these data are anecdotal, however, and serve only as evidence that discussions of priorities took place. Such a catalog of meetings leads the Evaluation Team to conclude that there is no consistent, formal process in place for consulting with stakeholders and partners. This *ad hoc* approach does not make it possible to connect the issues emerging from these important discussions to the actual work conducted by the Fisheries Program; nor can an observer determine who was not at the table that should have been.

The Fisheries Program appears to be taking its responsibilities to communicate its priorities and activities to its stakeholders seriously. Strong evidence of the Program's interest in involving stakeholders and partners is evident in the development and substance of the National Fisheries Program Strategic Plan for FY2004-2008. A similar commitment to stakeholder and partner involvement is found in the *Partnership Agenda for Fisheries Conservation*, produced by SFBPC with a wide range of stakeholders and partners at the request of the Program. These inclusive actions have served the Program well in demonstrating a new commitment to accountability to stakeholders and partners. Nevertheless, the Program will need to develop a consistent and convincing process to assure that appropriate stakeholders and partners are involved as it determines its annual activities and priorities.

The greatest issue the Evaluation Team identified in this activity is the inconsistency in program direction to the field. While data show that some stakeholder and partner priorities have been considered in establishing priorities, it is unclear how and whether these priorities are reflected in the work being undertaken by the Fisheries Program. Without a more formal process we have little confidence that the FWS and its Fisheries

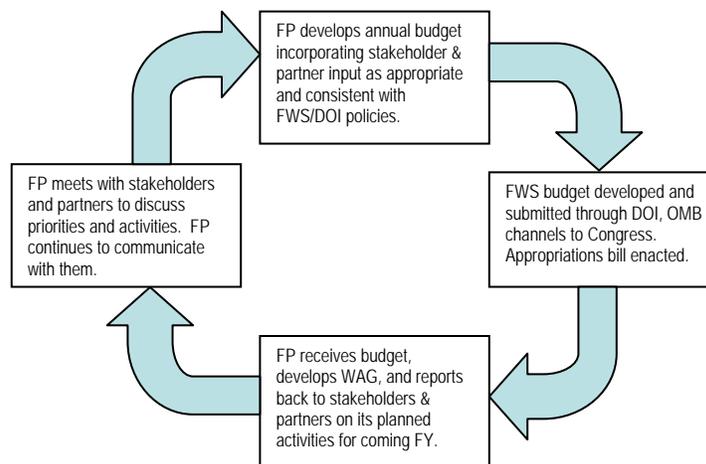
Program can maintain a direct relationship between what is said and decided at the highest levels and what actually happens at the field level. Similarly, a process for listening to stakeholders' annual priorities will serve the Fisheries Program well. But this process will not succeed unless there is a direct link between expected outcomes and the staff responsible for achieving these outcomes

Rating: Partially Effective

Recommendations to Increase Effectiveness

1. At the national, regional, and field level, continue to identify and engage stakeholders and partners in the process of developing and refining the Strategic Plan. Establish an annual accountability message/meeting with these groups and individuals to let them know how their input has, or has not, influenced activities.
2. At the regional level, develop a consistent, formal process to annually gather input from all stakeholders and partners regarding priorities (see diagram below). Such priority-setting communications should be directed at all interested parties.
3. Formalize and institutionalize annual direction from the Washington Office to the Regions in the form of a Work Activity Guidance (WAG), and similarly all Regions provide step-down WAGs to the field.

Recommended Communication Process



3. ACCOUNTABILITY (Through Communications)

Description of Activity

Effective communication is essential for the Fisheries Program to achieve its full aquatic resources management potential. Whether it is working with Tribes, dealing with aquatic nuisance species, or bringing the best available science to bear on management decisions, communications plays a critical role.

The Fisheries Program communicates its plans and accomplishments to States, Tribes, Federal agencies, and partners. At the national and regional level, regular meetings are held with primary stakeholders and selected partners to determine priorities for the upcoming year. These meetings were particularly fruitful during the development of the National Fisheries Program Strategic Plan, including drafting regional plans. Many different mechanisms have been developed by the Program to provide feedback to its many stakeholders and partners, including daily “in-the-field” interaction, newsletters and reports, and regional and field station web pages. National organizations such as the Sport Fishing and Boating Partnership Council and FishNet receive regular briefings on Program activities.

Basis for Assessment

To assess Fisheries Program accountability the Evaluation Team asked, “How effectively does the Program communicate its plans and accomplishments to States, Tribes, Federal Agencies, and partners?” The Team was interested in evidence of communications and formal feedback to stakeholders and partners.

For the first time a “National Accomplishments Report” is being prepared detailing FY 2004 accomplishments in relation to strategic plan goals. The Evaluation Team reviewed a draft of the report.

All regions provided evidence of face-to-face meetings and other communication efforts. The bulk of the data furnished to the Evaluation Team are anecdotal. Only a few regions have organized their communications efforts, and these effort are recent and their effectiveness yet to be thoughtfully judged. Region 3’s *Fish Lines* is a good example of a formal and regular report to stakeholders and partners that appears to be appreciated by those who receive it. Region 2 has begun a similar effort in the form of *Currents*.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
Stakeholders and partners receive regular and consistent communications from FP.	Production of a report annually on accomplishments linked to stated goals. <input type="checkbox"/> National accomplishment report	In development for first time for FY 2004. Draft reviewed by Evaluation Team was <u>not</u> linked to stated goals.	Annual report of progress toward stated goals.
	Demonstration of communications of plans and accomplishments to stakeholders and partners for each region and WO.	Anecdotal evidence of communicating selected program highlights with partners. No evidence that this communication follows a comprehensive outreach plan or is linked to stated goals and objectives.	All regions contribute to national report on progress toward stated goals. Regions develop and implement general communications consistent with FWS Communications Plan to improve their constituent relations.

The Fisheries Program is just now becoming aware that it must do a better job of communicating with those who have a stake or interest in what the Program is doing. The need has been repeatedly stressed both formally and informally, but little organized effort was evident during this evaluation. The Program Strategic Plan section regarding Partnerships and Accountability recognizes this need:

“Culminating three years of work in close cooperation with partners, this plan marks a new beginning for the Fisheries Program, but good beginnings are not the measure of success. What matters in the end are performance, results, and following through to completion on commitments. By measuring its performance, setting targets, and reporting on results, the Fisheries Program seeks to establish a record of accountability and to truly integrate program performance and budget.”

While formal communications, such as those outlined here, are important, the Fisheries Program must also recognize the continued need for regular communications with stakeholders and partners including face-to-face meetings, telephone and email. These cannot be replaced by rigidly structured communication efforts.

The National Accomplishments Report, reviewed in draft form, appears to be a good start. At present, however, it is more of a “highlights report” than an accomplishments report. Such a report will fill a “communications of accountability” need only if it becomes focused and linked to stated goals at the national and regional levels. In turn, the National Accomplishments Report can then support a regular conversation between the Fisheries Program and its stakeholders and partners.

Fish Lines, *Currents* and other communication efforts tell success stories. These publications are geared more toward a general audience than partners interested in progress toward specific programmatic goals. As only two regions have instituted these kind of formalized efforts, the Evaluation Team remains concerned that the program may still be seen as insular and uncommunicative by some sectors of the fisheries community. As Region 3 representatives informed the Team, costs associated with production and distribution of *Fish Lines* should be viewed as the “cost of doing business.”

Effective communications must be sustained over the long-term to be effective, which means they need to be affordable in terms of staff time and budget. The Fisheries Program needs to ensure use of the most effective communications (time, expenses versus audience impact) such as email, while recognizing that some partners and stakeholders may find printed materials most useful.

Rating: Partially Effective. Efforts show improvement from previous years.

Recommendations to Increase Effectiveness

4. The Fisheries Program should continue refining the National Accomplishment Report to serve its intended purpose of accountability to constituents. As the report is developed, regional components should be shared with stakeholders and partners. The report should provide a “bottom line” assessment of progress, identifying where objectives have and have not been met. It should state reasons for success, as well as lessons learned and obstacles encountered (i.e., resource limitations, low water year, etc.). Given the Program’s impressive fisheries expertise and breadth of operations, such a thoughtful exercise would provide valuable information to the fisheries community.

5. All regions should institute outreach strategies similar to R3 *Fish Lines* and R2 *Currents*.

4. AQUATIC HABITAT (Excluding U.S. Fish & Wildlife Service lands)

Description of Activity

The Fisheries Program is deeply involved in aquatic habitat issues across the United States. The Program's habitat activities are supported by a wide range of funding sources including Partners for Fish and Wildlife, Fish Passage, and the Coastal Program.

Because of the compelling strategic opportunities to benefit aquatic resources, and the need to cooperatively perform work on lands owned by other federal, Tribal, state, or private interests, the Program performs all of its habitat work in partnership. Program activities on FWS-administered lands are addressed in Question 8.

Through Washington Office and Regional Office guidance, and in consultation with stakeholders and partners, the Fisheries Program's field offices continue to stabilize, mitigate, and enhance degraded aquatic habitats on non-FWS lands. The Regional and National Fisheries Program Strategic Plan describe specific tasks to be implemented during FY 2004-2008.

In September 2004, the Sport Fishing and Boating Partnership Council formally presented its report on the feasibility of developing a National Fish Habitat Initiative to the FWS and the International Association of Fish and Wildlife Agencies (IAFWA). The report recognized the central role the Fisheries Program played in fostering this initiative. The unanimous input from stakeholders across the country was to proceed in developing a national aquatic habitat effort, with IAFWA as the overall lead and FWS as the lead Federal agency.

Basis for Assessment

In order to assess Fisheries Program success in habitat conservation, the Evaluation Team asked the question: "Is the Program having an impact in stabilizing and improving priority aquatic habitats on non-FWS lands?" The Team requested data demonstrating that the Program was: 1) cooperatively involved in a planned and coordinated set of activities on priority habitat issues, 2) such work is outlined in cooperatively-developed plans, and 3) plans contain monitoring and evaluation actions in order to determine the success of the work. In applying a focus to plans, the Team assumed that all plans reflect partners and Program priorities, and that the Program will only be working on habitat off FWS lands where its resources are welcome by landowners or agencies with primary management authority. Lastly, the Team examined the Program's role in national and regional initiatives as indicators of program commitment to aquatic habitat.

The data demonstrate that the Fisheries Program is meeting the needs identified in habitat/management plans by implementing on-the-ground habitat improvement and restoration projects. Two FY 2004 Examples:

- FIS Accomplishment Module tallies a total of 1,819 projects (e.g. accomplishments), of which 351 (19%) include habitat-related activities. The Fisheries Program accomplished 33 projects specifically improving riparian, in-stream, or wetland habitat. In addition, 106 fish-passage restoration projects were cost-shared and accomplished with partners.
- Habitat improvement projects restored or enhanced 213 riparian and 122 in-stream miles and 1,090 upland and 2,503 wetland acres of habitat. Fish passage projects removed 141 barriers, restoring access to 1,749 miles and 6,717 acres of historic habitat.

