

## SECTION 7

# COORDINATED IMPLEMENTATION, MONITORING AND EVALUATION

## INTRODUCTION

The Council recognizes the need to employ a systemwide approach to address the needs of Columbia River Basin fish and wildlife. To accomplish this, a coordinated implementation, monitoring and evaluation process is essential. This process should be flexible enough to evolve over time. It should facilitate identification of priorities. It should provide coordination at levels needed to accomplish basinwide as well as local watershed objectives. Coordination must also encompass all programs, plans, policies and statutes that affect fish and wildlife produced in the Columbia River Basin. It must allow all affected parties meaningful participation, encourage local implementation and guidance and provide needed regional coordination. The approach should also provide a mechanism for accountability.

Considering all the functions that need to be addressed by coordinated implementation, monitoring and evaluation at both the regional and local level, it is easy to envision a complicated system of committees with frequent meetings and numerous assignments. The intent of the Council is to avoid this approach as much as possible. Coordinated implementation, monitoring and evaluation should be lean on process and heavy on implementation of on-the-ground actions for fish and wildlife. Standing committees and meetings should be kept to a minimum. When meetings are needed, existing groups and committee structures should be used. If existing committees are not appropriate for topics that need to be addressed, informal gatherings or ad-hoc approaches should be used to accomplish the need. The processes and committees that are created should be reviewed frequently to ensure their continuing need. In short, the Council intends that coordinated implementation, monitoring and evaluation should expedite, not burden, actions for fish and wildlife.

## 7.1 COORDINATED IMPLEMENTATION

### 7.1A Basin Oversight Group

#### Council

1. Organize and convene a Basin Oversight Group, consisting of policy-makers from the state and federal implementing entities and other interested parties, to aggressively pursue implementation of this program. The Basin Oversight Group will meet at least annually to address progress, problems and issues regarding program implementation. This group will review the annual implementation work plan and the annual program monitoring report. It will make recommendations to the Council by July 31 of each year. Meetings of the Basin Oversight Group will focus on needed actions and implementation problems, not routine reporting. All other committees identified in this program will coordinate with the Basin Oversight Group.

### 7.1B Implementation and Monitoring

As the region moves forward to realize the ambitious goals of the fish and wildlife program it will pursue two closely related, parallel paths. One is the implementation path—that is, taking specific actions identified in the annual implementation work plan. This path will include steps to address uncertainties and refine actions over time. The second path is evaluation. The evaluation path will monitor overall program implementation, evaluate the effectiveness of actions taken, and judge their scientific merits. One outcome will be an annual assessment of the program's performance—the annual program monitoring report. This report can be

used to determine the need, if any, for mid-course corrections.

A key component of program implementation is feedback, through implementation of actions and program monitoring, to facilitate the refinement of the program over time. For this, the program framework (described in Section 2 and Appendix A) will act as a yardstick for evaluating the performance of the program.

There are many areas where current information is incomplete because we are as yet unable to measure some key variables, and because of the possibility of unforeseen events. The Council expects to revisit the schedules and targets as necessary based on information gathered by the monitoring program and evaluation of implemented actions. If progress toward the performance standards or meeting rebuilding schedules falls significantly short, the Council will revisit all or part of the program.

## Implementation of Actions Including Research Projects

Bonneville's implementation of this program to date has been guided by an implementation planning process negotiated with the fish and wildlife agencies and tribes. Bonneville created a policy review group and a scientific review group to review implementation questions. Coordination and prioritization of actions occurs in technical scoping groups that focus on different aspects of the program. In this section, the Council calls for this implementation process to be broadened to include land and water managers and other interested parties to produce an annual implementation work plan and a monitoring report, and to provide for independent scientific review of the program and its implementation. The annual implementation work plan should reflect program goals and principles, and any prioritization of measures developed by the Council.

