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United States Department of Agriculture

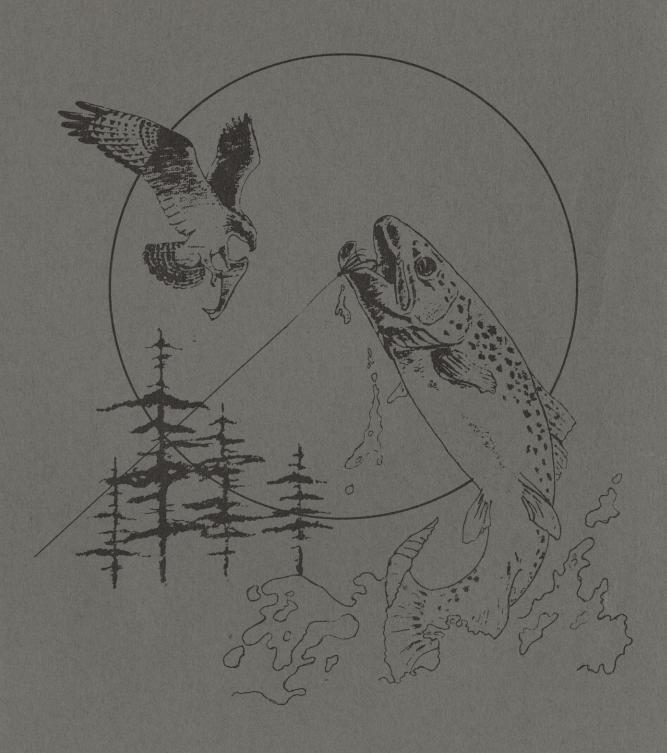
Forest Service

Fisheries Habitat Management

February 23, 1987



Rise To The Future



Rise to the RISE TO TREET BY THE PROPERTY OF T



ish Your National Forests

Forest Service

Reply to: 2660 Date: MAR 10

Subject: Fisheries Management Program

To: Regional Foresters and Station Directors

RELY DUE JUNE 1

In January 1986, we chartered a Fisheries Task Force to develop an action plan to increase emphasis on fisheries in the Forest Service. The enclosed report, action plan, and executive summary are the result of that effort.

These documents display the goals for an aggressive program to maintain and enhance fishery resources in National Forests and National Grasslands. Policy and direction are pulled together to focus the program and communicate internally and externally the responsibilities and roles of Forest Service personnel. Your support in implementing this program on all management units is a critical part of balanced resource management.

We would like to see a draft of your Regional Fisheries Action Plan by June 1. We will be reviewing Forest Service progress in implementing the action items beginning in FY 1988. Regional reviews should also examine progress in implementing action items at the Forest and District level.

Integration of research into this effort to improve the Forest Service fisheries program is also needed. We are assigning Ron Lindmark, Bob Nelson, and Mike Barton this responsibility, with Ron leading the task. The target for completion is July 1, 1987.

This effort has involved many people, both inside and outside of the Forest Service. All made significant contributions. We are grateful for this broad participation and confident that the result will be dramatically improved fisheries on the National Forests.

A brochure describing our fisheries program is being prepared with a June completion date. The theme for the new Forest Service fisheries program is: "Rise to the Future - Fish Your National Forests."

F. DALE ROBERTSON

7. Dale Cabertin

Chief

Enclosure

RISE TO THE FUTURE

The Fisheries Program of the USDA Forest Service March 16,1987

Preface

The waters in National Forests and National Grasslands provide Americans with millions of days and millions of dollars worth of sport and commercial fishing--vital resources for our Nation's economies and lifestyles. Sport fishing is the second most popular outdoor recreation activity in America. And fishing demand is expected to nearly double over the next five decades.

The Forest Service, through multiple-use conservation, protects and provides for wise uses of all natural resources including fish and fish habitats. These policies and goals describe a positive fisheries program. With our partners in the States, Federal Agencies, Tribal Governments, user groups, and publics we will protect, restore, and improve fishing on the National Forest System.

F. DALE ROBERTSON

Chief

FISHERIES ON THE NATIONAL FOREST SYSTEM

The 191 million acres of National Forest System lands in 43 states contain about 128,000 miles of streams and rivers; 2.2 million acres of ponds, lakes, and reservoirs; and 16,500 miles of coast and shorelines. They provide a tremendous annual harvest of fish for sport, commerce, and subsistence. In addition to hundreds of nongame species, game fish in the National Forests include salmon, trout, catfish, pike, muskellunge, bass, walleye, and sunfish.

Fish production in the National Forests is substantial. For example, in California, Oregon, Idaho, and Washington, over 50 percent of the spawning and rearing habitats for salmon and steelhead trout are found in National Forests, on about 15,000 miles of streams. In Alaska, approximately 27 percent of the freshwater habitat for salmon and steelhead is in the National Forests, on about 30,000 miles of streams.

Sport fishing is the second most popular nation-wide outdoor recreation activity in America. Over 53 million anglers engage in some type of sport fishing annually. In 1980 they spent over 850 million days and over \$17.3 billion in pursuing their sport. Demand is expected to increase 90 percent by the year 2030.

As access to private land declines, particularly near urban centers, the National Forests will provide one of the best opportunities for increased public angling. This is especially true for cold and warm water fishing in the Southwest, Rockies, Northeast, Midwest, and South. Current fishing use throughout the National Forest System is estimated at 46.5 million angler days annually with a net economic value of \$1.21 billion. Aquatic habitat protection and restoration in concert with well-designed habitat improvement projects can increase habitat productivity and angling opportunities. For example, an estimated 25 percent increase in angler use from access development and habitat improvement would amount to an additional 11.6 million angler days and \$303 million of fishing related expenditures. Many such opportunities have been identified in Forest Plans and coordinated with State Fish and Wildlife Agencies as part of their Comprehensive Plans developed pursuant to the Sikes Act.

In addition to recreational uses, the annual harvest of salmon and steelhead spawned and reared in National Forests is over 118 million pounds, with a commercial value of \$123 million. The capability exists to increase this harvest through economically sound habitat improvements to 190 million pounds with a direct value of \$229 million. Typical projects include construction of fishways past barriers to fish movement, improvement of spawning and rearing habitat, lake fertilization, and acid neutralization to increase productivity.

FISHERIES POLICIES AND GOALS

The USDA Forest Service's responsibility for managing fish habitats dates back to the Organic Administration Act of 1897. This Act instructed that the resources within Forest Reserves (later called National Forests) be protected for "... securing favorable conditions of water flows and to furnish a continuous supply of timber ...". Since that time, additional legislation, policy, and agency direction have clarified that responsibility. The National Forests are now managed for multiple values and uses. This requires balanced

consideration of all resources during planning and land management. Productive fisheries are dependent on the healthy riparian areas and aquatic ecosystems that result from that balance.

The protection and enhancement of fisheries on National Forests are specifically prescribed by the Multiple-Use Sustained Yield Act of 1960 and the National Forest Management Act of 1976. Habitats are managed to recover threatened or endangered species, maintain viable populations of all native and desired non-native fish, and produce game and commercially valuable fish to meet public demands for use. Specific objectives are developed through Forest planning, with fish as integral parts of overall multiple use goals. These objectives address both legal mandates and opportunities to meet State goals for fish use. Schedules for management activities and monitoring of fish habitat conditions and trends are developed and carried out in partnerships with the States and other cooperators.

THE FISHERIES PROGRAM ACTION PLAN IN BRIEF

The purpose of this action plan is to integrate fish habitat management into the overall multiple use goals on each unit of the National Forest System.

- 1. Enhance program identification by increasing the awareness of fish habitat management throughout the Forest Service and among fishery users and cooperators.
 - * Clearly identify the expected results of the fisheries program at National, Regional, Forest, and District levels.
 - * Ensure that fisheries is included in the staff or job titles of all personnel having fisheries responsibilities.
- 2. Use the best management technologies to increase habitat management efficiency and effectiveness.
 - Develop, implement, and refine cumulative effects analyses to identify both positive and negative effects of land management on fisheries resources.
 - Develop and implement aquatic classifications and inventories to improve predictive models and determine proper investments.
 - Identify, schedule, and budget research needs and studies.

- 3. Communicate fish habitat improvement and access needs and market fishing opportunities.
 - Publish and distribute materials that highlight the fisheries program and fishing opportunities in the National Forests.
 - * Invite the news media and interested groups on "show-me" trips.
 - Hold briefings to explain fisheries opportunities, needs, and accomplishments.
- 4. Strengthen partnerships with States, Federal Agencies, Tribal Governments, conservation groups, and publics to share in fisheries management.
 - * Review and update Memoranda of Understanding with States to improve fisheries management partnerships.
 - * Develop cooperative agreements with other Agencies, Tribal Governments, conservation groups, and interested publics to strengthen partnerships and improve fishing.
 - * Encourage participation of volunteers in fish habitat improvement projects.
- 5. Use valid economic techniques to determine fishery values, supplies, and demands in the decision making process.
 - * Publish a summary of best methods for determining ecomonic values of fisheries resources.
 - * Require inclusion of fisheries values with the values of other resources in decision making.
- 6. Maintain a highly skilled workforce with strong managerial, analytical, and technical skills.
 - * Utilize cooperative education programs, internships, and summer employment for students to provide advanced training for students and prospective employees.
 - * Implement entry-level and mid-career training programs to improve career-long employee efficiency and effectiveness.
 - * Ensure that fisheries biologists are qualified for other resource management jobs.

- 7. Implement a program of activities and develop budgets to accomplish the above goals.
 - Develop a fisheries workload analysis procedure and conduct the analyses to determine staffing needs.
 - * Include fisheries projects in Forest Plan implementation schedules that are used to develop annual budgets.
 - * Use programs such as the Challenge Grant Program to expand fisheries funding opportunities.



United States Department of Agriculture

Forest Service P.O. Box 2417 Washington, D.C. 20013

Rose Narlock (202) 475-3778

FOREST SERVICE STRENGTHENS FISHERIES PROGRAM

Washington, March 16--The U.S. Department of Agriculture's Forest Service today launched a new program to enhance fisheries resources in the National Forests.