The Fisheries Program has played an important role in developing the Eastern Brook Trout Joint Venture, which brought together a wide array of partners to set priorities and take actions for restoration of this native trout species in the eastern United States. Program staff have been instrumental in bringing partners together and providing momentum to keep the effort moving forward. This joint venture, along with others like the Southeast Aquatic Resource Partnership, serves as a model for how a national aquatic habitat initiative can ultimately work at the regional and local levels.

The Fisheries Program and other NFHI partners will benefit greatly in their planning and evaluation of NFHI activities by making use of the significant mapping and data sets that States, NGOs (such as TNC, WWF, TU, etc.) and others have developed for regional conservation planning and priority setting, and to support development of State Wildlife Comprehensive Plans.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP activities contribute to stable or improving status of aquatic habitats that are shared priorities with partners at local, regional, or national scales.	#/% of plans where FP is carrying out its habitat responsibilities.	100 (unknown %). Not able to determine overall expectation.	Ability of FP to demonstrate the denominator of expected habitat responsibilities. All regions capable of providing # and %.
	<input type="checkbox"/> #/% of habitat management plans implemented. <input type="checkbox"/> #/% of plan goals met (e.g., fish passage, acres/stream miles conserved, enhanced, restored). <input type="checkbox"/> #/% of FP-related PFW/Coastal program projects that target habitats identified in plans.	95 (unknown %) 105 (unknown %)	
	#/% of fish passage projects cost-shared with partners.	106 (100%)	100%
Monitoring and evaluation mechanisms are in place to determine effectiveness of conservation actions.	#/% of plans with monitoring and evaluation components being implemented and reported.	106 (unknown %)	100%
FP provides federal leadership to develop the NFHI.	Status of NFHI.	Initiated in FY 2005.	FP demonstrates federal leadership by engaging other Federal partners to commit resources to benefit NFHI.

The Fisheries Program is conducting significant habitat work in aquatic habitats. The overall benefits and impact of these efforts is uncertain because of the inability of

Program to provide “denominator” data. Thus, the Evaluation Team was unable to assess the overall impact of Program activities on the status of aquatic habitats.

Though data are incomplete, the information provided demonstrates that the FWS/Fisheries Program is a national leader in fish habitat work, as well as a key player in the national fisheries community and actions to increase national aquatic habitat efforts. Discussions with SFBPC, IAFWA and others indicate that the Fisheries Program played a pivotal role in developing support for the emerging NFHI in FY 2004-2005. The Evaluation Team expects this strong start to be continued by providing federal leadership to engage other Federal partners to commit resources to benefit NFHI in the coming years.

Taken in their entirety, the Fisheries Program habitat activities appear to be opportunistic rather than strategic. The Evaluation Team was not presented with evidence that would explain to partners and others how the program sets priorities for individual projects. Developing the National Fish Habitat Initiative will provide a roadmap to help the Program more strategically target its habitat efforts.

Data provided do not allow the Evaluation Team to assess what proportion of plans have monitoring and evaluation mechanisms. Monitoring and evaluation are integral to many plans covering Fisheries Program habitat activities, but it is not a part of all of the plans. For example, the California-Nevada Office reported that 100 percent of their 32 plans have these components, whereas Alaska reported that only 1 of 32 plans contained them. Several other regions only reported the number of plans with these activities, but not the total number of plans, goals, and projects.

Rating: Effective. The Fisheries Program is effective at undertaking habitat activities, though only partially effective at strategic development, and evaluating the impacts of its activities on the targeted natural resources.

Recommendations to Increase Effectiveness

6. Ensure all plans have properly scaled components to measure value of habitat activities against desired project outcomes at local, regional, and national levels.

5. NATIVE SPECIES

Description of Activity

The Fisheries Program’s primary role in conserving native aquatic species is the result of a greater FWS responsibility under the Endangered Species Act. In carrying out this role, the Fisheries Program receives its designation as lead or support from Ecological Services and does not, and cannot, act independently. Similarly, as non-listed fish and other aquatic species fall under the primary jurisdiction of the States, the Program must act in a supporting role to the State management agencies. In general, the Program does not become involved with non-endangered native fish in the absence of a cooperative fishery management plan (FMP).

In carrying out this role, the Fisheries Program is actively engaged in recovering and restoring selected native aquatic species on a national and international level. Program personnel are actively involved in developing and implementing recovery plans and fishery management plans for imperiled native species and species of concern in partnership with a myriad of agencies.

National Fish Hatcheries play an important role in conserving native species by providing refugia for species that cannot survive in the wild because of insufficient quality or quantity of habitat, and they serve as a source for restocking or supplementing existing populations. Hatcheries become involved in these efforts only when called for in a recovery plan or FMP. Similarly, FWS policy states that stocking may only be conducted as part of a recovery plan, FMP, or other formal agreement.

Lastly, the Fisheries Program is placing increased emphasis on the monitoring and evaluation components in plans and agreements, allowing managers to better evaluate management outcomes and assess the long-term success of their species conservation activities.

Basis for Assessment

For this assessment, the Evaluation Team asked the question, "How effectively does the Fisheries Program implement conservation actions for native aquatic species?" The Team was interested in how the Program was involved in planning, executing and evaluating conservation actions for these species. The Team wanted evidence that the Program was appropriately involved in areas: 1) where it has expertise, 2) it is successfully carrying out the tasks assigned in management plans, and 3) mechanisms are in place to monitor and evaluate results.

Approximately 75 percent of all Recovery Plans for fish recommend development of captive propagation or refugia programs as strategies to re-establish wild populations. Thirty-Seven of the 111 species propagated at National Fish Hatcheries are listed under the Endangered Species Act (Appendix 3).

According to the FY 2004 accomplishment data provided, 26 percent of the listed aquatic species actively managed by the Fisheries Program are stable or improving. For candidate species, 50 percent of the species actively managed cooperatively by the Program are stable or improving in condition. Two examples of Program work on listed species in FY 2004 include:

- The Lahontan NFH manages experimental in-stream flows to mimic natural flows under critical drought conditions in the Truckee Basin of Nevada. The managed flow regime maintained restored riparian habitat and provided the opportunity to document instream flow conditions for cui-ui (an endangered fish) at critically low flow conditions. Also, as part of the Truckee River Recovery Implementation Team, hatchery staff help identify and implement recovery projects in the Truckee River Basin and the Tahoe Basin including, habitat surveys, historic

reintroduction and evaluation programs, radio-telemetry, behavioral and food web studies.

- The New Mexico Fishery Resources Office works to restore Gila trout, which have been reduced to a small fragment of their historical range. The objective of this project is to increase the distribution of Gila trout within the Gila River Basin and reduce the impacts associated with introducing and establishing nonnative trout species. In addition, the FRO works with the Nambe, Santa Clara, and Taos Tribes to evaluate potential restoration opportunities for Rio Grande cutthroat trout. Activities include conducting initial surveys of stream populations and drafting management strategies for tribal council consideration.

Proactive conservation efforts by the Fisheries Program and its partners in FY 2004 kept several populations from potential listing actions, including paddlefish, Rio Grande cutthroat trout, alligator gar, and the Atlantic and lake sturgeon.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP plays a leadership role in developing and implementing effective recovery plans for native aquatic species and their habitats.	#/% of listed native aquatic species where FP has lead in developing recovery plans.	27 of 225 (12%)	Demonstration of continued leadership in recovery of native aquatic species.
	#/% of listed native aquatic species populations, where FP has leadership role, that are stabilizing or improving.	79/362 (21.4%)	Increased percentage of stabilized and improving species, and completion of actions necessary to support delisting of species.
	# of species not listed due to proactive conservation measures by FP in whole or in part (e.g. conservation agreements).	52	Continued and increased evidence of FP actions/projects conducted cooperatively to proactively conserve species and preclude need to list.
FP fulfills its role as outlined in cooperative FMPs for native species.	% of species of management concern covered in FMPs.	30%	75%
	#/% of species managed to levels specified in FMPs.	27 of 67 (40%)	60%
Monitoring and evaluation mechanisms are in place to determine effectiveness of conservation actions.	#/% of plans/agreements with monitoring and evaluation components being implemented and reported.	143 (denominator undetermined)	100%

It is evident to the Evaluation Team that the Fisheries Program is increasingly involved in the conservation and recovery of native species. The data also confirm that the Program has had some success in improving the status of listed species under its care. Lastly, it is apparent that the Program recognizes the beneficial role of proactive measures to conserve and manage species prior to ESA listing, precluding the need to list these species.

The Evaluation Team sees a need for the FWS to clearly outline the criteria for assigning the lead for listed native fish recovery; such criteria might include an assessment of available expertise (internal and external to the Fisheries Program and FWS), and the demonstrated ability for FWS to evaluate and report on the outcomes of its efforts to improve the status of listed native species.

The Evaluation Team was hampered in its assessment for want of a single set of reference data on what is a “native species,” a “species of management concern,” etc. Similarly, descriptive information on species of interest to the Program, such as status and trends, was difficult to assemble. For example, 17 species are reared by the National Fish Hatcheries that are not included on the FIS look-up table. Accordingly, the Team developed its own reference list drawn from the data provided and supplemented with the Team’s own research. This information is summarized in Table 6, and listed in Appendix 3.

Table 6. Summary of Native Aquatic Species of Interest to Fisheries Program

Total Number of Species = 396	Number of Native Species = 387
Species of Management Concern = 164	Native IJ Species = 69
Native Species covered under FMPs = 64	Species Managed to FMP levels = 27
Native Species Listed under ESA = 121	Listed with Recovery Plans = 102
Native Species propagated at NFH = 105	Listed Species at NFH = 37

Lastly, monitoring and evaluation are critical to assessing the success of management efforts. The Evaluation Team found that application of evaluation efforts in the Fisheries Program is inconsistent. Increased emphasis must be given to the evaluative components of conservation efforts.

Rating: Effective.

Recommendations to Increase Effectiveness

7. Develop a definitive set of reportable data including: a) management status (i.e., listed, recovery plan, covered by FMP), b) species trends (i.e., declining, stable, improving, meeting management goals, and c) other data allowing objective assessment of the resource and its status.³

6. INTERJURISDICTIONAL FISHERIES

Description of Activity

One of the more daunting challenges facing fisheries managers is how to conserve resources that range across political boundaries. The sheer volume of legislation, court orders, and other mandates have led to overlapping authorities and difficulty defining Federal, State, Tribal, and local roles. Solving these issues requires a focused, prioritized, and coordinated effort on the part of those entities with shared fishery management responsibilities. As used in this evaluation, interjurisdictional fisheries are defined as "populations managed by two or more States, nations, or Native American Tribal governments because of geographic distribution or migratory patterns of these

³ The consensus of Evaluation Team is that this information exists in the larger conservation community, but not in a consistent format that allows the Program to determine the effectiveness of their actions.

populations." The "IJ" designation indicates the need for species management across administrative boundaries.