### Bonneville, Fishery Managers and Others

1. Expand the implementation planning process so that participants prioritize and coordinate implementation of all program measures, including research. Participants should include the Council, the National Marine Fisheries Service, fish and wildlife agencies, Indian tribes, Bonneville, river operators, land and water managers, utilities, citizen groups and others.
2. Participants in this expanded process should prepare an annual implementation work plan:
  - a. detailing actions by all parties to implement program measures;
  - b. prioritizing actions, using the six principles described on page 18 and any other prioritization developed by the Council;
  - c. identifying criteria used to select habitat actions;

- d. identifying and explaining any conflicts with dates or schedules in the Council's program and suggesting modifications;
  - e. describing actions to deal with uncertainties identified by the independent scientific group; and
  - f. estimating costs of implementing measures.
3. The annual implementation work plan should include (but not be limited to) actions to address key scientific uncertainties associated with the program and its measures (see Section 7.2C).
  4. The annual implementation work plan should be submitted to the Council by June 15 of each year. In the course of its review, the Council will review the list of key uncertainties (see Section 7.2C), and the manner in which the work plan proposes to address these uncertainties. Unless the Council provides otherwise, responsible parties should proceed with implementation within 45 days of submitting the work plan to the Council.

### Federal Government, States and Tribes

5. Review the measures in this program that call for collective action by the states, tribes and other entities. Designate the appropriate entity to coordinate implementation of each measure. The designated entity should be responsible for preparing work plans and reporting progress. By January 1, 1993, report to the Council these designations. Where sources of funding are not identified, discuss the capabilities of the states, tribes and other entities to implement the measures with available resources. For each measure that cannot be met with available resources, and there is clearly no obligation of the Bonneville Power Administration under the Northwest Power Act, propose:
  - a. an alternative funding source;
  - b. the estimated cost for implementation; and
  - c. the legal authority for allocating the necessary funds from the proposed source.

### Federal Energy Regulatory Commission

6. For measures addressed directly to Federal Energy Regulatory Commission licensees, or that are otherwise relevant to Commission decision-making, take measures into account to the fullest extent practicable.

## Management and Coordination

Under the Northwest Power Act, the Council's role is to develop a regional fish and wildlife program. Implementation of this program is placed in the hands of others. The success of this program depends primarily on the willingness and ability of those implementing it.

The Council recognizes that implementation of this program will be a major challenge to the region. In some respects, this program is the biological equivalent of the Manhattan project, a project undertaken in great urgency and expense, and depending on the coordinated efforts of many separate groups.

To get major pieces of work under way quickly, this program establishes a large number of committees and working groups. The Council is especially concerned that these groups work closely together to achieve the primary goal of this program, the successful recovery of the salmon and steelhead populations in the Columbia River Basin in a manner which is as fast, efficient and cost-effective as possible.

Effective management and coordination of this program is essential. The Council believes two measures will contribute significantly to management and coordination.

First, the Council urges Bonneville, as primary funding agency, to work with the agencies, tribes and other implementors to establish an appropriate management structure with clear responsibility and accountability for the implementation of this program. While the decision on exactly what this structure should be is one best made by the implementors, the ability to make prompt and effective implementation decisions is critical. In particular, the management structure should include an executive, whether an individual or a small team, who is responsible for results, can determine priorities, make final decisions, resolve disputes and avoid deadlocks.

Second, the Council agrees to take all steps possible to further implementation of this program. The Council recognizes that even the most carefully developed plans can be improved with experience and will need adjustments and corrections as they are carried out. The Council intends to promptly take up and act upon any suggestions from implementors for changes in program measures that will improve implementation.

The Council will also use the extent of its powers, including both the legal authority given to the Council under the Act and its persuasive power with Congress, the states and the public, to encourage the full participation of implementing agencies. In the event that an agency is unwilling to cooperate in carrying out this regional program, the Council wishes to be advised immediately so that appropriate steps can be taken.

## 7.2 MONITORING AND EVALUATION

While implementors seek to take actions and clarify uncertainties, those who monitor and evaluate the program should determine if the program's goals are being met and if runs are being rebuilt. Evaluators also should evaluate the scientific credibility of the program. Pro-

gram monitors also should review the scientific credibility of the program and provide independent scientific review and a means to interject creative thinking, innovation and new ideas. The measures below describe a procedure to assess implementation and progress, and evaluate the program on its scientific merits.