"Fisheries management has been a part of National Forest management since 1897," Forest Service Chief F. Dale Robertson said. "What we are doing today is renewing our commitment to this resource by setting direction that incorporates new technology and knowledge about managing fisheries and aquatic habitats."

A Forest Service task force evaluated the National Forest fisheries' resource and developed actions for improvement following recommendations from the American Fisheries Society, Robertson said. The task force report, "Fisheries Habitat Management: A Positive Future," defines the fisheries program and actions to improve fish habitat and associated riparian areas. The report focuses on increased use of state-of-the-art methods to protect, maintain and enhance fish habitat. It also encourages partnerships with other agencies, users, and the public in activating the program.

National Forests contain 128,000 miles of streams, including some of the nation's blue-ribbon trout streams, and 2.2 million acres of lakes and reservoirs, Robertson said. These areas are increasingly important to commercial, recreational, and subsistence users. In addition, for threatened and endangered species, or species with critically low population levels, management techniques must be implemented to assure the continued viability of each species, he said.

Important fish species on National Forest lands include salmon, trout, catfish, pike muskellunge, bass, walleye, and sunfish.

The National Forests are the most important federal recreation lands in this country. And, sport fishing is the second most popular outdoor recreation activity in the U.S. When you combine these two--and also, consider that access to private land is becoming more restricted--then you know how important the fishery resources of the National Forests are to the nation.

Fishermen spend well over a billion dollars a year on the National Forests, and this could increase by as much as another \$232 million. Fishery resources are important to the public we serve. They are important to the resource management mix on our forests. And they are important to local and national economies.

So, we in the Forest Service listened carefully when an American Fisheries Society report told us in 1985 that some new management efforts were needed to ensure the health of this resource. Together, we set out to look at what improvements were needed and how to make them. A task force spent last year looking at the situation and preparing recommendations.

Today, we're here to sign the report of that group and an action plan to get our fishery resources to where we want them to be. I want to tell you that we are going to aggressively get on with the job. I will be asking each region to give me an action plan by June 1, so that we can develop a consistent approach to getting the job done.

Since pictures can communicate a lot better than just words, I'm going to show a video that portrays just how important the National Forest fishery resources are to all of us.

Remarks prepared for delivery by F. Dale Robertson, Chief, Forest Service, U.S. Department of Agriculture, at the signing ceremony for the report and action plan on fishery resources on the National Forests, Washington, D.C., March 16, 1987.





2660 Administration

JAN 9 1986

Subject

Fisheries Program Development

Regional Foresters

The Forest Service has an outstanding tradition in management of forest resources that is unmatched by that of any other professional group. Multiple-use management and recent environmental legislation, reflecting the public's desire for a more balanced approach to forest resources, have stimulated the emergence of resource management programs requiring disciplines other than foresters in the organization. Fishery managers are among the newer members now interacting with more traditional programs. Because fishery programs are relatively new, fishery professionals and the management of fishery resources are, of necessity, agents for change in our organization. Our ability to accommodate this change has varied depending on the location and managers involved.

The four enclosed documents reflect an inconsistent approach to fisheries management:

- 1. The American Fisheries Society report summarizes survey findings and the Society's recommendations for the Forest Service fishery program.
- 2. The manuscript by Dr. Jim Kennedy provides a profile of how Forest Service fishery biologists are adjusting to their profession and to the USDA FS organizational culture.
- 3. The National Wildlife Federation/Trout Unlimited report to the Regional Forester for the Northern Region describes the fisheries resource treatment in the draft Forest Plans.
- 4. The draft fisheries program description brings the fisheries program into focus. It is designed to define the responsibilities, missions, and roles of our personnel involved in fish habitat management.

As part of defining our wildlife and fish program and determining what changes are needed, we are chartering a task force to embrace fishery opportunities in the Forest Service and to develop an action plan to address four basic goals:

- 1. Integrate fishery biologists into the organization as positive agents for change.
- 2. Develop an action plan to address the American Fisheries Society report recommendations.
- 3. Create an internal and external awareness of the character, function and needs of the Forest Service Fishery Program.



4. Finalize the draft fisheries program description (number 3 above).

The task force will consist of the following individuals:

Mike Barton, Regional Forester, R-10 (Team Leader)

Carl Sullivan, Executive Director, American Fisheries Society

Dave Unger, Director, Watershed and Air, WO

Bob Nelson, Director, Wildlife and Fisheries, WO

Glen Hetzel, Director, Range, Wildlife/Fisheries, and Ecology R-2

Tom Kovalicky, Supervisor, Nezperce National Forest, R-1

Ron Marcoux, Associate Director, Montana Department of Fish,

Wildlife, and Parks

Paul Brouha, Fishery Program Manager (ex officio)

You should support this task force, and aid it in accomplishing the proposed goals. This group and your support of their resultant action plan is critical to development of the fisheries program as part of our growth toward balanced resource management in the Forest Service.

R. MAX PETERSON

Chief

Enclosures

Limited Distribution

EXECUTIVE SUMMARY FISHERIES TASK FORCE REPORT

POSITIVE ACTIONS FOR THE FUTURE

Fisheries Habitat Management

USDA - Forest Service

March 16, 1987

Prepared by the Forest Service Fisheries Task Force

Task Force Members:

Michael Barton, Team Leader Glen Hetzel Tom Kovalicky Ron Marcoux Robert Nelson Carl Sullivan Dave Unger Stephen Wright Paul Brouha, Ex Officio Phil Janik, Ex Officio

This Executive Summary is presented in four sections as follows:

- I. National Forest Fishery Resources and Use
- II. Fish Habitat Management Policies in National Forests
- III. Forest Service Fisheries Habitat Management Goals
- IV. Action Plan Summary for Improving Fisheries Habitat Management in National Forests

I. NATIONAL FOREST FISHERIES RESOURCES AND USE

The 191 million acres of the National Forest System in 43 states contains 128,000 miles of streams and 2.2 million acres of lakes and reservoirs and 16,500 miles of coastline where significant harvest by sport, commercial, subsistence and Native American fisheries activities occurs each year. In addition to nongame species, game fish in the National Forests include salmon, trout, catfish, pike, muskellunge, and many spiny-rayed species such as bass, walleye, and sunfish.

Fish production in the National Forests is substantial. In California, Oregon, Idaho, and Washington, well over 50 percent of the spawning and rearing habitats for salmon and steelhead are found in the National Forests and totals about 15,000 miles of streams. In Alaska, approximately 27 percent of the freshwater habitat for salmon and steelhead is in the National Forests and totals about 30,000 miles of streams.

Sport fishing is the second most popular outdoor recreation activity in America. Over 53 million anglers engage in some type of sport fishing annually. In 1980 they spent over 850 million days and over \$17.3 billion in pursuing their sport. The popularity of sport fishing is increasing, and is expected to increase 90 percent by the year 2030.

As access to private land, particularly near urban centers, becomes increasingly restricted, the National Forests will provide one of the greatest opportunities for increased public angling. Current use is estimated at 46.5 million angler days valued at \$1.21 billion. To meet anticipated increases in demand, fish habitat management in National Forests is very important, especially for those who cannot pay increasing private land rates. Aquatic habitat protection and restoration in concert with well-designed habitat improvement projects can materially increase habitat productivity and angling opportunities. Many such cost effective opportunities have been identified in Forest Plans and catalogued and coordinated with the State Fish and Wildlife Agencies as part of their Comprehensive Plans developed pursuant to the Sikes Act. For example, an estimated 25 percent increase in angler use from habitat improvement would amount to an additional 11.6 million angler days with additional expenditures of \$303 million.

In addition to the recreation provided, the annual harvest of salmon and steelhead spawned and reared in National Forests is over 118 million pounds, with a commercial value of \$123 million. The capability exists to cost effectively increase this harvest through habitat improvements to 190 million pounds with a direct value of \$229 million. Typical projects include construction of fishways past barriers, improvement of spawning and rearing habitat, lake fertilization and acid neutralization to increase productivity.

II. FISH HABITAT MANAGEMENT POLICIES IN NATIONAL FORESTS

The USDA-Forest Service's responsibility for management of fishery habitats of National Forests dates from the Organic Administration Act that created the National Forests in 1897. The act provided just two purposes for designation... "Securing favorable conditions of water flows and to furnish a continuous supply of timber..." Since that time, additional legislation, policy, and agency direction have further refined that responsibility.

The National Forests are administered under a mandate of multiple use. This mandate requires balanced consideration of all resources during planning and implementation of management activities. Fisheries are riparian-dependent resources that owe their existence and quality to associated riparian ecosystems. Ensuring that fish habitats and their associated riparian areas are properly protected and managed is a primary responsibility of Forest Service managers. Evaluating the potential effects of forest management activities on fish habitat is part of that responsibility.

The maintenance and enhancement of fisheries resources on National Forests are specifically prescribed for by law and are of critical importance. Fish habitats are managed to increase productivity for game and nongame fish species and to help threatened and endangered species recover. Habitat is improved, where possible, to meet increased demand by commercial, recreational, and subsistence users. For threatened and endangered species, and other species that may be approaching critically low population levels, fish habitats are managed to provide sufficient numbers and distributions of reproductive individuals to assure the continued existence of each species throughout its range.

Through Forest Planning, fisheries objectives are developed in concert with other resource management objectives. These objectives address issues, concerns, and opportunities related to fisheries resources. Fish habitat protection, restoration, and enhancement objectives on National Forests are established in the land management planning process. Implementation schedules and monitoring plans for fish habitat maintenance and enhancement are developed as a part of the planning process. In partnership with the States and other cooperators, projects are accomplished that result in the rehabilitation, maintenance, and improvement of fish populations and their habitat.