The Fisheries Program, in cooperation with stakeholders and partners, fulfills its leadership role in the recovery, restoration and enhancement of interjurisdictional fish and aquatic resources through the establishment of FMPs. FWS policy states that the Program will only become involved in IJ fish issues where there is a cooperative fishery management plan that outlines the role(s) of all participants. On a daily basis, Program staff provide technical expertise, assist in documenting findings, and formulate strategies for expected and proposed actions to recover and enhance interjurisdictional aquatic resources.

The Fisheries Program has conducted a significant amount of work under the banner of IJ fish management. Such historic and ongoing successes as those focused upon Atlantic striped bass, American shad, and lake trout underscore the nature of the impact that the Program can have when resources are cooperatively brought to bear.

Basis for Assessment

Similar to its assessment of native species, the Evaluation Team wished to ascertain, "How effectively does the Fisheries Program work with States, Tribes and inter-governmental authorities (e.g., Atlantic States Marine Fisheries Commission, Mississippi Interstate Cooperative Resource Association, Great Lakes Fisheries Commission) to prioritize and implement interjurisdictional fish management needs?" The Evaluation Team requested data on the Program's role in engaging appropriate management agencies in planning, conducting, and evaluating the effectiveness of conservation actions, as well as indications that these actions were benefiting the resource.

The data demonstrated that the Fisheries Program is involved in a significant number of tasks outlined in FMPs for IJ fish. Program personnel are actively involved at the policy and technical levels of the Pacific, Gulf, and Atlantic States Marine Fisheries commissions, the eight Regional Fishery Management Councils, and interstate groups such as the Great Lakes Commission. In addition, the Program participates in international organizations, inter-Tribal entities and other interstate fishery management groups, such as the US-Canada Yukon River Panel, the Lower Mississippi River Conservation Committee, and the Chippewa/Ottawa Fish and Wildlife Commission.

The following are examples of how the Fisheries Program works with States, Tribes, and intergovernmental authorities on interjurisdictional issues:

- The Columbia Fishery Resources Office (MO) analyzes and maps data in the Mississippi Interstate Cooperative Resource Association (MICRA) national paddlefish database. Twenty-eight states are members of MICRA, while 23 have contributed to the paddlefish database. The database contains individual records for about 1.5 million hatchery stocked paddlefish, 19,000 wild tagged paddlefish, and 1,700 tag recoveries. State and Federal biologists can visually interpret their paddlefish data with the ArcView mapping product created by the Columbia Fishery Resources Office.

- The Green Bay Fishery Resources Office (WI) participates in the assessment and management of the Lake Michigan fishery community. This interagency assessment and management is accomplished under the structure of the Great Lakes Fishery Commission. The states of Michigan, Wisconsin, Illinois, Indiana, the Chippewa/Ottawa Indian Tribes, the USGS, and the FWS coordinate their activities through policy and technical committees to achieve cooperative management of Lake Michigan fisheries.
- The Delaware River Fisheries Coordinator (DE) coordinates the activities of the Delaware River Basin Fish and Wildlife Management Cooperative. One of the primary responsibilities of the Cooperative is to restore American shad in the Delaware River. The coordinator also served as the FWS representative on the Mid-Atlantic Fishery Management Council and on the Atlantic States Marine Fisheries Council's American eel and sturgeon technical committees.

Data provided by the Program indicate confusion over the total number of IJ fish species. The Evaluation Team assembled information from a variety of sources to create a single chart of aquatic species and their management classifications (Appendix 3).

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP plays a leadership and/or cooperative role in developing and implementing effective FMPs for IJ fish and their habitats.	#/% of IJ species managed to levels specified in FMPs.	21/67 (31%)	Achieve full biological targets conforming with time frame specified in FMPs.
FP fulfills its role as outlined in FMPs.	#/% of tasks designated for FP in FMPs being implemented by FP.	495/748 (66%)	Perform full tasks conforming with time frame specified for FP in FMPs.
Monitoring and evaluation mechanisms are in place to determine effectiveness of IJ FMPs.	#/% of FMPs with monitoring and evaluation components being implemented and reported.	219 (total number of FMPs not discernable)	100%

The Fisheries Program is involved in a significant number of partnerships across the country working to manage and conserve IJ fisheries. Data indicate that the Program is taking on a significant amount of responsibility as indicated by the number of FMP tasks for IJ fish the Program is responsible for conducting. The data indicate that the Program has successfully managed 66 percent of its assigned tasks with 21 (31%) of the IJ fish populations at levels specified in FMPs. Many of the 21 IJ species managed at FMP levels, however, would not be considered significant management “challenges” (e.g., bluegill, largemouth bass, yellow perch), while many other IJ species will require significant management efforts if they are to achieve FMP levels (e.g., American eel, cutthroat trout, pallid sturgeon).

Without examining individual FMP implementation schedules, the Evaluation Team was unable to determine if 31 percent of species managed to levels specified in FMPs is laudatory or deficient. With 31 percent set as the baseline for FY 2004, the Team chose to set a target of achieving all biological targets set in FMPs, assuming these targets are both realistic and achievable.

The Fisheries Program reports 66 percent of the tasks designated for its attention were successfully implemented in FY 2004. The Evaluation Team found it difficult to determine whether the 233 unaccomplished tasks were the result of the Program failing to conduct the activities, or whether they are long-term tasks not yet scheduled for implementation.

As with native species, it is clear that monitoring and evaluation are important concepts that need to be part of all FMPs. A large number of plans have these components, but the Team was unable to determine the number without these components making it difficult to assess how much work needs to be done in this area.

Rating: Effective. This rating is assigned for work that the Fisheries Program actually conducted. Due to a lack of data, however, the Evaluation Team was unable to assess the reasons for, and the potential lost resource value of, FMP tasks not accomplished.

Recommendations to Increase Effectiveness

8. Work with partners to evaluate completion of FMP tasks against stated annual objectives.
9. Identify the barriers to reaching 100 percent implementation of tasks for which it is responsible.

7. RECREATIONAL FISHERIES

Description of Activity

The Fisheries Program has a long, but inconsistent, history of involvement in managing and enhancing recreational fisheries. This involvement is important to many stakeholders and partners, as well as a logical extension of its activities in mitigation fisheries. It is clear that many Program activities benefit and support recreational fishing, and that these actions have a significant social and economic impact.

The Fisheries Program is actively involved in recreational fisheries as outlined in cooperative agreements, management plans, and MOUs/MOAs with States, Tribes, and partners nationwide. When the Program restores depleted populations of native game fish, it provides and enhances recreational fishing opportunities for the Nation's 58 million recreational anglers. There are currently 69 operational NFHs that produce and distribute 111 species of which 80 percent provide recreational fishing opportunities across 42 states (Appendix 3 and 8). These fish species include American shad, Atlantic salmon, Pacific salmon, lake trout, rainbow trout, and striped bass. In FY 2004, 82 percent of the total 3,774 fish distribution activities identified recreation as one of the production benefits, and 99 percent of the 155 million fish distributed by NFHs had recreational value.

The Fisheries Program conducts activities in support of recreational fishing on Department of Defense (DOD) lands, at the request of individual installations as authorized in the Sikes Act. In order to provide services, the Program must typically obtain reimbursable funds to cover its expenses. Recreational fishing opportunities are primarily created for the benefit of the DOD personnel and their families living on base, but are also typically available to the public, based upon level of security at installation. Activities included conducting fishing clinics, surveying and assessing fish communities, and providing management recommendations to maximize opportunities on existing recreational fisheries.

Basis for Assessment

The Evaluation Team asked the question, “How effectively does the Fisheries Program work with States, Tribes, Federal agencies and partners to provide opportunities and support for recreational fishing?” In order to assess this question, the Team asked for data to support the presence or absence of specific recreational objectives, evidence that the Program is carrying out its roles as specified in agreements with partners; and evidence that the Program is working to address and balance the interests of recreational fishing and native fish conservation.

The Program does not have a formal mechanism for tracking/reporting the total number of requests for fish stocking, technical assistance, assessments, etc. However, a review of the FY 2004 FIS Accomplishment Module indicates that a total of 409 requests were fulfilled (135 Tribal and 274 State and other partners’ requests). These requests resulted in the stocking of over 37.5 million fish into waters managed by Tribes, States, military installations, and National Wildlife Refuges, and providing recreational fishing support and opportunities with an estimated value to local economies of over \$276 million. Over 150 aquatic assessments provided information on 226 populations of sport fish were conducted.

Fisheries Program staff regularly participate in recreational fishing based forums and help to develop, implement, and participate in angling/aquatic education programs at the local, regional, and national levels. Educational opportunities are offered to the general public through Program facility tours, training classes, and job shadowing. In FY 2004, the Program reported that 83 of its field stations hosted and/or participated in partnerships/agreements with national groups, public meetings and events, presentations to public and professional groups, and other outreach efforts.

The program reported fulfilling 630 requests for assistance in support of recreational fishing (e.g. technical assistance, stocking, and stock assessment) in FY 2004. In addition, the Program was involved in at least 84 special programs in support of angler and aquatic education, such as National Fishing and Boating Week, Disabled Angler access, etc.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
Presence of specific recreational fishing objectives for FP.	Director’s Orders that explicitly support recreational fishing.	0	Prepare and issue Director’s Order by National Fishing & Boating Week, June 2006.

FP implements its roles outlined in agreements and management plans (MOAs, etc) with States, Tribes, and partners in support of recreational fishing.	# of State, Tribal and partner requests, and % fulfilled (e.g., fish stocking, technical assistance, assessments) in support of recreational fishing.	630 (unknown percent) problem with definition of "request."	100% fulfillment of tasks outlined in MOAs with States, Tribes, DOD facilities.
	FP participation in recreational fishing based forums (as an advocate for recreational fishing).	No data (narrative only). FP staff are actively involved.	Continual involvement of FP staff.
	# of angling education/aquatic education programs (e.g., NFBW, disabled angler access at NFHI, etc).	84	Continue breadth and FP involvement in. All FP facilities involved (FRO, FTC, NFH, etc.).
	# of Department of Defense installations, with INRMPs that address recreational fishing.	Minimum 88 of 380 plans.	Responsive to requests as developed by DOD and cost neutral.
FP balances multiple interests in addressing native fish conservation and recreational fisheries.	FP assistance in resolving conflicts (e.g., participation in internal/external endangered species consultations, implementation of Service's "Achieving Balance" policy, etc.).	Numerous examples supplied in the narrative.	Continued evidence of FP involvement and effectiveness in conflict resolution.