The purpose of these monitoring and evaluation activities is to ensure that the region systematically improves its knowledge of what measures work, what measures do not and why. To help identify areas where we most need to improve our understanding, the Council is calling on an independent scientific group (see Section 7.2B, below) to identify "key uncertainties"—questions whose answers are most crucial to the success of program measures in rebuilding salmon and steelhead populations. These questions will be used by the implementation process in identifying measures to be implemented, and by the Council and the region in reviewing the annual implementation work plan, to be sure that our approach to learning is well thought through. The Council sees this as a critical step in carrying out an adaptive management approach to salmon and steelhead rebuilding. The Council recognizes that the region cannot expect perfect knowledge before taking action, and must act on the basis of the best information available at that time.

The Council expects to learn not only from program implementation, but also from the Endangered Species Act and other federal processes, which will tend to focus federal agency implementation of the Council program, other salmon recovery measures and other analyses of salmon recovery. For example, the Corps' National Environmental Policy Act analysis of 1992 river operations showed some technical difficulties in the program's spring flow program in the Snake River. The National Marine Fisheries Service's 1992 consultation process on river operations also led to changes in summer flows and spill. The Council does not expect to amend its program each time one of these developments occurs. Rather, over the course of several seasons, a group of program issues may emerge, and an amendment process can be initiated. This will require the Council not only to pay careful attention to this program's evaluation processes, but to monitor the National Marine Fisheries Service's consultation process.

Because salmon populations and their environment are dynamic, monitoring and evaluation should account for the possibility that, even as the region takes steps to rebuild salmon populations, other human activities may undermine these efforts. Accordingly, program implementors and evaluators and the Council should try to anticipate potential impacts and take steps to avoid them before they occur. Where this is not possible, appropriate steps should be taken to mitigate impacts after the fact.

## 7.2A Annual Program Monitoring Report

### Bonneville

1. Fund the coordinated preparation of an annual program monitoring report as part of the expanded implementation planning process. This report should compile and summarize information on program implementation, performance standards, harvest and stock status. The report should be based on the coordinated information system (Section 7.6). The annual monitoring report should reflect broad technical review and input, including the Council and the National Marine Fisheries Service. The final report should be submitted to the Council and the National Marine Fisheries Service by June 15 each year.

## 7.2B Independent Scientific Evaluation

### Bonneville

1. Fund an independent scientific group to evaluate the program in terms of the following questions:
  - a. Are survival targets being met?
  - b. Are rebuilding targets being met?
  - c. Are program goals being met?
  - d. Are effort and money being invested in a cost-effective manner?
  - e. Are there unintended effects on resident fish, wildlife or the environment, and if so, how might they be minimized?

The group should make use of the past efforts of the Council's Monitoring and Evaluation Group. The independent scientific group should also review questions submitted by the Council or through the implementation process. The group should be fully compensated for its time and travel.

The independent scientific group should consist of people with strong natural or social science experience who have demonstrated an ability to provide independent review of complex environmental issues. The group (and contract or staff support for the group) should be organized and funded to ensure the scientific credibility of its evaluations, free of institutional constraints or biases. Selection of independent scientific group members should be made in consultation with the Council, with advice from participants in the implementation process. To ensure that the group is independent of institutional constraints and biases, consider organizing this effort through an independent contractor, a university-based group, or both. The group may suggest improvements in the program, in research projects, in

the coordinated information system, or in the implementation process, including changes that would facilitate evaluation. The group should scope its review process, prepare a proposed budget and report to the Council by June 15, 1993. Following Council approval of the budget, evaluation activities should proceed, and evaluation reports should be submitted to the Council biennially, beginning on June 15, 1994.

## 7.2C Key Uncertainties

### Independent Scientific Group

1. Identify and revise over time key uncertainties associated with program measures. These key uncertainties should be those information needs most critical to the achievement of program goals, and rebuilding and survival targets.

## 7.2D Endangered Species Act Coordination

### Council

1. Monitor the Endangered Species Act consultation process to ensure that program monitoring and evaluation results are considered, and that the Council is aware of developments in river operations, harvest, habitat and production activities that may suggest the need for program amendments.