III. THE FOREST SERVICE FISHERIES HABITAT MANAGEMENT GOALS

- I. Provide opportunities for the public to use and enjoy the fisheries resources on the National Forests.
- II. Maintain and enhance the fish habitat capability of National Forests.
- III. Improve communication, coordination, planning, and involvement with all who have an interest in management of National Forest fishery resources.
- IV. Improve program effectiveness in meeting Forest Service responsibilities for fish habitat management.

IV. A SUMMARY OF THE ACTION PLAN FOR IMPROVING FISHERIES HABITAT MANAGEMENT IN NATIONAL FORESTS

The action plan addresses both the recommendations of the American Fisheries Society based on their analysis of the program and the concerns identified by the task force. As in the complete document, the actions listed in this summary are presented under five categories, based on similarity of subject matter being addressed.

A. Program Identification

To enhance the fisheries program of the Forest Service, we must accurately identify program goals and objectives and establish the necessary steps to reach those objectives. Current procedures need to be evaluated and improved where necessary. Program elements must be displayed and easily understood by all personnel within the Forest Service. These efforts should also be highly visible to other agencies, interest groups and the public to gain needed support.

Summary of Recommended Actions

- 1. Increase the profile of and commitment to the Forest Service fisheries program by increasing awareness of national goals and ensuring recreational and commercial fishery objectives are well defined at each organizational level.
- 2. Evaluate and improve the fish habitat program through identification of state-of-the-art procedures for habitat inventory, evaluation, monitoring; interpretation and storage of data; and other matters of resource information management. Develop regional schedules for aquatic habitat surveys and encourage use of fish habitat relationships information.
- 3. Strengthen the integration of management practices for fisheries with other land management practices. Expand the opportunities for obtaining habitat improvement funds through more efficient use of funding sources such as the K-V and Range Betterment funding opportunities.

- 4. Improve scheduling of fisheries program objectives from forest plans into annual budgets. Evaluate the adequacy of the monitoring and reporting systems used to track accomplishment of work.
- 5. Develop procedures for improved analysis of the fisheries workload and corresponding staffing needs, and adjust as appropriate.
- 6. Improve procedures for identification of research needs, and schedule research activities, as needed.

B. Technical Capabilities

Management of fisheries habitat on National Forests should occur with use of the most modern technology. We must make efforts to continually improve procedures to obtain field data needed to update the fisheries habitat data bases. Procedures should be improved to assess and monitor the effects of various land use activities on riparian and aquatic resources, to evaluate habitat improvement projects, and to further define fish habitat relationships.

Summary of Recommended Actions

- 1. Coordinate monitoring efforts with States to ensure that best management practices are implemented and working as intended. Integrate procedures developed by out-service sources into the Forest Service monitoring systems. Develop monitoring procedures that will enable continual refinement of fish habitat relationships information.
- 2. Improve procedures for identifying the effects of land management activities on aquatic and riparian resources. Incorporate state-of-the-art fish habitat survey systems into national inventory standards.
- 3. Develop standards and criteria for the development of land/aquatic resource classification systems that are compatible with State classifications.

C. Cooperation and Public Information

There is a need to increase the public awareness of the Forest Service actions in aquatic habitat management. We should ensure that other agencies, interest groups and the general public fully understand the extent of our efforts, and are given the opportunity for involvement in program development and execution. We can increase the profile of the Forest Service fishery program by improving interagency coordination, providing a better understanding of the program among non-fisheries Forest Service personnel and increasing public awareness of our endeavors and accomplishments through the various forms of news media. Appropriate recognition should be made to the responsible individuals and/or parties for program accomplishments.

Summary of Recommended Actions

- 1. Improve coordination with other agencies by reviewing and improving the Memorandum of Understanding with States on goals and objectives. Coordinate efforts with other agencies and groups in the survey and analysis of aquatic habitat conditions.
- 2. Increase the awareness of Forest Service fishery program through the development of information plans and news media packages, brochures, video packages, presentations and inviting news media representatives on "show me" trips. Encourage volunteers to participate in aquatic habitat improvement projects.
- 3. Improve in-house understanding of the fisheries program by producing annual status reports on program implementation, holding congressional staff briefings, preparing internal video presentations and making better use of internal correspondence to keep the work force aware of fisheries habitat management activities and accomplishments. Incorporate these objectives into individual work plans and performance standards.

D. Economic Valuation

We should determine the most modern fishery use assessment procedures to estimate the economic value of the fisheries resource for use in decision making processes. Utilizing the appropriate fisheries use information and methods to determine the future demand for the fishery resource is an important part of this effort. Much of this kind of information is available from the states and other agencies.

Summary of Recommended Actions

- 1. Develop a fisheries information system based on user data currently available from state, federal, and private sources. Augment this information with additional new information and research findings, as needed.
- 2. Determine the economic value of the fishery resource by developing fishery valuation criteria with the International Association of Fish and Wildlife Agencies. Use these economic analyses in the decision making process.
- 3. Develop a publication based on known economic studies to be used as a standard reference when estimating economic valuations of fisheries.

E. Fishery Personnel Development

One component of this effort is to improve and strengthen the fisheries program in the Forest Service by employing the most highly qualified personnel available, and providing needed training throughout their careers. Training programs for Forest Service management and research biologists should enable them to be knowledgeable in the most current concepts in fisheries management, strengthen leadership and managerial skills and be competitive for interdisciplinary positions. We must ensure the agency is able to hire the most qualified candidates and provide programs for continuing education throughout their career development. The Forest Service should also help universities and other groups in development of programs that would be available to students to make them better qualified in today's field of fisheries management. We must also work on improving the ability of entry-level and mid-career personnel to help them be competitive for line and staff positions, eventually at the higher grade levels.

Summary of Recommended Actions

- 1. Develop educational objectives for the undergraduate and graduate curriculum that meets the needs of the Forest Service. Improve and expand the cooperative education program.
- 2. Work with OPM to modify the X-118 standards so that specific academic requirements are met in the application process. Advertise position vacancies as widely as possible and develop more definitive procedures for identifying the most highly qualified candidates.
- 3. Provide a continuing education program for biologists and ensure the biologist series is identified for interdisciplinary positions. Develop an awareness of the importance of mentoring, and encourage biologists to establish relationships with line/staff officers and/or experienced biologists as their mentors. Improve the leadership abilities of biologists and encourage them to improve and exercise their verbal and written communication skills.

FISHERIES TASK FORCE REPORT

POSITIVE ACTIONS FOR THE FUTURE

Prepared by Forest Service Fisheries Task Force

Task Force Members:

Michael Barton, (Team Leader) Regional Forester, Alaska Region Glen Hetzel, Director, Range Wildlife & Ecology, Rocky Mountain Region Tom Kovalicky, Supervisor, Nez Perce National Forest Ron Marcoux, Associate Director, Montana Dept. Fish, Wildlife & Parks Robert Nelson, Director, Wildlife and Fisheries, Forest Service Carl Sullivan, Executive Director, American Fisheries Society Dave Unger, Director, Watershed and Air, Forest Service Stephen Wright, Commissioner, Vermont Department of Fish & Game Paul Brouha, (Ex Officio) Deputy Director, American Fisheries Society Phil Janik, (Ex Officio) Director, Wildlife and Fisheries, Alaska Region

FISHERIES HABITAT MANAGEMENT

USDA-FOREST SERVICE

March 16, 1987

F. DALE ROBERTSON, CHIEF

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Abbreviations

The following abbreviations are used in this report:

AFS American Fisheries Society EEO Equal Employment Opportunity EPA Environmental Protection Agency FS Forest Supervisor FSM Forest Service Manual InS Information Systems K-V Knutson-Vandenberg Act LA Legislative Affairs LMP Land Management Planning NFS National Forest System OGC Office of General Counsel PA Policy Analysis PAO Public Affairs Office P&CR Personnel and Civil Rights P&L Programs and Legislation PD&B Program Development and Budget Rec Recreation Res Research RF Regional Forester Rge Range Management RPA Resources Planning Act T&E Threatened and Endangered TM Timber Management WO Washington Office WL/F Wildlife and Fisheries WS&A Watershed and Air

I. NATIONAL FOREST FISHERIES RESOURCES AND USE

The 191 million acres of the National Forest System in 43 states contain 128,000 miles of streams and 2.2 million acres of lakes and reservoirs and 16,500 miles of coastline where significant harvest by sport, commercial, subsistence and Native American fisheries activities occurs each year. In addition to nongame species, game fish in the National Forests include salmon, trout, catfish, pike, muskellunge, and many spiny-rayed species such as bass, walleye, and sunfish.

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- III. Improve communication, coordination, planning, and involvement with all who have an interest in management of National Forest fishery resources.
- IV. Improve program effectiveness in meeting Forest Service responsibilities for fish habitat management.

IV. ACTION PLAN FOR IMPROVING FISHERIES HABITAT MANAGEMENT IN NATIONAL FORESTS

The following Action Plan was developed by the National Fisheries Task Force in response to recommendations of the American Fisheries Society's (AFS) survey and other analyses of the Forest Service fisheries habitat management program.

The objectives are divided into five general categories:

- o Program Identification
- o Technical Capabilities
- o Cooperation and Public Information
- o Economic Valuation
- o Fishery Personnel Development

PROGRAM IDENTIFICATION

Objectives:	Responsibility	Due Date	AFS Price Recommend- ations	1/
Redefine and distribute national fisheries policies, goals, objectives, and direction, as needed.	WO, Deputy Chief for NFS 2/	6/87	1B(1) 1B(3) 1B(5)	**
Establish policy that fisheries be specifically recognized in the title of staff units having that program responsibility.	WO, NFS - WL∕F	Draft 6/87 Final 12/30/87	1B(10) 2 A (7)	•
Define Forest Service fisheries mission and program functions at each level of the organization and publish as a single document in the Forest Service Manual.	WO, Deputy Chief for NFS with WL/F	Draft in Appendix Final 6/87		**
Evaluate directives used for describing fisheries and wildlife issues, concerns, and opportunities to ensure the two resources are distinct (Refer FSM 1920 & 2600).	WO, NFS - LMP with WS&A, WL/F, and RPA	Draft 3/88 Final 9/88	1A(3) 1A(4) 1D(2) 1D(3) 2C(2) 2C(4)	
Define habitat inventory/survey requirements, data standards and other fisheries planning information needs. Schedule accomplishment to ensure adequate information exists for the second round of Forest Planning and project work (Refer FSM 1920).	WO, NFS-LMP with WS&A, WL/F, and RPA Regions-WLF	9/88	1D(2) 1D(2) 2C(2) 2C(4)	**
Define use of Fish Habitat Relationships in integrated project inventory, analysis, planning and monitoring.	WO, Regions NFS - WL/F with WS&A	9/88	2A(4) 2A(5) 2C(5)	**

2/ For abbreviations see page 2.