Although there is much talk about the importance of recreational fishing to the culture, heritage and future of the Fisheries Program, the data indicated that no specific objectives are laid out by the FWS. There are no Director's Orders (statements of FWS policy) that describe the Program's role and responsibilities in recreational fishing. The draft Strategic Plan does contain a recreational fishing section, and it is clear the Program supports and promotes recreational fisheries in many ways. It is also apparent that the universe of possible actions is large, and that the Program will fall short of the high expectations held by many outside the FWS without a clearly defined recreational fishing role. Except for statements in the draft strategic plan, all recreational fishing activity appears to take place in a policy vacuum.

The Evaluation Team requested data on the number of State, Tribal and partner requests, and percentage fulfilled (e.g., fish stocking, technical assistance, assessments) in support of recreational fishing. The reported 630 requests fulfilled for support of recreational fishing largely arise from their mandated activities in the course of native fish conservation, cooperation on IJ fisheries, and mitigation. The remainder of its activities largely falls under the angler and aquatic education category with the Program conducting little work on recreational fishing *per se*.

The Evaluation Team found ample evidence of Fisheries Program participation in various forums, such as National Fishing and Boating Week and disabled angler access at NFHs, as an advocate for recreational fishing. The reported 84 activities do not reflect full extent of the angling/aquatic education programs as three regions (1, 4, and 6) failed to report any activity. However, the Team is aware of programs conducted in these regions during FY 2004.

The Evaluation Team requested the number of DOD installations with Integrated Natural Resource Management Plans (INRMPs) that address recreational fishing, but the data is not collected on a regular basis. Though difficult to determine the overall impact of the Fisheries Program recreational fishing activities on DOD lands, the Program should

continue to assist the DOD contingent on available Program resources and the assumption that all costs are recovered.

With its unique role both to conserve native fish and to support recreational fishing, the Fisheries Program has had a number of opportunities to help balance recreational fishing and subsistence use with the conservation of native species. In 1996, the directors of National Marine Fisheries Service (NMFS) and FWS established a joint “policy for conserving species listed or proposed for listing under the Endangered Species Act while providing and enhancing recreational fisheries opportunities” (Appendix 4). Since this policy was issued, both agencies have been active in balancing these sometime competing goals. For example, in Alaska at least eight Fisheries Resources and Monitoring Program projects have gathered information to help resolve or reduce conflicts among various user groups, including projects conducted in response to conflicts between subsistence and recreational users in Bristol Bay and on the Yukon Flat.

Rating: Effective.

Recommendations to Increase Effectiveness

10. Prepare and issue a Director’s Order that addresses the FWS/Fisheries Program role in recreational fishing.
11. All Fisheries Program stations (FTC, NFH, FROs, etc.) should be involved in one or more activities involving angler/aquatic education on an annual basis.

8. HABITAT AND RECREATIONAL FISHING ON NATIONAL WILDLIFE REFUGE LANDS

Description of Activity

The National Wildlife Refuge System (NWRS) encompasses some of the Nation’s most important natural settings and resources. The NWRS contains 96 million acres of land on over 540 refuges in 50 States and eight territories. Recreational fishing is listed as one of the priority uses of the NWRS in the Refuge Enhancement Act of 1996. It is permitted on refuges when it does not conflict with the primary purpose(s) for which a particular refuge was established (e.g. endangered species protection or waterfowl management). Some coastal NWRs also provide access across their lands to adjacent tidal waters.

NWRs are special places where management activities are directed at improving the habitat for the range of fish and wildlife species resident or potentially resident on the refuge. The majority of NWRs were established for waterfowl and terrestrial wildlife with aquatic habitats often viewed from a waterfowl management perspective. Select refuges have been established to conserve aquatic habitat, however, and many refuge managers work diligently to improve aquatic habitat and enhance recreational fishing opportunities on their refuges.

Basis for Assessment

To examine this question, the Evaluation Team focused on how effectively the Fisheries Program and the NWRs Program interact to maintain or restore aquatic habitats and work to develop and promote recreational fishing opportunities on NWRs. In assessing this activity, the Team sought data to indicate that: 1) aquatic habitat management on NWRs reflects input from the Fisheries Program; 2) the Program promotes aquatic habitat conservation by proposing lands to be included in the NWRs; and 3) the Program provides input into the Comprehensive Conservation Plans (CCP) of refuges with recreational fishing as a potentially compatible use.

Numerous examples demonstrate that Fisheries Program and NWRs personnel are working collaboratively to enhance aquatic habitat on refuges, as well as developing fishery management plans as facets of refuge CCPs. Program biologists help with numerous activities on NWRs, including population analyses and surveys, fish stocking, and habitat improvement projects. A high level of activity and responsiveness is evident from the data on Program activity in response to 131 requests from refuges. The least responsive region responded to 88 percent of such requests. Only Region 3 reported their Program proposing lands to be included in the NWRs.

Recreational fishing on NWRs requires a balance between protection and responsible use. Presently, 283 of the 545 NWRs allow recreational fishing within their boundaries. In addition, 36 of 37 Wetland Management Districts (WMD) also allow recreational fishing. Over the past five years, an average of four refuges were opened to recreational fishing annually. Individual refuges may close specific areas to fishing during certain periods of the year, based on a need to protect certain habitats and species from disturbances during crucial breeding and other periods.

An emerging focus of the Fisheries Program and NWRs is the development of a joint operating agreement outlining goals and actions that both programs will work jointly to implement over the next five years. Two examples are better integration of aquatic habitat values into the Refuges Land Acquisition Priority System and updating a "Guide to Fishing on National Wildlife Refuges."

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
Aquatic habitat management on NWRs reflects input from FP.	#/% of Comprehensive Conservation Plans (CCPs), for NWRs with aquatic habitats, developed with input from FP.	33 (denominator undetermined)	100% of NWRs with aquatic habitats and/or fishing opportunities.
	# of technical assistance requests from NWR to FP, and % fulfilled.	131 (denominator undetermined)	100% fulfillment.
FP proposes lands to be included in the NWRs for aquatic habitat value.	# of proposals received from FP resulting in additions to NWRs.	9	FP in all Regions (1-6) making proposals to NWRs.
CCPs, for NWR's with fishing as a potentially compatible use, reflect input from FP regarding recreational fishing opportunities.	#/trends of NWRs that promote and manage for recreational fishing opportunities.	269 of 545 (49.5%)	All refuges open to fishing where appropriate.

The Fisheries Program has significant expertise that has proven, and will continue to prove, valuable to NWRS in enhancing aquatic habitat and developing compatible fishing programs on refuge lands.

As a whole, data indicate that the Fisheries Program undertakes important activities on NWRs though its distribution is uneven. For example, some regions appear very active in helping to develop CCPs (e.g., Region 3) while other regions report little activity (e.g., Region 6). The Program appears responsive to requests from refuge staff. The Evaluation Team hopes that the relationship between NWRS and Program will be strengthened as the joint operating agreement becomes institutionalized and the full range of expertise is used.

The Evaluation Team asked for data on the number of proposals from the Fisheries Program for additional lands to the NWRS. Only one region indicated that they had submitted lands of aquatic habitat value for NWRS consideration. With the emergence of the National Fish Habitat Initiative, and such regional initiatives as the Southeast Aquatic Resource Partnership, the Program's role in identifying and proposing such lands to be included in the NWRS will become increasingly important.

Though incomplete, data indicated that Fisheries Program expertise has been sought in the development of 33 CCPs. This ranges from a low of zero in Region 6 to a high of 20 in Region 2. Interpretation of these data is difficult due to the lack of a denominator. The number of requests for technical assistance from NWRS to the Program provides another example of the uneven involvement.

Rating: Partially effective. The Fisheries Program and NWRS appear to work effectively for aquatic resources when they engage each other's experience and expertise. This appears to be the exception, however, thereby reducing the effectiveness of the effort across the entire refuge system.

Recommendations to Increase Effectiveness

12. Work with partners to identify lands of high aquatic value to be included in the NWRS.
13. Complete and implement Fisheries Program/NWRS agreement to fully utilize joint expertise and develop aquatic habitat and recreational fishing opportunities on lands throughout the NWR System.

9. SCIENCE AND TECHNOLOGY

Description of Activity

Until 1992, research was housed within the FWS (formerly Region 8). Region 8's purpose was to address the science and technology needs of the agency. FWS and the Fisheries Program are still in the process of adjusting to the major organizational change that ultimately relocated these functions to the Biological Resources Division in USGS.

Because of the resulting lack of organizational focus and expertise in science and technology within FWS, the Program’s field stations have had to expand their scientific expertise and contacts by negotiating with USGS, and partnering with universities, NGOs, and others.

The science and technology efforts of the Fisheries Program are primarily focused through seven Fish Technology Centers and nine Fish Health Centers (Table 6). These centers provide the Program’s field offices and hatcheries with applied science and research solutions in genetics, cryopreservation, statistical analyses, sampling protocols, culture techniques and technologies, fish feed research, and many other areas.

Table 7. Fish Health and Technology Centers

Abernathy FTC, Washington	Lamar FHC/FTC, Pennsylvania
Bozeman FHC/FTC, Montana	LaCrosse FHC, Wisconsin
Columbia River FHC, Oregon	Mora FTC, New Mexico
Coleman FHC, California	Pinetop FHC, Arizona
Dexter FTC, New Mexico	San Marcos FTC, Texas
Idaho FRO/FHC, Idaho	Warm Springs FHC/FTC, Georgia

The FWS National Science Coordinator works with the USGS to provide additional research needs to the Fisheries Program. The Program has National Coordinators for both the FTCs and FHCs, each housed in the office of the Assistant Director for Fisheries. These individuals provide routine liaison between the centers, and other Program facilities and offices, as well as between the Program and FWS National Science Coordinator. The Program also established a Science Advisory Committee in 2003 to focus on science and technology issues in general, and to interact with FTCs and FHCs on high priority science issues. The Science Advisory Team meets annually, along with the FTCs and FHCs, to discuss science needs and priorities.

The Fisheries Program’s Fisheries Information System (FIS) and Fisheries Operational Needs System (FONS) provide one avenue for the Fisheries Program to identify and rank science needs. For example, an analysis of the 2004 FONS projects pointed to a need for increased genetic analysis capability, which would allow access to quick turnaround genetic information for fisheries management decisions. All regions considered this a high priority. A genetics project was funded in the FY2004 budget, resulting in additional genetic analysis capabilities.

The Fisheries Program actively supports training to enable its personnel to meet the FWS goal of at least 40 hours of training annually for each employee. Program staff are encouraged to take advantage of training opportunities offered by the National Conservation Training Center (NCTC) as well as other governmental and non-governmental offerings. Much of this training is technology and science-based. In addition, employees are encouraged to identify training needs on an annual basis as part of their Employee Performance Planning process. For upper-level biologists, however, keeping abreast of advances in science and technology requires interactions within the larger scientific community and training that is available only outside the agency.