## 7.2E Prioritization and Cost-Effectiveness

### Council

1. Continue to review program measures for purposes of prioritization, cost-effectiveness and biological effectiveness.

## 7.2F Streamlining Implementation

### Council

1. Retain an independent consultant to review, in consultation with appropriate parties, the entire structure of committees and groups involved in planning or implementing fish and wildlife program measures. By August 1993, prepare a report identifying ways to reduce process and increase efficiency wherever possible.

## 7.3 REGIONAL ANALYTICAL METHODS COORDINATION

To develop and assess regional strategies to rebuild salmon and steelhead, and to make the program framework operational, analytical tools should be developed that are both understandable and credible. Computer models and other analytical methods are essential to the program framework. They provide a means to link program measures to survival targets, rebuilding schedules and rebuilding targets. A variety of tools may be developed that span legitimate scientific differences or reflect different approaches. This process should not stifle these differences, but instead should promote understanding of their implications. However, the region should integrate these tools into a unified approach. The Council applauds the considerable progress in this direction, and calls on the technical staffs of the various parties to expedite development of analytical tools and their documentation to assist decision-making.

All computer models are based on imperfect knowledge. They cannot fully represent the complexity of the Columbia River ecosystem, much less predict the future. There remain major uncertainties regarding the biological effectiveness of some measures. Models necessarily incorporate assumptions that are debatable, even where they are based on the best available scientific knowledge.

During the course of the 1991-1992 amendment process, substantial efforts were devoted to the development of new analytical tools with which to evaluate the targets. Not all of these tools were fully developed and reviewed at the time the amendment process was completed. The Council wishes to make use of these tools, while recognizing that these tools also will be limited by imperfect knowledge. New analytical tools will not resolve scientific uncertainties that have plagued the region for years.

In short, we are involved in a long learning process that will be shaped both by analytic models and new information. To ensure that the benefits of this debate are fully reflected in this program, the Council has outlined a process in Sections 2.3 and 7.1 for updating the rebuilding plans on an ongoing basis.

### 7.3A Implementation Process

#### Bonneville, Fishery Managers and Others

1. Begin a continuing process to review, coordinate and develop analytical tools to assist decision making, facilitate program evaluation, and identify critical uncertainties. This should be linked closely with and contribute to the development of framework elements in Section 2.3. This process also should inter-

act closely with the coordinated information system and efforts to monitor and evaluate this program. This process should seek to incorporate new information, events and techniques into improved projections of rebuilding schedules under this program.

This should be a technically oriented process that is responsive to policy and management needs. A primary goal should be to promote understanding and effective use of computer models, data bases and other analytical tools. This includes the development of standards for model documentation, modification and dissemination. Through this process, identify areas of agreement between different approaches. Where different points of view and interpretation are evident, identify the implications of these disagreements and suggest research and other actions to resolve the difference. The process should also prepare a common bibliography and input data base. This should be developed in consultation with the Coordinated Information System. Provide a progress report to the Council by July 1993.

#### Bonneville

2. Supply funding necessary to establish and maintain this process including travel expenses of participants and facilitation, documentation or other support.

## 7.4 CONTINUING EVALUATION OF SOURCES OF SALMON MORTALITY

There is continuing debate over the contribution of various human activities to salmon mortality. To a certain extent, this debate involves complex interactions that would lend themselves to evaluation only after lengthy basic research and analysis. However, several parties have offered analyses that provide a general picture of relative contributions to fish mortality, and the Council believes it may be worthwhile to refine these analyses in an effort to arrive at a common understanding of these questions.

#### Council

1. Refine and elaborate analyses of the relative contributions of various human activities to fish mortality. Circulate the resulting analyses for public review.