Develop and implement best management practices policy for nonpoint source pollution control and riparian habitat management.	WO, NFS - WS&A with WL/F and Rge	Draft 3/88 Final 9/88	1A(10) 1B(6)	**
Integrate user demand and attitude information from State and other agencies in development of recreation objectives for quality, quantity and diversity of opportunity for fisheries use associated with National Forests.	WO, Regions, NFS- WL/F with Rec, RPA, and LMP	89 RPA Assess- ment Schedule	1A(8)	•
Establish objectives for commercial fisheries production from NFS lands.	WO, Regions, NFS- WL/F with RPA and LMP.	89 RPA Assess- ment Schedule	1A(8)	•
Evaluate opportunity for expansion of fisheries K-V funds to include associated habitats outside the sale area.	WO, Deputy Chief for NFS	12/87	2A(8)	•
Evaluate the adequacy of the fisheries program and budget codes and habitat coefficients; and adjust as necessary.	WO, Deputy Chief for ADM with NFS Deputy Chief and WL/F	12/87	1C(1) 1C(2)	*
Include fisheries program objectives in multi-year Forest Plan implementation schedules ensuring linkage to annual budgets.	Regions, RF and FS with WLF and PD&B	12/87	2B(2)	**
Develop a fisheries workload analysis procedure, based on resource and support needs, to help Regions determine staffing levels.	WO, Deputy Chief for ADM with P&CR, WL/F	9/87	1E(1)	*
Conduct fisheries workload analysis and adjust fisheries biologist staffing, as needed.	Regions, RF and FS with WL/F and P&CF	s 9/88 R	2D(1) 1E(2)	٠
Develop frequent communication between National and Regional fisheries personnel to ensure development of sound fisheries program strategies.	WO, Regions, WL/F	Ongoing	2A(1)	**

Evaluate adequacy of Management Attainment Report and Review System for tracking compliance with national policy, goals, and direction.	WO, Deputy Chief for NFS with Deputy Chief for ADM and WL/F	1/89	1A(10) ** 1B(2) 1B(7)
Evaluate habitat coefficients based on monitoring results, and refine as needed.	WO, Regions WL/F	Draft 3/90 Final 9/90	1A(7) 1A(10) 1A(12) 2A(4) 2A(5)
Evaluate research coordination needs for action items in this document and plan/schedule research activities and assistance, as appropriate.	WO, Res with WL/F	7/87	1A(10) *** 1A(13) 1A(14) 1B(11) 1D(1) 1D(2)
TECHNI	CAL CAPABILITIES		
Define and implement with States, integrated, interagency monitoring procedures and schedules to ensure the effectiveness of best management practices.	Regions, WS&A with WL/F, States, and EPA. Policy - WO, Deputy Chief for NFS with Res. Procedures Regions WS&A with WL/F and Res.	Final 3/89 Draft 9/88 Final 3/89	1A(10) **
Develop methods to evaluate, and refine fish habitat relationships.	WO, Regions - WL/F with Res.	Ongoing	1A(7) ** 1A(10) 1A(12) 2A(4) 2A(5)
Integrate Fisheries Resource inventory methods, and national LMP and RPA data collection standards with procedures being developed by the AFS Habitat Inventory Standardization Committee.	WO, NFS - WL/F with LMP, RPA and AFS Committees	Draft as they become available before 1/90 Final 12/90	1D(1) * 2A(5)
Develop procedures to quantify effects of management activities on riparian habitat resource values and vegetation management objectives.	WO, NFS - LMP with WL/F, WS&A, Rge, and TM	Draft 12/88 Final 12/89	1A(6) ** 1B(6)

Develop prescriptions for riparian fish habitat management.	Regions, WL/F with WS&A, Rge, and TM	Draft 12/89 Final 6/90	1A(6) 1B(6) 2C(5)	**
Develop national standards and criteria for aquatic habitat classification.	WO ,NFS - WL/F with WS&A, LMP Rge, RPA and Res	Draft 3/89 Final 9/89	1A(1)	•
Define land/aquatic resource classification systems that are compatible with State's needs and all resource functions.	WO, NFS - LMP with WS&A, WL/F, RPA, and Res	Draft 3/89 Final 9/90	1A(2)	•
Assess available habitat survey systems to determine which could serve as models for national inventory standards, in conjunction with fish habitat relationships inventory methods.	WO, NFS - WL/F with Res	6/88	1D(3) 2C(4)	
COOPERATION	AND PUBLIC INFORMAT	TION		
Review Memoranda of Understanding with States to assess adequacy of fisheries management partnership goals, objectives, and respective roles.	Regions, WL/F with Rec	12/87	1B(4) 1B(9) 1D(4) 2A(6) 2C(6)	٠
Develop direction for cooperative surveys of habitat, recreation demand and for cooperative program/project development with user groups.	Regions, WL/F with Rec	6/88	1A(8)	
Annually report status of fisheries program direction implementation, including fish population and habitat condition trends to all interested parties.	WO, Deputy Chief for P&L (PAO and LA) with Deputy Ch for NFS (WL/F), and Deputy Chief for Admin (Ins); Regions, RF and FS with WL/F and PAO		1A(7) 2B(1)	•
Develop an information plan to inform the public, cooperators, and employees about the fisheries program.	WO, Deputy Chief for NFS with WL/F and PAO; Regions RF and FS with WL/F and PAO	- 6/87	1A(7) 1A(8) 1B(1) 1B(2) 1B(7)	**

Develop a media package detailing WO, WLF with E the scope and new initiatives of the Forest Service's fisheries management program.	PAO 12/87	1B(1) 1B(2) 1B(3) 2A(2) 2A(9)	**
Develop a public-oriented WO, WLF with fisheries program brochure outlining Forest Service fisheries habitat management direction.	9/87	1B(1) 1B(2) 1B(3)	•
Develop a high quality national WO, WLF with I visual media production describing all aspects of the fisheries program.	PAO 12/87	1B(1) 1B(2) 1B(3)	**
Hold Congressional staff briefings to explain the increased fisheries emphasis. Briefings should include field trips to observe program accomplishments. WO, Deputy Charles for P&L with I LA and WL/F; Regions - RF a with WL/F and	PAO, Ongoing and FS	1B(1) 1B(2) 1B(3) 1B(7)	**
Prepare a video presentation for internal use featuring the Chief's thoughts on a commitment to the fisheries program.	6/87	1B(1) 1B(3)	**
Incorporate internal and public communication and cooperation objectives into work program and performance standards. WO, Regions - RF and FS with WL/F and PAO	9/87 h	1B(1) 1B(4) 2A(1) 2A(3) 2A(4)	**
Determine feasibility of using public relations agencies and expertise in the private sector, such as contracting for the full range of news media services.	6/87	1B(1) 1B(3) 1B(4) 2A(9)	•
Issue periodic news releases that Regions, describe a new regional project that will or has enhanced fish habitat.	Ongoing	1B(7)	٠
Prepare a video presentation on the Regions, same subject for internal use. PAO with WL/F Television stations in the Region should be made aware of the program and allowed to use it if they desire.	3/88 & Ongoing	1B(7)	٠

Include information in internal correspondence, such as staff notes and newsletters, etc. that documents the National, Regional, and Forest efforts to manage fish habitat.			1B(1) 1B(3) 1B(7)	
Invite local newspaper, radio and television contacts on "show me" trips of fisheries projects.	Regions - RF and FS with PAO and WL/F	Ongoing	1B(7)	**
Encourage volunteers to participate in stream/lake improvement projects or other efforts to enhance the fishery.	Regions - RF and FS with P&CR and WL/F	Ongoing	1B(1)	**
Make presentations on the Forest Service fisheries program to other agencies, fisheries user groups, and other interested publics.	WO, WL/F with PAO; Regions - RF and FS with WL/F and PAO	Ongoing	1B(1) 1B(3) 1B(4)	•
ECONO	MIC VALUATION			
Determine what user data are available from State and other sources and determine how Regional and National data could be systematically organized to estimate present and future demand.	WO, Regions NFS - WL/F with LMP, RPA, Rec, and Res	Draft 6/88 Final 12/88	1A(8)	
Develop fishery valuation criteria in concert with International Association of Fish and Wildlife Agencies, including procedures that permit determination of fisheries values to local economies, subsistence users and to estimate the resource existence value.	WO, NFS - WL/F with LMP, RPA and USDA Committee on Economics	Draft 6/88 Final 12/88	1A(14) 1B(11)	**
Review economic studies pertaining to methods for estimating economic valuation of fisheries, and present findings in a "state-of-the-art" publication.	WO, WLF with Res	9/88	1A(14) 1B(11)	
Determine and present the estimated valuation of the fisheries resource to ensure commensurate value comparisons with other resources during decision making processes.	Regions, WLF with LMP	9/89	1A(14) 1B(11)	**
	correspondence, such as staff notes and newsletters, etc. that documents the National, Regional, and Forest efforts to manage fish habitat. Invite local newspaper, radio and television contacts on "show me" trips of fisheries projects. Encourage volunteers to participate in stream/lake improvement projects or other efforts to enhance the fishery. Make presentations on the Forest Service fisheries program to other agencies, fisheries user groups, and other interested publics. ECONC Determine what user data are available from State and other sources and determine how Regional and National data could be systematically organized to estimate present and future demand. Develop fishery valuation criteria in concert with International Association of Fish and Wildlife Agencies, including procedures that permit determination of fisheries values to local economies, subsistence users and to estimate the resource existence value. Review economic studies pertaining to methods for estimating economic valuation of fisheries, and present findings in a "state-of-the-art" publication. Determine and present the estimated valuation of the fisheries resource to ensure commensurate value comparisons with other resources	Regions - RF and Forest efforts to manage fish habitat. Invite local newspaper, radio and television contacts on "show me" trips of fisheries projects. Encourage volunteers to participate in stream/lake improvement projects or other efforts to enhance the fishery. Make presentations on the Forest Service fisheries program to other agencies, fisheries user groups, and other interested publics. Determine what user data are available from State and other sources and determine how Regional and National data could be systematically organized to estimate present and future demand. 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Determine and present the estimated valuation of the fisheries resource to ensure commensurate value comparisons with other resources subsets with LMP with LMP and PAO Regions - RF and FS with PACR and WL/F WM, WL/F with PACR and WL/F WMO, WL/F with PACR and WL/F WMO, WLF with MP, 6/88 RPA, Rec, and Final Res WO, NFS - WL/F WI/F with LMP, 6/88 and USDA Committee on Economics WMO, WLF with LMP, 6/88 And USDA Committee on Economics WMO, WLF with LMP with	recorrespondence, such as staff notes and newsletters, etc. that documents the National, Regional, and Forest efforts to manage fish habitat. Invite local newspaper, radio and television contacts on "show me" trips of fisheries projects. Encourage volunteers to participate in stream/lake improvement projects or other efforts to enhance the fishery. Make presentations on the Forest Service fisheries program to other agencies, fisheries user groups, and other interested publics. 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FISHERY PERSONNEL DEVELOPMENT