The Fisheries Program is guided by a number of policies in its conduct and application of science and technology. These include the Director's Order on Science Excellence (a mandate for adherence to strict scientific integrity), Comprehensive Management and HAACP plans for Program facilities, and Data Quality Act and QAQC/SOP policies.

Criteria have been developed and are being utilized to perform regular evaluations of the FTCs and FHCs. The stated purpose of these evaluations is "to address the need for Fish Technology Center assessment; ensure the quality, relevance, integration, and productivity of Center activities; maintain quality control of Center products; and ensure that Centers address priority resource needs." Protocols dictate that each center should be evaluated every four years.

Basis for Assessment

In reviewing science and technology, the Evaluation Team identified three evaluation questions:

1. Does the Fisheries Program assess its science needs, and evaluate required staffing and access to outside capacity?
2. How does the Fisheries Program identify, evaluate, obtain, use, and disseminate new technologies and scientific advances?
3. How well does the Fisheries Program stand up against scientific scrutiny?

The Fisheries Program interacts with the National, FTC and FHC coordinators to determine high priority research needs to be submitted to USGS for fulfillment. In FY 2004, FWS/USGS collaborative processes for prioritizing research needs included:

- Future Challenges Workshop – FWS/USGS Science symposium to prioritize research needs that will better prepare both agencies to deal with future resource challenges and identify research needs. Fisheries Program scientists were key participants in this effort.
- Science Challenges Workshop – Formal grant process prioritizing and funding research needs through collaboration with USGS. The National Research Coordinator maintains a database of FWS research needs.
- USGS Strategic Plan – Fisheries Program staff contributed to the USGS strategic plan. FWS met with USGS and provided feedback regarding research needs.

In its FY 2004 budget justification, USGS requested a total of \$26.1 million for its Aquatic and Endangered Resources Program. Of this, data indicate \$13.85 million (53%) was specifically targeted toward needs also identified by the Fisheries Program.

Data show that Fisheries Program personnel avail themselves of training opportunities, and that NCTC has developed a number of courses in state-of-the-art science and technology applications. Attendance at professional meetings and interactions with scientific colleagues is also an important part of continuing professional development.

Fisheries Program staff are actively involved in disseminating the results of their work through peer-reviewed channels (n=512 publications). Evaluation Team requested data to demonstrate how scientific and technologic tools are obtained, developed, implemented, evaluated, and shared with partners, but little basis for providing this information exists within the Program.

The Fisheries Program reports a total of 544 programs and activities collaboratively undertaken with universities and other organizations to promote new technology development, scientific innovation, and cooperative research. For example, Dale Hollow NFH is actively assisting a coalition of conservation groups to recover the Barrens topminnow, a rare native fish found in south-central Tennessee. Cooperative research shaped the reintroduction plan for the topminnow.

The Evaluation Team was interested in determining how the Fisheries Program encourages its employees to develop and use state-of-the-art science and technology. In particular, the Team examined opportunities and incentives for Program employees to acquire and upgrade scientific skills. No clear set of requirements were found, but employees are encouraged to be active members in professional societies, such as the American Fisheries Society (AFS), and flexible work schedules may be offered to pursue advanced degrees. The Arizona FRO awards each employee that publishes in a peer-reviewed journal.

Given the potential for FWS decisions to be challenged on the quality of the underlying science, the Evaluation Team framed a question addressing how well the Fisheries Program products stand up to scientific scrutiny. Information was provided on one case where the FWS was sued on its decision to list the Atlantic salmon in Maine. Both the National Research Council (requested by Congress to review the science) and District Court affirmed the science behind the FWS decision.

Congress appropriated \$3.4 million dollars in FY 2001 to create the Science Support Program administered by Biological Resources Division (BRD) of the USGS. Through the program FWS assembles its priority needs for research under the Endangered Species Act. Scientists within USGS prepare proposals that address those needs, and compete for the funds available under this program. Annually, a panel comprised of members of the FWS and USGS determine which proposals best meet the research needs of the FWS. In FY 2004, \$4.0 million was available.

The Evaluation Team requested information on the number of peer-reviewed articles and external recognition of Fisheries Program work. Data indicated that Program scientists are publishing and being recognized, but do not describe the level of scientific rigor at Program facilities. The Program reported that “many” of its facilities have Comprehensive Management Plans and “all” scientific stations adhere to the Quality Assurance Quality Control (QAQC) policies and Standard Operating Principles (SOP).

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP assesses its science needs and capacities in relationship to FP strategic plan.	Assessment of science needs and capacities in relation to strategic plan.	Does not currently exist.	FIS/FONS tie needs to Strategic Plan (see discussion).
	#/% of science needs being addressed.	51/101 (50%) in recovery plans; 96/206 (47%) in FMPs.	Achieve 75% or better of identified science needs.
FP has a formal process for coordinating with USGS that identifies fisheries research needs and delivers requested results.	USGS budget request reflects FP science priorities.	\$13.85M of approximately \$38M in needs	Highest priority FP science needs are reflected in annual USGS budget request.
	\$ resulting from USGS Science Support funding.	\$1.7 million	Highest priority FP science needs are reflected in annual USGS budget request.
FP employees are trained and provided in-service opportunities.	# of FP employees trained and provided in-service opportunities at NCTC, et. al., in state-of-the-art science and technology applications.	315/ total 830 FTEs received all forms of training.	100% of key scientific staff receives training appropriate to their expertise.
Scientific and technologic tools are obtained, developed, implemented, evaluated, and shared with partners.	# and nature of collaborative activities and programs undertaken with universities, NGO, private sector, and other organizations.	544 (nature of these activities found in narrative)	Number of activities appropriate to fulfill science needs.
	# of peer-reviewed publications and technical presentations.	512/127	50%+ of FP scientific staff publishing peer reviewed journals annually.
FP is implementing and monitoring Quality Assurance Quality Control (QAQC) and Standard Operating Procedures (SOP) policies.	Adherence and degree of compliance, to QAQC/SOP policies by FP facilities and programs.	100%	100%
	Degree of compliance with Data Quality Act requirements.	Reported as fully in compliance.	Fully in compliance.

The Evaluation Team remains concerned over the lack of focus on science and its role in both the Fisheries Program and FWS as a whole. There is no convincing evidence that prioritized resource management needs are consistently linked to the Program's Strategic Plan or coupled with capabilities or needs for science and technology. Rather they appear to be opportunistically pursued where financial resources are available, or might become available. In addition, the Evaluation Team is concerned that the Program is attempting to address its science and technology needs through its own staff, rather than seeking expertise outside the program.

It is obvious to the Evaluation Team that the Fisheries Program and the FWS are still trying to accommodate the major organizational shift that occurred when the research function was removed from the FWS. The Program appears to be taking appropriate advantage of the available opportunities to influence the USGS budget in order to get its science needs addressed. In spite of limited success, FONS identified a minimum of \$24 million (202 projects) in unfunded science needs for FY 2004. The Team found it difficult to determine what the Program's priority needs were and which needs the USGS budget addressed. In addition, the Program has no means of evaluating the results of work that goes undone because USGS cannot meet all Fisheries Program fisheries needs in a timely manner.

The science being conducted by the Fisheries Program appears to be directed at the highest priority needs and, from the evidence presented, the science appears to be of high quality. The scientific community seems to be in accord with this statement as evidenced

by the large number of the Program's articles that are peer reviewed and published in the scientific literature.

There appear to be a reasonable number of training opportunities available to Fisheries Program staff to hone science and technology skills, but the Evaluation Team found the need for a logical process to make sure the right employees are receiving the appropriate training in a timely fashion. This concern extends to the apparent lack of assessment of staff and partner capabilities, coupled with the unsystematic training of personnel, which can lead to the scientific rigor exhibited in the Maine Atlantic salmon case becoming the exception rather than the rule. The primary way that researchers and scientists stay up to date is through attendance at professional meetings, conferences, and the resulting interactions with professional colleagues at universities, etc. To attend professional meetings such as AFS annual conferences, however, staff need to be nominated and receive regional office approval. This proves both difficult to budget and receive approval. Travel to these meetings is tightly controlled at present, and in a time of increasing fiscal constraint is likely to become increasingly difficult.

While many Program projects result in a peer-reviewed publication or gray literature report, dissemination of results is not required as policy. FTCs and others do publish "technical information leaflets" that describe the results of their work, but many projects go unreported. There was general agreement that a final report outlining what was learned should be required for all projects, with these learnings shared with the greater fisheries community.

The Evaluation Team concluded that the Fisheries Program is highly effective at conducting important science and contributing to sum total knowledge of fisheries science. Program scientists at FTCs and FHCs are recognized as world leaders in areas of fish culture, genetics, and fish health. Science at the FTCs and FHCs is carefully planned and directed. The Program, however, is only partially effective at describing overall scientific needs and assessing who could best do the work (including outside expertise). Lastly, the Program appears to recognize the ongoing need to have its priorities adopting and championed by USGS. Recent efforts, such as the Future Challenges Project and Science Support Program, are moving in the right direction.

Rating: Partially Effective. Highly effective at conducting research. Partially effective at sharing learnings from project work, and partially effective in working with USGS.

Recommendations to Increase Effectiveness

14. Develop a system for prioritizing resource management needs linked to the Fisheries Program Strategic Plan and coupled with associated capabilities or needs for science and technology.

15. Assure that all scientific investigations, whether successful or not, have a final report or publication.

16. Since the Fisheries Program is increasingly dependent on USGS to meet its science and technology needs, the Program must develop a sharper tool to track its requests to USGS and the level of project support received.

10. COOPERATION WITH NATIVE AMERICANS

Description of Activity

By virtue of the special relationship between the United States Government and Native American governments, the Department of the Interior serves as trustee of the assets and resources that the United States holds in trust for tribal governments and their members (e.g. Reservations and ceded territory fishing and hunting rights). The identification and quantification of these assets and the associated responsibilities is a difficult and evolving process.

The relationship between the Tribes and FWS is defined by a specific set of legal and management requirements. For example, the FWS's interaction with Alaska Natives is largely directed by the Alaska Native Claims Settlement Act and the Alaska National Interest Lands Conservation Act. In the lower 48, the FWS's interaction with Native Americans is guided principally by reserved rights doctrines, Executive Orders, judicial mandates and specific treaties between the Federal Government and individual Tribes (see Authorities, Question 1).

Tribal lands contain some of the most important fish and wildlife habitats in the Nation (more than 55 million acres), and cooperation with Tribes is vital to conserve, restore and recover many species. For example, the long-term efforts by the White Mountain Apache Tribe and Fisheries Program personnel may soon result in the delisting of Apache and Gila trout: the first fish species recovered from the Endangered Species List.

The Fisheries Program has longstanding relationships and responsibilities which are outlined by the FWS in its Native American Policy (Appendix 5). The policy articulates principles to guide the FWS's government-to-government relationship with Tribes in the conservation of fish and wildlife resources.