## 7.5 RESEARCH AND MONITORING INFORMATION DISSEMINATION

### Bonneville and Corps of Engineers

1. Annually publish a summary of results from all studies funded under the program. This should consist of concise descriptions of the project, results to date and future directions. Summaries should be prepared by the contractors, and compiled and published by Bonneville.
2. Specify as part of the above task that summaries of research originating from the fish and wildlife program be submitted to the Coordinated Information System in appropriate form for incorporation into its research information data base. Fund the development of similar summaries for prior research conducted under the fish and wildlife program.
3. Hold annual symposiums at which contractors present the results of their studies, beginning in March 1993. The purpose of these symposiums is two-fold: first, to promote the use of research and monitoring information funded under this program by managers and non-research personnel, and, second, to provide peer review and coordination of research within the research community.

## 7.6 COORDINATED INFORMATION SYSTEM

### Bonneville

1. Continue to fund the development of the Coordinated Information System to promote effective exchange and dissemination of information in standardized, electronic format throughout the basin. The Coordinated Information System should be maintained as an objective vehicle for collection and dissemination of information to and from all parties. It should be used in close cooperation with the fishery managers and other concerned parties. This development should include making available information from primary sources such as fishery managers and secondary sources, such as the Fish Passage Center and the Pacific States Marine Fisheries Commission. Standardizing data formats and establishing data needs will be an ongoing responsibility of those developing the Coordinated Information System. Include the following data bases:

### Anadromous Fish Data Base

Those developing the Coordinated Information System should assemble and tabulate on an annual basis and make available in electronic format all data necessary to the production, updating and enhancement of information in the 1985 Bonneville-funded Stock Assessment Report. The Stock Assessment Report should be revised and released by October 1992. Thereafter, those responsible for the Coordinated Information System should update the report on a regular basis. Other types of natural, hatchery and system information requested for program monitoring and evaluation should be included in the anadromous fish data base. Hatchery data should be developed in cooperation with the Integrated Hatchery Operations Team and should contain all data necessary to ascertain the performance of Columbia River Basin hatcheries.

### Scientific Information Data Base

Existing information from fish and wildlife program projects, other regional research efforts, and related national and international anadromous fish research should be compiled and made available to users in the form of a computerized bibliographic data base and a systematic, readily accessible, document retrieval system. Research data bases that are maintained by various fish and wildlife entities should be cataloged in a summary data base describing the information and detailed instructions on how to access this data.

### Habitat Data Base

Information to permit evaluation of the status of anadromous fish habitat in the Columbia River Basin should be compiled and made available to Coordinated Information System users. The data base should include a hierarchical classification system. This should include information on carrying capabilities, survival rates and habitat-related human activities. In developing and maintaining this capability, explore options to survey habitat conditions, such as analysis of aerial photographs, that could be more expeditious, less cumbersome and less costly than conventional methods. Also, explore using a standard organizing approach such as the Geographic Information System.

## 7.7 PROJECT ACCOUNTING DATA BASE

### Bonneville

1. In cooperation with the fishery managers, develop a data base and tracking system to monitor and categorize expenditures by geographic location (Environmental Protection Agency River Reach System), species, type of action and other relevant categories. This should be developed in coordination with the Coordinated Information System. This data base should focus on Bonneville expenditures, but also include other agencies' funding activities under the fish and wildlife program. Bonneville should expedite development of this data base and seek to have a working prototype by September 1993.

## 7.8 PROMISING NEW IDEAS FOR IMPROVING SALMON SURVIVAL

The Council has called for additional flows, augmented transportation, drawdown studies, evaluations of several possible changes in power system operations and other ways to improve passage survival. Success of any of these measures is uncertain. Other ideas may be as promising. The Council has also called for new fish marking techniques, methods for selective harvest and investigation of the use of sound to divert salmon away from turbines. The Council is concerned that these new ideas might be lost in the debate over existing measures or allowed to languish. This measure is intended to provide an expedited process to encourage innovative approaches to improving salmon survival, especially in the mainstem.

### Bonneville, Corps of Engineers and Bureau of Reclamation

1. Accept and, if necessary, solicit proposals from all sources to improve passage and other aspects of salmon survival.
2. Screen and evaluate such proposals on an expedited basis and promptly present promising ideas to the Council.

The Council will review promising ideas on an expedited basis, with input from fish managers, and determine whether or not development of these ideas should be pursued. Upon Council approval, development should be promptly funded.