Develop and implement a continuing education program at the Regional level, meeting national standards for fisheries biologists.	WO, Regions - WL/F with P&CR		1E(4) 1E(5) 2D(2) 2D(3)	**
Develop more definitive procedures for identifying needed skills when selecting fisheries biologists.	WO, Regions - WL/F with P&CR	12/87	1E(5) 2D(3)	•
Advertise fisheries and inter- disciplinary position vacancies as widely as possible.	WO, Regions - WL/F with P&CR	Ongoing	1E(4)	**
Establish a process to aid new biologists in finding a willing and effective mentor.	WO, Regions - WL/F with P&CR	12/87	2D(2)	*
Assist academic institutions to develop educational objectives for undergraduate and graduate curricula that relate to aquatic habitat.	WO, Regions - WL/F with the Educators' Section of the American Fisheries the Association of Fisheries and Wild! Administrators	Society and University		
Budget for cooperative education, internships, and summer employment opportunities to provide meaningful experiences for students and a means for the Forest Service to select promising candidates for permanent employment.	Regions - RF and FS with WL/F and P&CR	Ongoing	2D(2)	
Provide opportunities for fisheries biologists to develop and demonstrate management and leadership skills, through work experiences such as interdisciplinary teams, project reviews, public involvement, and coordination with other agencies.	WO, WL/F; Regions - RF and FS with WL/F	Ongoing	1E(3) 1E(4) 2D(2) 2D(3)	**
Encourage fisheries biologists to write one or more popular articles each year and make presentations to outside groups and organizations.	Regions - RF and FS with WL/F	Ongoing	1B(7)	•

Ensure the fisheries biologists series is identified for interdisciplinary position vacancies, where appropriate.	WO, Deputy Chief for Admin with P&CR and WL/F; Regions, RF and FS with WL/F and P&CR	6/87	1E(4)	**
Pursue modification of X-118 standards and require all candidates for professional fisheries positions to have a degree in fisheries biology from an accredited school or a similar degree that includes fisheries studies, emphasizing habitat management.	AFS working with other Federal Agencies, OPM, and WO Deputy Chief for Admin. with P&CR and WL/F in concert with Regions	6/88	1E(5)	

APPENDIX 1

I. CONTINUING EDUCATION FOR FISHERIES BIOLOGISTS

BACKGROUND: The best academic preparation and summer job experience will not provide the level of skills and knowledge required by professional biologists as Forest Service program managers. University curricula, no matter how comprehensive, will not address all the needs of any one employer. Academic programs also tend to focus on species versus habitat management, individual versus group (team) decision-making, or biological versus socio-political or economic considerations. Such an academic orientatation is not consistent with the Forest Service. In addition, some skills and knowledge can only be mastered after a period of full-time professional experience, when biologists gain new perspectives and recognize their importance in acquiring professional competency.

Modules will include:

1. Entry level module

The entry level training module should be completed within 6 to 18 months of recruitment. Early career development should be emphasized. Modules will focus on how entry-level biologists and fisheries management fit into the structure and culture of the Forest Service--including policies and procedures, personnel management, legal requirements, organizational climate and public demands. In these modules entry-level biologists should:

- A. compare the similarities and differences between their academically formed values, images and skills with those required of effective FS fisheries biologists;
- B. develop personal strategies for effectively balancing the need to become an integrated, respected Forest Service employee (agency identification); with the need to maintain professional standards in the promotion and management of fisheries values (professional identification);
 - C. develop initial Forest Service career plans;
- D. identify strengths and deficiencies in their preparedness to fulfill current and desired future job requirements, and formulate initial career development and training plans to remedy deficiencies;
- E. acquire attitudes and skills to become an integrated, effective, respected professional in the Forest Service organization at the entry stage (and later stages) of their career--communication, coordination, team dynamics, public involvement, and multiple-resource attitudes and skills should be especially stressed.

2. Non-supervisory leadership modules

The non-supervisory leadership modules should be completed within 1 to 2 years of assuming journey status (GSA). They should specifically include: a. basic management skills; b. communication skills; c. leadership skills; and d. interpersonal skills.

Upon completion of the modules, fisheries biologists should have proficiencies in program management and administration needed to become effective team members/leaders in the interdisciplinary resource management environment of the Forest Service.

3. Fish Habitat Modules

The fish habitat modules should be completed within 1 year of assuming journey status. These modules should be developed in cooperation with research and include: a) resource inventory and monitoring, b) fish habitat relationships and analytical tools, and c) habitat improvement/enhancement techiques; and d) project development and implementation strategies compatible with the Forest Service policy.

Upon completing the module, the fisheries biologists should have knowledge of current fish habitat management techniques and strategies in the profession and the agency and have the skills to develop, package and implement fisheries projects that are consistent with other multiple use requirements.

II. RECRUITMENT

BACKGROUND: The quality of new biologists in the Forest Service largely depends on the recruitment and selection process. There is a large pool of graduates and experienced biologists available from which to hire. The Forest Service must become more effective in hiring, challenging, monitoring, and selecting that person who warrants permanent professional status.

An aggressive recruitment program will ensure that highly qualified fisheries biologists are hired consistent with EEO and affirmative action policies. A more discerning probationary evaluation process will ensure competent professionals are invited to permanent professional status.

III. MENTORING

BACKGROUND: The Kennedy Studies (1982 & 1985) of Forest Service fisheries and wildlife biologists identified mentoring as being important in career development of resource managers in the Forest Service. Mentoring opportunity is limited in fisheries because of the small number of biologists spread over a large geographic area.

IV. ACADEMIC PREPARATION:

BACKGROUND: The content, quality, and relevance of fisheries education to Forest Service habitat management needs differ among Universities. The value of maintaining a diversity of educational programs is recognized as a strength of the educational system. However, there is a need to establish minimum standards and requirements to provide curriculum guidelines to Universities. The American Fisheries Society establishes minimum requirements for certification of fisheries biologists. These requirements are used by many Universities in developing the fisheries curricula. Accreditation of University programs has been suggested, but little interest has been generated among fisheries educators.

The Education Section of the American Fisheries Society has as it's primary mission the improvement of fisheries education. In addition to sponsoring workshops and symposia, the Educators' Section has taken the lead in all aspects of fisheries education. The Association of University Fisheries and Wildlife Program Administrators is another group that can facilitate change in the fisheries curricula. Both groups are receptive to new ideas and suggestions. The Forest Service should assist academic institutions and these involved groups in shaping the curricula to better prepare students for employment and effectiveness.

V. IMPROVING THE IMAGE OF FOREST SERVICE FISHERIES HABITAT MANAGEMENT

BACKGROUND: The effectiveness of fisheries habitat management depends partially on how favorably Forest Service fisheries biologists are perceived by other professional disciplines, line officers, and the public. Narrowly trained individuals are often perceived as specialists with limited capacity to assume broader responsibilities. Fisheries biologists must be more involved and effective in managerial roles. It is not enough for biologists to develop a reputation of competency in their professional "speciality". They also need abilities to integrate themselves and fisheries management into the agency value system, and interdisciplinary programs, and thereby broaden staff and line support.

APPENDIX II

REPORT ON CREATING AN INTERNAL AND EXTERNAL AWARENESS OF FOREST SERVICE FISHERIES HABITAT MANAGEMENT

As a preface to a formal plan, the following are items for consideration:

- 1. In develoing recommendations, the primary thrust should be on the fisheries resource commitment by the Forest Service at every level. There should be emphasis on improved fisheries program direction and research under multiple use management.
- Certain communications techniques are developed for internal use; i.e., most video tape presentations are produced for internal use, but are ultimately utilized outside the agency. Consideration should be given to additional external focus.
- 3. The level of funding for the fisheries program has often been discussed as related to program potential. There is a need to improve the way program needs are identified and displayed. The relationships between differing funding levels, expected outputs, and economic, recreational, social, cultural, and other values should be clearly presented so that the public and Forest Service personnel have a better understanding of these relationships.
- 4. It's important to be candid about past problems in order to show the need for increased emphasis. However, stress the positive and focus on needs, opportunities and examples of successful fisheries programs.
- 5. There is a need to define the target groups for dissemination of fisheries information. This process will help define the necessary communications techniques.