Like other federal agencies, the Fisheries Program faces what is termed a "dual mandate" dilemma when it comes to Tribes. That is, the Program must implement specific laws and mandates from Congress. Simultaneously, the Program must fulfill treaty obligations and trust responsibilities to American Indian Tribes that, in some instances, are equally specific, but in other instances are relatively less defined.

The challenge for the Fisheries Program is to recognize and accommodate tribal rights and to support tribal self-governance and self-determination without abdicating federal management and stewardship responsibilities or subordinating its responsibilities to other stakeholders. This challenge is compounded by the fact that many laws governing the Program do not specifically reference tribal rights or the trust responsibility. Similarly, most Program-related laws often do not provide funding that is dedicated to meeting its responsibilities to Tribes.

The Fisheries Program's ability to meet these responsibilities, prioritize needs, and conduct a wide spectrum of activities that affect Tribes is a function of both the Program's own infrastructure and staff, as well as tribal infrastructure and staff. It is important for the Program to have in place internal mechanisms and policies that enable its personnel to understand and carry out the FWS's responsibilities to Tribes, as well as to understand the tribal governments and the communities involved.

At the same time, the status of tribal natural resource management programs creates opportunities for and obstacles to the Fisheries Program meeting its tribal responsibilities. Where Tribes have more developed programs and employ full-time fish and game staffs, the Fisheries Program's relationship is more likely to be that of a partner addressing issues of mutual concern, from recovery of native species to enhancement of recreational fisheries where there is a comparatively larger role for the Tribe itself. In other cases, where a Tribe's fisheries capacity is still developing, the Program's relationship more likely involves technical assistance, tasks, cooperatively building professional staff and developing the foundations of a professional tribal fisheries management program.

Basis for Assessment

In assessing the FWS's capabilities and performance, the Evaluation Team framed two questions:

1. How does the Fisheries Program incorporate an understanding of Tribal communities and their fishery resource needs in implementing programs?
2. How does the Fisheries Program prioritize and support conservation actions, fish production, technical assistance, and increased capacity for Tribes?

The Fisheries Program interacts with more than 200 Tribes across the United States (Appendix 6). Each Tribe represents a unique set of fisheries-related responsibilities and interests. The Program undertakes a broad range of activities in supporting Tribal interests. The Evaluation Team was particularly interested in the determined the level of satisfaction tribal partners have with Program activities as a result of increased emphasis on collaboration and communications.

All FWS regions and the WO have designated Native American Liaisons that incorporate Fisheries Program interests. The position descriptions for these posts may or may not require experience and training in Tribal history, culture, and responsibilities. Many Program positions require working with Tribes, but actual experience is largely the result of on-the-job learning rather than formal training.

The Fisheries Program acknowledges evidence of a process for consulting with specific Tribes to discuss program decisions and actions while recognizing that more could be done. For example in Region 2, the Alchesay-Williams Creek NFH makes at least 30 annual contacts with various Tribes throughout the Southwest Region to coordinate stocking events while Region 6 reports undertaking 606 consultations including providing technical assistance to the Turtle Mountain Band of Chippewa Indians in North Dakota to enhance recreational fishing opportunities, improve management capability, and develop a management plan. The Alaska Region appears to be conscientious in

managing the subsistence function with substantial funding dedicated to this function. This region has a fundamentally different job than the other FWS Regions as a result of the Alaska National Interest Lands Conservation Act and Alaska Native Claims Settlement Act.

The data confirmed that agreement exists between numerous Tribes and the Fisheries Program on fisheries resource needs and priorities; but these data are largely silent on where such agreement does not exist. A review of the FY 2004 FIS Accomplishment Module indicates that a total of 669 Tribal technical assistance requests were fulfilled, including those in support of recreational fishing (see Question 7). These requests resulted in stocking over 1.8 million fish into Tribal waters, 308 aquatic assessments on 261 aquatic populations, and significant habitat restoration activity. The Program does not presently have a mechanism for tracking and reporting the total number of Tribal technical assistance requests that have been received and agreed to, therefore it is not possible to determine what Tribal requests were not accomplished.

Assisting the Tribes with identifying and applying for fisheries-related grants is another important aspect of the Fisheries Program's support of Tribal work. This is evidenced by 67 grants, totaling nearly \$5.6 million, awarded in FY 2004.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
Improved satisfaction of Tribes concerning FP interactions with Tribes.	Direct assessment of Tribal satisfaction with FP understanding of Tribal communities and their fishery resource needs.	No evidence of such an assessment.	Develop and utilize assessment.
FP staff are trained in history, culture and responsibilities of Tribes.	#/% of all FP staff trained in history, culture and responsibilities of Tribes.	45 (0-11% by region)	100% of management personnel (down to Project Leaders) trained.
	FP employees recognized for promoting cooperation with Tribes.	Evidence that FP personnel are being recognized.	FP actively promotes recognition of its personnel.
Agreement between individual Tribes and FP on fisheries resource needs and priorities.	# of Tribal technical assistance requests and % fulfilled, based upon FMPs (including RPs),	669 fulfilled (total requests not tracked).	100% requests fulfilled on mutually-agreed upon activities.
	Fish and Egg requests met per mutual agreement.	17.25 million fish and 154 million eggs.	100% requests fulfilled on mutually-agreed upon activities.
Fisheries-related training sessions are promoted, developed, coordinated, or implemented for Tribal personnel.	# of training sessions (and # of tribal staff/members attending) for Tribal personnel in courses developed, coordinated or implemented.	27+ programs attended by 216+ personnel.	# of programs and attendance increased as appropriate.
FP is helping Tribes apply and receive Tribal Program Grants and other support.	# of grants and \$ received by Tribes as result of FP activities.	67 grants totaling \$5.6M (fish and wildlife grants).	Increased percentage of grant success. Documentation of continued success.

As outlined in the FWS Native American Policy, the Federal government has a special relationship with and responsibility to Native American governments. Thus, the Program operates differently with respect to Tribes than it does with other stakeholders. The Team evaluated how well the Program incorporates an understanding of Tribes and their needs into its operations, as well as how the Program makes decisions among its Tribe-related activities. Overall, the Team found the Program to be committed to fulfilling its obligations toward Tribes. Given limited resources and multiple mandates, the Program

does well to balance its obligations toward Tribes and its obligations toward other stakeholders. The Team determined that consultations with Tribes are mainly *ad hoc* in nature and not the result of a systematic process. However, where interactions are ongoing, significant progress is being made in both meeting fishery needs and in supporting the development of tribal fishery management programs.

The Fisheries Program is actively engaged in providing fish products and technical assistance to Tribes, fulfilling 669 requests for technical assistance. The ability to quantify the overall impact and performance of these activities is hampered, however, by the lack of targets against which to compare activities, by the inability to track Tribal requests not accomplished, and by the lack of direct feedback on Program activities from Tribes. The Evaluation Team's research suggests that the Program is working to address these deficiencies.

Indications of need for improved training and hiring criteria are implicit from the data. For example, position descriptions for Fisheries Program personnel who work with Tribes in majority of regions are standardized, but do not require prior Tribal-related training and experience. There is no formal training for Program staff on Tribal history, culture, and responsibilities although the Program does employ Native Americans who are well versed in this area. By contrast, all supervisors in Region 7 (Alaska) are required to take ANILCA and ANSCA training and the Office of Subsistence Management staff has been trained in history, culture, and responsibilities of Alaska Natives and Tribes. Many other field offices do have personnel with specialized Tribal-related training. A similar set of training expectations should apply to program managers in Regions 1-6.

It appears from the data that consultations with Tribes are not consistently the result of a dedicated process. This implies the likelihood that there are Tribes with fisheries interests that did not receive regular consultations. To the Program's credit, where it communicates with Tribes and arrives at mutually agreed upon goals, the result is highly effective. The Program needs to ensure all Tribal-Program relations on fisheries reach this level of collaboration, consistent with the Service's Native American Policy that states, "to keep Native American governments involved in such matters from initiation to completion of related Service activities."

Rating: Effective. Continued effectiveness will require a more formal and regular consultation process with Tribes from initiation to completion of Program activities (including a systematic method for assessing the Tribes' view of the Program's effectiveness), as well as a demonstrated ability to represent Tribal fisheries interests to other state and federal agencies. We also note that our rating must be tempered by the lack of a rating from the Tribes themselves.

Recommendations to Increase Effectiveness

17. Develop regional assessment capability to determine Tribal satisfaction with the Fisheries Program consultation, development of priorities, and activities conducted.

18. Develop in-service training directed at management personnel (down to Project Leaders) on Tribal history and culture.

11. MITIGATION FISHERIES

Description of Activity

When many Federal locks and dams were constructed, Congress and the Federal government committed to mitigate impacts on recreational, commercial, and Tribal fisheries. Over the years, a growing hodge-podge of project-specific authorities has led to a jumble of mechanisms and responsibilities for mitigating lost fisheries. The Fisheries Program is responsible for carrying out many of these mitigation fishery programs, principally through a system of 32 National Fish Hatcheries that are solely or partially dedicated to the production of fish for mitigation stockings (Table 8). While it is clear that the Federal water project development agency and/or Federal project beneficiaries are responsible for funding associated mitigation costs, recovering actual costs from these parties has proven problematic for the Program.

The fisheries community and the general public sometimes disagree on the appropriate way to mitigate fisheries and habitat impacted by Federal water development projects. For example, hatchery-reared rainbow trout are stocked as mitigation for dam construction on warm-water rivers where rainbow trout were never native. Some users welcome the sport fish while others decry the loss of native species. The FWS and the Fisheries Program have been placed in the position of providing “fish as mitigation” on behalf of the Corps of Engineers, Bureau of Reclamation, and other federal government entities, often with inadequate funding from the responsible agency. This lack of funding has impaired FWS’s ability to deliver other needed aquatic resource programs. The following list summarizes reimbursed and non-reimbursed mitigation costs.

Basis for Assessment

In assessing the FWS’s capabilities and performance, the Evaluation Team framed three questions:

1. Where a Federal mitigation responsibility exists, is the Fisheries Program role clearly understood?
2. To what extent does the Fisheries Program supply fish and services that meet the mitigation requirements of the water development project?
3. To what extent does the Fisheries Program recover costs for mitigation from responsible Federal agencies?

As a result of Evaluation Team inquiries, the Fisheries Program assembled an exceptionally detailed report of the extent and names of projects, legislative history, and their costs by region (Appendix 7).