GOALS OF THE INFORMATION EFFORT ARE:

- 1. to explain to the public (as well as Forest Service employees) the responsibility and component parts of the Forest Service fisheries program.
- 2. to demonstrate to all constituent groups that the Forest Service is making a greater commitment to the fisheries resource. (Example: establish state/federal coordinating group in each state with National Forest holdings, designate a forest liaison for contact with private groups, make wider use of IPA program, fill fisheries positions with professional fisheries biologist. Document and distribute an explanation of expected benefits to the fisheries resources from this commitment.)
- 3. to let people know of the Forest Service Chief's commitment to the fisheries resource. The Chief has indicated in his January 9, 1986 letter to Regional Foresters that he recognizes the public's desire for a more balanced approach to resource management.

4. to emphasize opportunities by citing and publicizing successful projects and programs and the magnitude of remaining needs. Specifically, we would suggest examples like the effort on the Nez Perce that has improved the steelhead run, the cooperative program on the Beaverhead National Forest whereby a state fisheries biologist works for the Forest Service on a daily basis with funding cost-shared, and the cooperative fisheries enhancement programs on the Tongass and Chugach National Forests.

By citing constructive examples, explaining the potential benefits of increased effort and cooperation, and the positive aspects of an integrated approach, we believe others will recognize the benefits and the program will gain momentum.

FOREST SERVICE FISHERIES MANAGEMENT INFORMATION PLAN

Forest Service communication efforts should become progressively more specific at lower organizational levels. We would envision the Chief issuing the initial release to set the stage. Next, at the Regional level, public information would be more specific to the programs in that Region. Finally, at the Forest/District level emphasis would be directed to local programs and issues.

In conjunction with determing needs for internal and external awareness, queries of the Forest Service Program were made to determine the perceived importance of fisheries issues. Overall rankings of 12 preselected issues presented in the questionnaire sent to Forest Service Regions, other agencies and interested organizations presented are listed below:

Issue	Internal ranking	External ranking	Action plan item
Improve methods of integrating fisheries with other resources.	2	1	yes
Improve methods of identifying relation- ships between fisheries and other re- source values.	6	2	yes
Develop standard procedures for including fisheries issues in the Forest Service planning process.	9	3	yes
Involve and interact with states in developing fisheries programs (a partnership approach).	3	ц	yes
Determine fisheries status, current use and project future demands.	11	5	yes
Develop fisheries economic values in cooperation with the states.	4	6	yes
Develop MOU's with states for joint stream and lake surveys and other aspects of fisheries program on national forest lands.	12	7	yes
Measure habitat outputs as well as recreation days.	1	8	yes
Develop a standard aquatic classif- ication unit and fisheries data and monitoring system on a national basis compatible with state's needs.	10	9	yes
Improve methods of displaying fisheries program needs.	8	10	yes
Identify separately the fisheries program needs.	5	11	yes
Identify separately the fisheries biologist staffing needs.	7	12	yes

APPENDIX III

DRAFT

FISHERIES

HABITAT MANAGEMENT

IN THE

USDA-FOREST SERVICE

A

Statement of Fisheries
Resource Extent and Use,
Responsibilities and Policies,

Goals, Objectives, Unit Missions, Personnel Roles

Executive Summary

The USDA - Forest Service's responsibility for management of fishery habitat resources of the National Forests dates from the Organic Administration Act that created the National Forests in 1897. The act provided just two purposes for designation... "Securing favorable conditions of water flows, and to furnish a continuous supply of timber...." Since that time, additional legislation, policy, and agency direction has further refined and delineated that responsibility.

The purpose of this document is to define the structure and function of the Forest Service Fishery Program. In it, applicable laws, regulations, policy, and direction are pulled together to focus the program and communicate internally and externally the responsibilities, missions and roles of National Forest System personnel involved in Fish Habitat Management.

THE FISHERIES PROGRAM OF THE FOREST SERVICE

I. Resource Extent and Use

The 191 million acres of the National Forest System contains 128,000 miles of streams and 2.2 million acres of lakes and reservoirs that contribute significantly to the harvest by the sport, commercial, and American native fisheries each year.

Fishing

Sport fishing is one of the most popular outdoor activities in America. In 1980, over 53 million anglers engaged in some type of sport fishing. They spent over 850 million days and over \$17.3 billion in pursuing their sport. The popularity of sport fishing is increasing rapidly, and participation is expected to increase 90 percent the year 2030.

As private land access, particularly near urban centers, becomes increasingly restricted, National Forest System lands provide one of the greatest opportunities for increased public angling. Current use is estimated at 15.6 million 12 hour fishing user days (46.5 million angler days). The potential to increase the angling opportunities on the fish habitats of the National Forests through habitat improvements is unknown. An esimated 25 percent increase in angling use from habitat improvement would amount to an additional 11.6 million angler days with additional expenditure of \$303 million. Well designed habitat improvement projects (e.g., dams to create small lakes, and instream structures to create pools) can materially increase habitat productivity and angling opportunities. Many such opportunities have been identified in Forest Plans and catalogued and coordinated with the State Fish and Wildlife Agencies as part of their Comprehensive Plans developed pursuant to the Sikes Act. These project opportunities are technically feasible and cost effective.

Sport fishing on the 154 National Forests and 19 Grasslands throughout the National Forest System accounts for seven percent of the total recreation use in National Forests and is the third most popular form of recreation among the activities inventoried.

Resident Fish

In addition to nongame species, resident fish on the National Forests include trout, catfish, pike, muskellunge, and many spiny-rayed species such as bass, walleye, and sunfish. These fishes are utilized primarily by the sport fishery and are found throughout the National Forests located in 43 states.

Salmon and Steelhead

Salmon and steelhead production on National Forest System lands is substantial. In the States of California, Oregon, Idaho, and Washington, well over 50 percent of the spawning and rearing habitats for salmon and steelhead are found on the National Forests. In Alaska, 27 percent of the freshwater habitat for salmon and steelhead is on the National Forests. It has been projected that a 60 percent increase in freshwater habitat capability can be realized through habitat improvements. In addition to the recreation provided, the present contribution of the National Forests to the annual harvest of salmon and steelhead is over 118 million pounds (with a direct value of \$123 million). The capability exists to cost effectively increase this contribution through habitat improvements to 190 million pounds which would produce a direct value of \$229 million. Typical projects include construction of fishways over barriers, improvement of spawning and rearing habitat, and lake fertilization to increase productivity.

II. Responsibility and Policy for Fish Habitat Management on National Forests

Laws

The Organic Administration Act that created the National Forests in 1897 provided just two purposes for designation -- "Securing favorable conditions of water flows, and to furnish a continuous supply of timber . . . " The Weeks Act of 1911 (Section 6) authorized the Forests to purchase lands for two purposes " -- protect . . . denuded lands within watersheds of manageable streams . . . or for the production of timber." The protection of fisheries resources on National Forests was specifically identified in Title III of the Bankhead-Jones Farm Tenant Act of 1937. Title III "authorized and directed" the Secretary to "correct maladjustments in land use, and thus assist in controlling erosion, reforestation, preserving natural resources, protecting fish and wildlife . . . " (emphasis added). Fisheries was mentioned again in the Multiple-Use and Sustained-Yield Act of 1960 which declared the National Forests . . . " shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." Section 6(g)(3) of the National Forest Management Act (NFMA) provides that Forest planning guides shall . . . "provide for obtaining inventory data on the various renewable resources and soil and water" . . . and requires that timber be harvested only where "protection is provided for streams, stream banks, shorelines, lakes, and wetlands, and other bodies of water from detrimental change in water temperature, blockage of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat:"

Regulations

Forest Service responsibility to maintain/improve fish habitat to the degree consistent with overall multiple-use objectives is further stated in 36 CFR 219:

- 219.19 Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.
- 219.19(a)(1) In order to estimate the effects of each alternative on fish and wildlife populations, certain . . . species present in the area shall be identified and selected as management indicator species . . .
- 219.19(a)(2) Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal population trends of the management indicator species.
- 219.19(a)(6) Population trends of the management indicator species (includes fish) will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with state fish and wildlife agencies to the extent practicable.
- 219.27(a)(6) Provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for (management indicator species) is maintained and improved to the degree consistent with multiple-use objectives.
- 219.27(b) Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall (6) provide the desired effects on water quantity and quality, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yield; . . .
- 219.27(e) Riparian Areas . . . No management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment shall be pérmitted within these areas which seriously and adversely affect water conditions or fish habitat."

Ideally, National Forests will monitor fish habitat and States will monitor fish populations in a coordinated effort to identify causes of significant population changes (trends). A State's inability to conduct timely population surveys as part of the monitoring process does not relieve a National Forest from compliance with 36 CFR 219.19.

Policy and Manual Direction

Although habitat management is a Forest Service responsibility, States are not excluded from participating in it as stated in FSM 2610.3:

"As a broad guide, the Forest Service will assume leadership in habitat rehabilitation and improvement work. However, this does not preclude the State, in cooperation with the Forest Service from doing habitat improvement on National Forest System lands."

In 1941, the Secretary of Agriculture issued Regulation W-2 (now 36 CFR 241.2) which set the stage for long-term cooperation between the Forest Service and the States. It recognized the States as responsible for species management while establishing habitat management as a Forest Service responsibility. This policy has stood the test of time and was recently (8/22/83) restated in Secretary's Regulation 9500-4, 3c:

Wildlife Jurisdiction and State Cooperation

"The U.S. Department of Agriculture recognizes the rights of the individual States to manage fish and wildlife populations under their jurisdictions. Departmental agencies will utilize their respective authorities to manage habitat on public lands, to assist landowners in managing habitat on private lands, and to encourage and assist the States, territories, and other Federal agencies in conducting resource inventories and evaluating the status and potential of fish and wildlife habitat."

The Forest Service Manual *(FSM 2603.4) refines this policy as follows: 4.-"Specify quantitative...fish...habitat objectives and standards in the RPA Program, Regional guides, Forest Plans and Sikes Act schedules."