The Fisheries Program is presently reimbursed only for approximately 64 percent of the mitigation costs it incurs on behalf of Federal water development agencies. Agreement on mitigation needs, costs, and reimbursement has been reached with some agencies like

Table 8. National Fish Hatcheries with Mitigation Responsibilities

() = Source of Mitigation

Carson NFH, WA (Bonneville Dam, Columbia River)
Chattahoochee Forest NFH, GA (Chattahoochee & Savannah River dams)
Coleman NFH, CA (Keswick/Shasta Dam, Sacramento River)
Creston NFH, MT* (Hungry Horse Dam, Flathead River)
Dale Hollow NFH, TN* (Tennessee River dams, etc.)
Dworshak NFH, ID (Lower Snake River dams)
Eagle Creek NFH, OR (Bonneville Dam, Columbia River)
Ennis NFH, MT* (Missouri & Henry Fork Snake River dams)
Entiat NFH, WA (Grand Coulee Dam, Columbia River)
Garrison Dam NFH, ND* (Missouri River system dams)
Gavins Point NFH, SD* (Missouri River system dams)
Greers Ferry NFH, AR (White & Little Red River dams, etc.)
Hagerman NFH, ID (Lower Snake River dams)
Hotchkiss NFH, CO* (Colorado River system dams)
Jackson NFH, WY* (Shoshone and Snake River dams)
Jones Hole NFH, UT* (Colorado River system dams)
Lahontan NFH, NV* (Truckee River dams)
Leavenworth NFH, WA (Grand Coulee Dam, Columbia River)
Little White Salmon NFH, WA (Columbia River dams)
Livingston Stone NFH, CA (Keswick/Shasta Dam, Sacramento River)
Mammoth Spring NFH, AR* (White & Little Red River dams, etc.)
Neosho NFH, MO* (Table Rock Dam, White River system)
Norfolk NFH, AR* (Arkansas & White River dams, etc.)
Spring Creek NFH, WA (Bonneville & John Day dams, Columbia River)
Tehama-Colusa Fish Facility, CA** (Red Bluff diversion, Sacramento River)
Tishomingo NFH, OK* (Arkansas & Yazoo River dams)
Valley City NFH, ND* (Missouri River system dams)
Willard NFH, WA (Bonneville Dam, Columbia River)
Winthrop NFH, WA (Grand Coulee Dam, Columbia River)
Wolf Creek NFH, KY* (Cumberland & Kentucky River dams, etc.)

* Hatchery is also involved in activities other than mitigating Federal water resource development projects.

** Station is presently mothballed.

Bonneville Power Authority, but reimbursement from other agencies is incomplete. FWS is in the process of negotiating with the Bureau of Reclamation. Negotiations with other agencies are awaiting the conclusion of these negotiations.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP is supplying mitigation as required in Federal water development project plans (program understands its responsibilities).	#/% of mitigation plans for Federal water development projects where FP is supplying required mitigation.	Data do not allow determination of nature of responsibility.	100%
FP is fully meeting its responsibility to supply fish where required.	#/% of mitigation stocking activities that are covered by plans.	Absence of data demonstrating existence and use of such plans does not allow Team to make an adequate determination.	100% plans in place. 100% of activities conducted are in alignment with plans.
	#/% of fish & eggs requests fulfilled (Hatchery Production Summaries/Fish & Egg Distribution Summary).	63.245 million fish (3.4 million pounds) distributed. No information on what was requested.	100% of agreed-upon fish and egg requests fulfilled.
FP and responsible agencies agree on mitigation needs and costs.	#/% of water development projects where responsible Federal agencies agree on mitigation needs and costs.	2 of 6 agencies (BPA and partial BR).	Complete negotiation with BR, and initiate with BIA, CE, NMFS, and TVA by FY 2008.
Responsible Federal agency fully reimburses FWS for mitigation services.	#/%/\$ of water development projects where responsible Federal agency fully reimburses FWS for mitigation services.	64% of total project costs. 1 of 6 principal agencies.	80% by FY 2008. 100% by FY 2010.
	# & \$ value of priority activities on which FP is unable to work because of lack of cost-recovery (lost opportunity cost).	\$14.2 million	\$0 (this measure ceases to be germane).

The role of the FWS is to provide fish and associated technical support to mitigate adverse effects from Federally funded water projects as directed by statutory authority or reimbursed by project managers and sponsors. Data clearly show that FWS has extensive responsibilities to conduct mitigation. However, additional analysis is needed to determine where FWS is indicated as the primary mitigator (*de jure*) versus projects where the Federal government's responsibility has been assumed over time by the FWS (*de facto*). The Evaluation Team suspects that there is a relationship between nature of mitigation authority and the resulting cost recovery.

The Evaluation Team requested data to determine whether the Fisheries Program was fully meeting its responsibility to supply fish where required. FWS policy dictates that no fish are to be stocked out of the NFHS for mitigation without a plan developed in cooperation with the appropriate statutory agencies, e.g., States and Tribes. While it is clear that most facilities may operate under such plans, the Team noted that in many cases the plan consists of a memorandum or other informal agreement, rather than a formal plan. In addition, the Team requested information on requested levels of mitigation services and actual production in FY 2004. Production details are outlined in Appendix 7 while information on targeted levels was not provided.

FWS is not reimbursed for the full costs of its mitigation responsibilities (summarized in Table 9). According to data provided, project costs of \$39.24 million are needed to fully fund its mitigation responsibilities, yet only \$25 million, or 64 percent, is reimbursed by the responsible agencies (BR, BIA, BPA, NMFS, CE, TVA etc.). Of these agencies, only BPA is reimbursing 100 percent of project costs. The Fisheries Program's assumption of this \$14 million shortfall amounts to approximately 10 percent of its overall fisheries

budget and comes at the expense of other Program responsibilities and activities. For the sake of comparison, Appendix 9 provides a list of the 174 FONS projects, totaling \$14.2 million, that were next in line for funding had funds been available due to full cost recovery for mitigation expenses incurred.

Table 9. Reimbursed and Non-Reimbursed Mitigation Costs.

Agency	Total Project Costs	Reimbursed Costs	% Reimbursed	Non-Reimbursed Costs
Corps of Engineers (CE)	\$9,753,413	\$2,908,480	30%	\$6,844,933
Bureau of Reclamation (BR)	\$8,964,450	\$5,278,586	59%	\$3,685,864
<i>Minus CRSP&CUP*</i>	\$7,195,969	\$5,278,586	73%	\$1,917,383
Tennessee Valley Authority (TVA)	\$1,040,841	0	0%	\$1,040,841
Bonneville Power Authority (BPA)	\$13,415,645	\$13,375,878	100%	\$39,767
TOTALS less NMFS and BIA**	\$33,174,349	\$21,562,944	65%	\$11,611,405
National Marine Fisheries Service (NMFS)	\$5,148,083	\$3,449,216	67%	\$1,698,867
Bureau of Indian Affairs (BIA)	\$914,195	0	0%	\$914,195
GRAND TOTAL	\$39,236,627	\$25,012,160	64%	\$14,224,467

* Funding associated with the Colorado River Storage Project Act (CRSP) and the Colorado Utah Project Act (CUP) were taken off the table for negotiations with BOR due to potential legislative impediments to cost recovery and administrative provisions in CUP.

**Mitchell Act mitigation activities administered by the National Marine Fisheries Services, and those associated with the Bureau of Indian Affairs are not associated with specific water development projects and will be addressed separately from the water development agencies.

During one regional office field verification visit, the Team asked about the costs identified as necessary to reimburse one hatchery for its mitigation responsibilities. While agreeing that reimbursement is necessary, the region was not aware of the figure presented by the Washington Office nor, when shown the figure in the official list, did it agree with the costs identified. This is disturbing; the credibility of the Program is put at risk when differences of this nature occur. There must be a single set of figures, agreed upon, or at least understood by both the regions and Washington in order for the Program to have any chance of recovering the full costs of its mitigation activities.

The Evaluation Team recognizes that mitigation has historically been focused on providing a replacement fishery. Given advances in science and changes in societal values, the array of mitigation activities needs to be modernized to include such options as adjusting dam's Operating Criteria and Procedures to better mimic natural flows, examining species stocked, creation of suitable habitat for native fish, etc. While the Team is aware that the Fisheries Program has a limited ability to unilaterally affect these changes, the Program can play an important role in pushing these considerations as future dam operations are considered.

Rating: Partially effective. The Fisheries Program is effective at turning out mitigation products, partially effective in pursuing reimbursement from responsible parties, and partially effective in demonstrating that all mitigation is based on FMP or other agreed-upon plans.

Recommendations to Increase Effectiveness

19. Mitigation plans must be developed for each mitigation activity conducted by the Fisheries Program. Each plan should contain identifiable annual mitigation goals, annual budgets and cost reimbursement requirements, and provide for regular review and updating in concert with stakeholders and partners. Plans need to be maintained at the field station and regional office.
20. Reconcile any and all differences, and develop a single set of numbers, between Washington and Region on dollars needed to reimburse actual mitigation expenses.
21. FWS/Fisheries Program will complete negotiations to receive cost recovery from all responsible parties. Program should seek to cover a suitable share of the infrastructure needs of the hatcheries, not just cost of annual operations.

12. AQUATIC NUISANCE SPECIES

Description of Activity

Aquatic nuisance species (ANS) are non-native plants and animals that threaten the diversity and abundance of native aquatic species; the ecological stability of infested waters; and/or the commercial, agricultural, and recreational activities dependent on these waters. Scientists believe non-native introductions are second only to habitat alteration as a factor in the decline of native aquatic species in North America. In addition, ANS-related costs are estimated to exceed \$100 billion annually. New introductions and the spread of already established ANS have the potential to add to these ecological impacts and costs.

Under the provisions of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 and the National Invasive Species Act of 1996 (as amended), FWS's primary role focuses on coordinating and integrating activities to prevent and control invasive aquatic species. The Fisheries Program conducts its national and regional coordination role by providing leadership and support to the Aquatic Nuisance Species Task Force, its regional panels, committees and working groups. The ANS Task Force is co-chaired by the FWS Director and the Under Secretary of Commerce for Oceans and Atmosphere. The membership is comprised of nine Federal agencies and 11 ex-officio members representing other governmental entities. The Task Force's mission is to develop and implement a program to prevent introduction and dispersal of aquatic nuisance species; to monitor, control, and study such species; and to educate and inform the general public and program stakeholders about the prevention and control of these species.

ANS activities are conducted on both a national and regional level. At the national level, a national ANS coordinator oversees the program and all FWS regions have ANS coordinators. At the field level, operational activities are conducted by field personnel in close coordination with State, Tribal and other partners.

Basis for Assessment

In assessing the FWS's capabilities and performance, the Evaluation Team framed two questions:

1. How effectively is FWS/Fisheries Program accomplishing its national and regional coordination role in the prevention, management and control of ANS?
2. How effectively is the Fisheries Program working to reduce the ecological impacts of ANS?