III. Fisheries Program Goal

- A. Coordinate fish habitat management with other Forest activities to take advantage of improvement opportunities and to prevent or mitigate/compensate losses (FSM 2630.2 and 2634.02).
 - 1. Integrate fishery objectives and fish habitat inventory and evaluation into project and Forest-level interdisciplinary resource planning and management (FSM 2634.2).
 - 2. Manage riparian habitats to protect and improve them and to give preferential consideration to riparian dependent fish habitat in cases of user conflict (FSM 2526.03).
 - Monitor activities to ensure planned objectives are achieved (FSM 2621.17 and FSM 2630.43).

^{*} Some FSM references changes will be required to comply with FSM revisions in progress.

- B. Enhance and maintain National Forest fish habitat capability (Recommended Program RPA 1980, selected high bound alternative, page 9.)
 - 1. Improve habitat carrying capacity to support increased numbers of resident fish species in public demand and to compensate for losses from other resource development activities (new objective based on FSM 2602.1c and FSM 2603.1 and 5).
 - 2. Improve habitat carrying capacity to increase the production of anadromous fish for commercial, sport fishing, and native American subsistence use and to compensate for losses from other resource development activities (FSM 2602.1c and .5).
 - Manage habitats to recover and maintain viable populations of threatened, endangered, or sensitive fish species (FSM 2602 and FSM 2670.2).
- C. Improve communication, coordination, planning, and involvement of all agencies, organizations, groups, and individuals with responsibilities or interests in management of National Forest fishery resources (FSM 2610.2).
 - 1. Embody the concept that private and State monies should be matched to leverage the capabilities of the program (FSM 2610).
 - Foster constituency support of the Forest Service Fishery Program by promoting demonstrations and developing program initiatives (FSM 2610.35).
 - 3. Develop Sikes Act action programs with the states to cooperatively implement fisheries programs detailed in Forest Plans (FSM 2603.4 and draft FSM 2610.4) and FSM 2610.32).
- D. Provide information and opportunity for the public to use and enjoy the fish resources on National Forest lands (FSM 2602.2 and FSM 2610.36).
 - 1. Communicate fish resource status and trends on a regular basis to National Forest users to show results of the Fisheries Program (FSM 2610:37).
 - Publicize fishing recreation opportunities to obtain use in balance with resource capability (FSM 2610.3).
- E. Provide organization effectiveness to properly accomplish Forest Service responsibilities for fish habitat management (FSM 2660).
 - 1. Improve mentoring of entry-level and mid-career fishery resource professionals to ensure development of a habitat management focus and of skills and attitudes to prepare them for working with people in an interdisciplinary manner (FSM 2600).
 - 2. Ensure that formal and informal training is part of each fishery professional's career development to maintain and develop technical and management skills (FSM 2600).

 Encourage active involvement in professional societies (AFS, AIFRB, TWS, SAF), sportsmen groups, and conservation organizations (FSM 2600).

V. Unit Missions

A. Chief's Office

1. Goal

a) Define, develop, and direct the implementation of the fisheries program so it can be understood both internally and externally (based on FSM 2604.12).

Responsibilities

- a) Establish policy, goals, objectives, targets, standards, and guidelines to effectively organize and control fisheries program activities to achieve desired results.
- b) Provide program management advice to the Regional Foresters, Staff Directors, and Regional Fisheries Program Managers.
- c) Develop methods and transfer technology to Regions and Forests to integrate fish habitat inventory, classification, and evaluation into project and Forest level interdisciplinary resource planning and management.
- d) Strengthen relationships with constituencies by coordinating and involving fisheries research and all other agencies, organizations, and the public in supporting development and implementation of fishery program activities (by encouraging use of such mechanisms as cooperative Regional initiatives and demonstrations).
- e) Clarify fisheries program planning and budgeting processes to relate activities to results/outputs in reference to habitat goals and objectives.
- f) Provide the internal climate to promote organizational effectiveness among the agency's fisheries professionals through development of training, mentoring, continuing education, and career development processes.

B. Regional Office

1. Goal

Plan, organize, direct, and control the fisheries habitat management program.

2. Responsibilities

- a. Establish policy, goals, objectives, targets, standards, and guidelines to achieve desired results through the fisheries program.
- b. Provide management advice to the Regional Forester, Forest Supervisors, Staff Officers, and Forest fisheries personnel.
- c. Improve fisheries program coordination, planning, communication and involvement with fisheries research and all other agencies, organizations, and groups, with responsibilities or interests in management of fisheries resources in the Region (by developing such mechanisms as cooperative program initiatives or demonstrations).
- d. Improve organization effectiveness in discharging Forest Service responsibilities for fisheries habitat management by implementing training, mentoring, continuing education, and career development processes to ensure continued professionalism and enthusiasm among Forest fishery personnel.
- e. Support development, transfer to Forests, and use of Fish Habitat Relationships processes to ensure integration of fish habitat, inventory, classification, and evaluation, into project and Forest level interdisciplinary resource planning and management.
- f. Provide information and opportunity for the public to use and enjoy the fisheries resources present on National Forests in the Region.

C. National Forest

1. Goal

Plan, develop, organize, direct, and control the fisheries habitat management program on the Forest.

2. Responsibilities

- a. Implement policy, goals, and objectives, and accomplish targets, standards, and guidelines to achieve the desired results of the Forest fishery program.
- b. Provide management advice to the Forest Supervisor, District Rangers, Staff Officers, and District fisheries personnel.
- c. Improve fisheries program coordination, planning, communication and involvement with fisheries research and all other agencies, organizations, and groups, with responsibilities or interests in management of Forest fisheries resources.

- d. Improve organization effectiveness in discharging Forest Service responsibilities for fisheries habitat management by using training, mentoring, continuing education, and career development processes to ensure continued professionalism and enthusiasm among Forest and District fishery personnel.
- e. Integrate Fish Habitat Relationships processes into project and Forest level interdisciplinary resource planning and management.
- f. Ensure the public is provided information and opportunity to use and enjoy the fishery resources on the National Forest.
- g. Address emerging resource issues by being willing to negotiate objectives and by encouraging public participation in Forest decision processes.

D. Ranger District

Responsibilities

Implement the fisheries program and ensure quality control, and adherence to directives, standards, and guidelines.

VI. Personal Roles

A. National Fisheries Program Manager
The National Fisheries Program Manager is responsible for formulation and evaluation of the National Fishery Program. All National Program activities will be coordinated through the Program Manager. The Program Manager is responsible for the total assigned program, will coordinate with the F/WL Program Planning/Budget Coordinator and F/WL Planning/RPA Coordinator, and will report to the Director of Fish and Wildlife. The specific role of the Program Manager is defined as follows:

Manager	is defined as follows:
Mgmt. Code	
1410	Participates in all levels of management reviews as requested. Evaluates Regions' fishery programs for opportunities to improve direction, standards, methods, funding, staffing and effectiveness.
1570	Evaluates fishery/riparian area appeals. Responds to congressional interrogatories and other work requests.
1920	With F/WL Planning/RPA coordinator, reviews selected Forest Planning documents and provides advice to ensure Forest responsiveness to existing laws and policy, developed standards and guidelines, and approved methods.
1920	Reviews and aids Regions in developing and implementing fisheries and riparian habitat programs and monitoring action plans to ensure Forest plan goals are met.
1920	Provides advice on development of program to ensure fisheries assessment in RPA.
1930	Assists WO and RO Staff Groups in describing results of fish management programs by development and refinement of reporting systems and by reviewing accomplishments
2600	Develops policy recommendations for coldwater, warmwater, anadromous, and adfluvial fisheries and riparian habitat management, K-V Wildlife fund uses, or fish stocking, wilderness lakes, and wild and scenic river management.
2600/ 2660	With F/WL Program Planning and Budget Coordinator, recommends National Fisheries and Riparian Habitat Program priorities funds, targets, and personnel) to respond to national direction and Chief's emphasis.
2610	Improves achievement of FS programs through development of formal and informal relationships with other agencies, and individuals in universities and conservation groups (coordinated target, Sikes Act plans, etc.) to achieve coordinated goals.

- Recommends national direction to Regions concerning coordination of program objectives with States and other Federal agencies to ensure fish population management compliments FS habitat and recreation objectives and vice versa.
- Provides national scientific/technical direction for fisheries and riparian habitat management by developing research findings and study results into meaningful management information (FHR). Summarizes management needs for research and transmits them to NF research. Coordinates fisheries technology transfer to Regions.
- Recommends national policy and procedures, and assists in definition of minimum coordination standards, fish habitat relationships, interagency databases, and evaluation programs.
- Develops national fish stocking coordination guidelines for use on National Forests to ensure fishery production and a recreation experience opportunity spectrum in balance with demand.
- 2650 Coordinates with Regions to ensure species chemical rehabilitation project standards meet NEPA requirements on NFS lands.
- Integrates National Fishery and Riparian Habitat Program with other functional programs (Watershed, Range, Engineering, and Lands) to ensure program implementation without duplication of effort or unproductive conflict.
- Participates in Regional activity reviews and functional assistance trips to improve fisheries and riparian habitat management direction and to evaluate achievement of desired program, standards, and guidelines.
- Visits Regions to aid development of improved procedures and programs, and recognition of resource management opportunities in fishery and riparian habitats.
- Motivates development of teamwork and highly regarded professional fisheries and riparian habitat programs. Assists Regional Program Managers in defining and operating effectively with their roles.
- Coordinates Regional development of national fisheries and riparian habitat management programs and fund needs (functional plans, ADVENT program, Sikes Act, K-V Program, personnel recruitment).
- Advises Regional Fishery Program Managers of national program needs to supplement information provided with requested budget and targets (fisheries and K-V).
- Ensures training, mentoring, and continuing education opportunities are made available to fisheries personnel to meet their professional development and career development goals. Facilitates sharing of information between Regions to aid placement of qualified biologists.

Coordinates with National T&E Species Program Manager to ensure active planning and action is taken to maintain viable populations of fish species and to recognize and recover sensitive, and T&E fish populations where they exist.

B. Regional Fisheries Program Managers

Regional Fisheries Program Managers are responsible for formulation and evaluation of the Regional fisheries programs. All programs (Forest's requests for assistance, Regional direction, and management of assigned species or groups of species, etc.) will be coordinated through the Program Manager. The Program Manager is responsible for the total assigned program, and will report to the Director of Fish and Wildlife. The specific Regional Fishery Program Manager's role is defined as follows:

- Participates in all levels of management reviews as requested. Evaluates Forest fishery programs for opportunities to improve direction, standards, methods, funding, staffing and effectiveness.
- Evaluates fishery/riparian area appeals. Responds to unscheduled congressional interrogatories and other work requests.
- Participates on Regional Planning ID Team. Reviews Forest Planning documents and provides advice to ensure Forest responsiveness to existing laws and policy, developed standards and guidelines, and approved methods.
- Reviews and aids Forests in developing and implementing fisheries and riparian habitat programs and monitoring action plans to ensure Forest plan goals are met.
- Provides and reviews requested fisheries data to RPA, and coordinates public and interagency review of submitted data. Validates National Assessment procedures.
- Assists WO and RO Staff Groups in describing results of fish management programs by development and refinement of reporting systems and by reviewing accomplishments.
- Develops policy recommendations for coldwater, warmwater, anadromous, and adfluvial fisheries and riparian habitat management, K-V wildlife fund uses, or fish stocking, wilderness lakes, and wild and scenic river management.
- 2600/ Recommends Regional fisheries and riparian habitat program priorities
 2660 (funds needs, targets, and personnel) to respond to national direction
 and Regional Forester's emphasis.

- Improves achievement of FS programs through development of formal and informal relationships with other agencies, and individuals in universities and conservation groups (coordinated targets, Sikes Act plans, etc.) to achieve coordinated goals.
- Provides Regional direction to Forests concerning coordination of program objectives and, in some cases, directly coordinates program objectives with States and other Federal agencies to ensure fish population management compliments FS habitat and recreation objectives and vice versa.
- Provides Regional scientific/technical direction for fisheries and riparian habitat management by converting research findings and study results into meaningful management information (FHR). Summarizes management needs for research and transmits them to NF research. Coordinates fisheries technology transfer to National Forests and States.
- Recommends Regional policy and procedures, and assists in field application of minimum coordination standards, fish habitat relationships, interagency databases, and evaluation programs.
- Develops Regional fish stocking coordination guidelines for use on National Forests and, based on habitat capability, recommends regulations in cooperation with States to ensure fishery production and a recreation experience opportunity spectrum in balance with demand.
- 2650 Coordinates with States to ensure species chemical rehabilitation projects meet NEPA requirements on NFS lands. (Project authority is delegated at Regional level.)
- Integrates Regional fishery and riparian habitat program with other functional programs (Watershed, Soils, Range, Engineering, and Timber Management) to ensure program implementation without duplication of effort or unproductive conflict.
- Participates in Forest activity reviews and project analyses to improve fisheries and riparian habitat management direction and to evaluate achievement of desired program, standards, and guidelines.
- Visits Forests to aid development of improved procedures and programs, and recognition of resource management opportunities in fishery and riparian habitats.
- Motivates development of teamwork and highly regarded professional Forest fisheries and riparian habitat programs in Region. Assists Forest personnel (biologists and staff officers) in defining and operating effectively with their roles.
- Coordinates Forest development of Region's fisheries and riparian habitat management programs and funds needs (functional plans, ADVENT 5-year program, Sikes Act, K-V Program, personnel recruitment).

- Advises National Fisheries Program Manager of Regional program needs to supplement information provided with requested budget and targets (fisheries and KV).
- Ensures training, mentoring, and continuing education opportunities are made available to Forest personnel to meet their professional development and career development goals. Facilitates sharing of information between Regions and Forests to aid placement of qualified biologists.
- Coordinates with Region's T&E Species Program Manager to ensure active planning and action is taken to maintain viable populations of fish species and to recognize and recover sensitive, and T&E fish populations where they exist within the Region.

Forest Fisheries Staff Officers

The Forest Staff Officer with responsibility for the fisheries program works at the direction of the Forest Supervisor. The staff officer has the following roles and responsibilities:

- Participates in all levels of management reviews as requested.
 Evaluates Forest and Districts' fishery programs for opportunities to improve direction, standards, methods, funding, staffing, and effectiveness.
- 1570 Coordinates evaluation of fishery/riparian area appeals. Helps prepare responses to congressional interrogatories and other work requests.
- 1920 Coordinates adequate participation of fishery expertise on Forest level Planning ID Teams. Ensures Forest compliance with existing laws and policy, developed standards and guidelines, and approved methods.
- 1920 Coordinates development and implementation of fisheries and riparian habitat programs and monitoring plans to assure Forest Plan goals are met.
- Assists WO and RO Staff Groups in describing results of fish management programs by providing input to the development and refinement of reporting systems.
- Coordinates Forest level development of policy recommendations for coldwater, warmwater, anadromous, and adfluvial fisheries and riparian habitat management, K-V fund uses, fish stocking, wilderness lakes, and wild and scenic river management.
- 2600/ Coordinates development of Forest's recommended fisheries and 2660 riparian habitat program priorities (funds, targets, and personnel) to respond to National and Regional direction.

- Improves achievement of FS programs through development of formal and informal relationships with other agencies, and individuals that increase support of proposed and ongoing programs.
- Provides direction on the Forest to ensure adequate coordination of state fish program objectives with FS habitat and recreation objectives and vice versa. Includes coordination with appropriate state level offices.
- 2620 Coordinates and summarizes management's needs for research and transmits them through appropriate channels.
- Recommends Forest policy and procedures and ensures field application of minimum coordination standards, fish habitat relationships, interagency databases, and evaluation programs.
- Ensures National and Regional fish stocking coordination guidelines are used on the Forest. Coordinates recommendations to the states for regulations that balance demand win fishery production and the recreation experience opportunity spectrum.
- 2650 Ensures species chemical rehabilitation projects are coordinated with the states and meet NEPA requirements on NFS lands.
- 2660 Ensures integration of Forest level fishery and riparian habitat programs with other functional programs to ensure program implementation without duplication of effort or unproductive conflict.
- Coordinates Forest and District level program activity and project reviews to improve fisheries and riparian habitat management direction and to evaluate achievement of desired program, standards, and quidelines.
- Visits Districts to aid development of improved programs and recognition of resource management opportunities in fishery and riparian habitats.
- Supports and facilitates development of teamwork and highly regarded professional Forest fisheries and riparian habitat programs on the Forest, assists District staffs in defining and operating effectively with their roles.
- 2660 Coordinates Forest development of fisheries and riparian habitat management programs and funding needs.
- Ensures training, mentoring, and continuing education opportunities are available to Forest personnel to help meet their professional development and career goals. Facilitates information sharing between Regions, Forests, and Districts to aid placement of qualified biologists.

Ensures adequate planning and action is taken to maintain viable populations of fish species and to recognize and recover sensitive, and T&E fish populations on the Forest. Ensures adequate coordination with the states and Fish and Wildlife Service is occurring.

D. Forest, Shared Services, or Zone Fisheries Biologists

The Forest Fishery Biologist works at the direction of the Forest Staff Officer responsible for the fisheries program. A Shared Services Fishery Biologist works at the direction of Forest staff officers on several units who have the responsibility of coordinating his service activities and schedule. A Zone Fishery Biologist works at the direction of a Supervisor in the Regional Office or other administrative unit to which he is assigned. Their specific roles on a Forest are defined as follows:

- 1570 Evaluates fishery/riparian area appeals on the Forest as requested. Responds to Regional requests for information.
- Participates on Forest Planning ID Team. Develops fisheries objectives, standards and guidelines, and monitoring plans. Evaluates potential impacts to fisheries from proposed alternatives.
- Develops recommendations for coldwater, warmwater, anadromous, and adfluvial fisheries and riparian habitat management, K-V wildlife fund uses, or fish stocking, wilderness lakes, and wild and scenic river management.
- Recommends fisheries and riparian habitat program priorities (fund needs, targets, and personnel) to respond to national direction and Regional Forester's emphasis.
- Improves achievement of FS programs through development of effective formal and informal relationships with local agencies and groups.

 Develops support for Forest Programs.
- Coordinates program objectives with appropriate level State and other Federal agency offices to ensure fish population management compliments FS habitat and recreation objectives and vice versa.
- Provides Forest level scientific/technical direction for fisheries and riparian habitat management by converting research findings and study results into meaningful management information (FHR). Summarizes research needs and transmits them through appropriate channels.
- Coordinates Forest fish stocking proposals with States to ensure fishery production and a recreation experience opportunity spectrum in balance with demand.

- Coordinates with States and provides input, as necessary, to ensure species rehabilitation projects meet NEPA requirements on NFS lands. (Project authority for chemical rehabilitation is delegated at Regional level.)
- Integrates Forest level fishery and riparian habitat programs with other functional programs (Watershed, Soils, Range, Engineering, and Timber Management) to ensure program implementation without duplication of effort or unproductive conflict.
- Participates on Forest program, activity, and project reviews to improve fisheries and riparian habitat management direction and to evaluate achievement of desired quality of program, standards, and guidelines.
- Visits Districts to aid development of improved procedures and programs, and recognition of resource management opportunities in fishery and riparian habitats.
- Motivates development of teamwork and highly regarded professional Forest fisheries and riparian habitat programs on the Forest. Assists District biologists in defining and operating effectively with their roles.
- 2660 Coordinates District development of Forest's fisheries and riparian habitat management programs and fund needs.
- Advises Regional Fisheries Program Manager of Forest program needs to supplement information provided on requested budget and targets (fisheries and K-V).
- Coordinates with Region's T&E Species Program Manager to ensure active planning and action is taken to maintain viable populations of fish species and to recognize and recover sensitive and T&E fish populations where they exist on the Forest.

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Research Action Plan

Due July 1, 1987



Regional Action Plan

Due June 1, 1987