Regional ANS Coordinators facilitate information exchange and coordinate project implementation among all intra-agency and external partners working on ANS issues. Some examples of activities conducted as a result of the Fisheries Program coordination of the ANS Task Force, Regional Panels, and multi-stakeholder control teams include:

- Work with the U.S. Coast Guard and others on ballast water issues.
- Provide funding to purchase herbicides to eradicate new infestations of giant salvinia in Georgia (GA DNR provided in-kind match of staff and equipment).
- Facilitate and fund education and technical assistance projects under the 100th Meridian Initiative to prevent westward spread of zebra mussels, particularly targeting outreach to boaters and other visitors.

Current Program priorities for ANS include: preventing introductions and spread, detecting and monitoring, control actions, application of “rapid response” methodology to new introductions, and research and education. Species-specific projects are reviewed annually to determine the most effective use of funds. Allocations are adjusted based on new aquatic species invasions (i.e., New Zealand mud snail, snakehead fishes) and based on the development and implementation of species management plans (i.e., *Caulerpa taxifolia*, Asian carp).

Since the ANS program receives its funding via a budget sub-activity containing several Program elements, it is difficult to determine the amount of funding available exclusively for ANS projects. In FY 2007, the Fisheries Program is proposing to re-structure the budget to make the ANS Program a new distinct sub-activity. Under the revised structure, the ANS Program will be better able to track allocations and increase accountability.

Evaluation

Indicator	Information Request	Baseline (FY 2004)	Target
FP provides leadership to the ANS Task Force, and assistance to Regional Panels and multi-stakeholder control teams.	# of assistance/coordination activities conducted as a result of FP coordination of the ANS Task Force and associated entities.	231	Continued demonstration of coordination and leadership on ANS issues.
FP provides assistance and coordination for activities directed by regional step-down plans.	# of coordination activities conducted as directed by regional step-down plans.	479	Continued demonstration tracked against overall # of activities in FP ANS regional work plan(s).

FP activities, for ANS species identified as priorities for FP, results in reduced scope and severity.	# of activities conducted by FP to manage and control ANS in cooperation with States and other partners. <input type="checkbox"/> # of ANS species evaluations undertaken as result of petitions received, and # of proactive evaluations undertaken without any petition <input type="checkbox"/> #/% of risk assessments conducted	40 30 19	Continued demonstration tracked against overall # of activities in FP ANS annual work plan(s).
FP activities address priority pathways.	# of activities (e.g., ballast water) conducted to address priority pathways.	133	Continued demonstration.
	#/% of Hazard Analysis and Critical Control Point (HACCP) plans implemented.	114	Full implementation at all FP facilities (NFHS, FTC, FHC).
FP national and regional public awareness campaigns are effective tools for addressing ANS.	#/impact of national and regional public awareness campaigns established for high priority ANS.	75	Continued evidence of leadership in outreach. Completion of 1+ evaluation of effectiveness.

ANS is a significant issue on a national and international level. While FWS has a direct interest and responsibility to control and manage ANS, the only efficient path is the full involvement of all stakeholders and partners in this campaign. The Fisheries Program’s own efforts, given resource realities, must be thoughtful and targeted. Additionally, as observed by Fisheries Program ANS staff, even informed citizens become discouraged by the ANS issue because they believe the issue is too complex for their actions to matter.

As co-chair of the ANS Task Force, and with the presence of national and regional coordinators, the FWS is in a strong position to coordinate ongoing ANS activities with its Federal, State, Tribal and others. The Evaluation Team found limited evidence that this leadership opportunity is being fully utilized to effectively prioritize internal and external efforts. The Fisheries Program has conducted a large number of activities directed at ANS, but analysis of their impact is just beginning.

While the Evaluation Team is impressed with the overall number and scope of Fisheries Program activities, it is unclear whether such activities are directed opportunistically or as a result of strategic oversight. There is evidence of efforts to prioritize ANS species at the regional level where the Program is working with partners to assess ANS threats, manage existing ANS populations, and to prevent new infestations (Table 10). Similarly, there is ample anecdotal evidence of these activities succeeding on a local level. For example, Region 3 reported reduced range expansion of the ruffe, an invasive fish species first established in the Great Lakes. Work is also underway to identify priority pathways (how invasive species become established and spread) and to direct science, technology, and management activities to address them. Two specific illustrations are: 1) ballast water technology developed to support the shipping industry and 2) HACCP plans developed for all National Fish Hatcheries directed at preventing the unintentional introduction of ANS.

The Fisheries Program is actively developing national public awareness campaigns targeting priority ANS pathways. For example, *Stop Aquatic Hitchhikers!* is aimed at recreational boaters while *Habitattitude* is directed towards aquarium hobbyists. The

Program is working with NOAA and the Maritime Administration to develop a new campaign directed at ship transports to promote utilizing new techniques to take on ballast water while in transit. These programs appear to be on-target, strategically focused on important species/pathways, and leveraging significant buy-in from partners, as well. The Program intends to formally evaluate these programs working with pilot states to generate the feedback and gauge public awareness of the aquatic invasive species issue.

Rating: Effective

Table 10. Priority ANS Species by Region

<p style="text-align: center;"><u>Region 1</u></p> <p>100th Meridian (zebra mussel prevention) Brown tree snake control Caulerpa management and control Chinese mitten crab control and management Detection and monitoring New Zealand mud snail management</p>	<p style="text-align: center;"><u>Region 5</u></p> <p>100th Meridian (zebra mussel prevention) Asian carp monitoring and management Detection and monitoring New York State Canal program Round Goby monitoring Ruffe control and management</p>
<p style="text-align: center;"><u>Region 2</u></p> <p>100th Meridian (zebra mussel prevention) Asian carp management Brown tree snake control Cryptocoryne control Detection and monitoring Giant salvinia management and control New Zealand mud snail management</p>	<p style="text-align: center;"><u>Region 6</u></p> <p>100th Meridian (zebra mussel prevention) Asian carp management Detection and monitoring New Zealand mud snail management</p>
<p style="text-align: center;"><u>Region 3</u></p> <p>100th Meridian (zebra mussel prevention) Asian carp management Ballast water pathways Detection and monitoring Eurasian water milfoil monitoring Round Goby control Ruffe control and management Sea lamprey control</p>	<p style="text-align: center;"><u>Region 7</u></p> <p>100th Meridian (zebra mussel prevention) Atlantic salmon (aquaculture) Ballast water Detection and monitoring New Zealand mud snail management</p>
<p style="text-align: center;"><u>Region 4</u></p> <p>100th Meridian (zebra mussel prevention) Asian carp management Asian swamp eel control Detection and monitoring Giant salvinia</p>	<p style="text-align: center;"><u>Region 9</u></p> <p>Ballast water demonstration Ecological surveys Information systems Rapid response Public Awareness campaigns Snakehead management plan</p>

Recommendations to Increase Effectiveness

22. Develop improved method for prioritization of risk assessment results (HACCP), and integrate these into ANS funding requests.
23. Develop a case study of sea lamprey management for training of FP personnel.

Sea Lamprey Management in the Great Lakes

The integrated management of sea lampreys in the Great Lakes provides a valuable model for management of other ANS control challenges. The international effort to control sea lamprey facilitated restoration of lake trout and the development of salmonid fisheries in the Great Lakes. Overall, the control strategy implemented by the Great Lakes Fishery Commission (GLFC) upon recommendations of the Sea Lamprey Integration Committee and the larger fisheries community emerges as an innovative mix of planning, monitoring, risk assessment and innovation (i.e., development of new control measures, use of “economic injury approach”).

Sea Lamprey were first reported in Great Lakes in the early 1900s. Their impact to fisheries, however, was not problematic until water quality and habitat improvements began to improve fisheries. Efforts began to control lampreys in 1957 on Lake Superior, and spread through the other Great Lakes over the following decades.

Control strategies were developed from analyses of benefits vs. costs of control options and the modeling of cumulative effects on the abundance of parasitic-phase sea lampreys and lake trout. The strategy has integrated short- and long-term control technologies, such as lampricide applications, trapping, spawning barriers, and the release of sterile males. Management agencies have been reducing their reliance on lampricides (TFM and Bayluscide), because of impacts to non-target species, as they develop alternative control techniques.

The lamprey control program, along with the stocking of native fish, introduction of Pacific salmon species, and other related regulations has allowed the socioeconomic and biological recovery of the Lake Michigan and other Great Lakes fisheries. The problem has not been eliminated, however, and sea lamprey populations rebound rapidly in the absence of continued control efforts.

Conclusion and Acknowledgements

Viewed collectively, six messages arise consistently from assessing the 12 elements of the Fisheries Program:

1. Where agency policy calls for plans, have plans.
2. Take strategic approach—set priorities and follow them.
3. Monitor and Evaluate program activities on an ongoing basis.
4. Develop consistent data and definitions (nomenclature and species list, denominator, mitigation expenses).
5. Undertake a consistent approach to stakeholder/partner involvement, and communications.
6. Develop one set of evaluation metrics (combine PART, GPRA, Strategic Plan, etc.) and be accountable to them.

As far as the Team is aware, the structure and conduct of this PART evaluation are unique in the natural resources arena. As such, this evaluation has opened a new chapter in the evaluation of natural resource programs. Attempts to reduce conservation outcomes to a standard and repeatable set of metrics presented a considerable challenge. This is particularly difficult, as multiple sets of metrics have already been developed (i.e.,

GPRA, the DOI Strategic Plan, etc.). Future reviews will be greatly facilitated by an effort to bring together all of the different sets into a single set that can be used for all of the various purposes. It is also important to develop the fewest indicators possible that provide the greatest insight possible into the performance of the program.

As far as frequency of reviews in the future are concerned, the Evaluation Team recognizes a delicate balance between having reviews frequent enough to provide a regular flow of data on program performance while allowing an appropriate interval between reviews. As many of the indicators used here are biologically based, the Team believes that annual reviews would not give the system a chance to respond. On the other hand, the natural tendency of those within the Program is to seek as long an interval between reviews as possible. The Team believes a good balance to be reviews conducted on a three-year interval.

The Team is appreciative of the opportunity to have participated in this groundbreaking process. A great deal was learned, and to a person, each member felt privileged to get to know the Fisheries Program intimately and become acquainted with its outstanding and professional employees.

The Evaluation Team realizes that its job could not have been completed without the help of many individuals. At the risk of omission, we would like to recognize the following:

Doug Hobbs, Coordinator of the Sport Fishing and Boating Partnership Council, who carried out all of the logistics necessary for the team members to attend meetings and work productively.

Joe Moran, Division of National Fish Hatcheries, who served as the conduit from the Fisheries Program to the Team and good-naturedly responded to our many requests for additional information.

Lyn Grillo, Secretary to the Fisheries Program in Region 3, who supported us in numerous ways for work group meetings.

Mamie Parker, Assistant Director for Fisheries, who stressed the importance of this evaluation to all who were involved, and attended several Team meetings.

Bob Batky, Tom Busiahn, Gerry Jackson, Mike Oetker, Mike Weimer, and other dedicated Fisheries Program staff that assisted us in countless ways as we worked through the evaluation process.