

**Report to the
Office of Management and Budget
on the
U.S. Fish and Wildlife Service's
Fisheries Mitigation Programs**

Department of the Interior
U.S. Fish and Wildlife Service
May 28, 2002

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INTRODUCTION

The predecessor of the U.S. Fish and Wildlife Service (Service), the U.S. Commission on Fish and Fisheries, was formed in 1871 to protect and enhance fisheries which were being depleted by a growing Nation. Since that time, the Service's Fisheries Program, including the National Fish Hatchery System (NFHS), has been involved in, among other things, mitigating the losses of fish habitats, fish populations, and fishing opportunities.

The U.S. Congress and the Courts have provided laws, appropriations, and orders which have authorized the construction and operation of dams, and other water diversion projects. The construction and operation of these Federal water resource development projects have had impacts on many water systems and their respective fish populations. The construction and operation of these projects have resulted in the need to build and operate fish hatcheries to provide direct mitigation (e.g., provide disease-free fish eggs or fish for stocking) for waters impaired by Federal water resource development projects. Differences in authorities to do so, which now number over 200, have led to questions on how fisheries mitigation programs for Federal water resource development projects should best be conducted and funded. In some cases, authorities specifically require or forbid full cost recovery to the Service from the Federal action agency or project beneficiaries. This inconsistency has led to the Service expending its appropriations to offset the costs associated with mitigating the impacts of Federal water resource development projects.

Directives and recommendations for how these programs should be conducted and funded have been offered recently by the Office of Management and Budget (OMB), Interior Appropriations Committees, the General Accounting Office (GAO), and the Sport Fishing and Boating Partnership Council (SFBPC) (Appendix I). This Report responds to directives from OMB in the Passback of the Department of the Interior FY 2003 budget. Directives included:

- “FWS is also requested to prepare a report by July 1, 2002, that identifies all hatchery programs providing mitigation services for Federal water resource development projects, the legal authorities for the FWS to conduct the mitigation work, associated costs, and relevant agencies responsible for such projects. The report should also provide recommendations and suggested legislative fixes to facilitate full cost recovery of these services as recommended by GAO and Congress in the FY 2002 Interior Appropriations Conference report.”
- “Identify changes to current law that will help the Fish Hatchery System prosper; i.e., clarify priorities and mitigation (consistent with GAO and Sportfishing and Boating Council's reports).” [Note: This Report focuses on mitigation. The directive to clarify priorities will be addressed in a separate Report.]
- “Establish cost-recovery mechanisms for statutory mitigation activities of the NFHS, e.g., BPA (specific actions with time lines should be identified).”

- “Develop strategies to recover costs associated with mitigation hatcheries and other hatchery activities.”
- “Develop a plan to enter into cost-sharing arrangements with states and eventual phasing out of hatcheries producing non-native fish and estimate costs and savings.” [Note: This Report focuses on full cost recovery for mitigation programs. A directive to phase out non-native production will be addressed in a separate Report.]

The SFBPC asserts that one role of the Service in fisheries mitigation programs is “. . . to provide fish and associated technical support to mitigate adverse effects from federally funded water projects as directed by statutory authority or reimbursed by project managers and sponsors” (*A Partnership Agenda for Fisheries Conservation: A Special Report by the Sport Fishing and Boating Partnership Council*; January 2002). Recommendations by the Interior Appropriations Committees, GAO, and the SFBPC call for all operations and maintenance costs for fisheries mitigation programs to be reimbursed by the Federal project development agency or, where possible, the project beneficiaries (Appendix I). These recommendations are consistent with those of OMB.

This Report summarizes the findings of an analysis of the NFHS’s mitigation programs associated with Federal water resource development projects and provides recommendations for both administrative and legislative actions to obtain full cost recovery for those programs. This Report is the first of several steps the Service will take to fully recover costs for its fisheries mitigation programs.

For the purpose of this Report and supporting analyses, the definition of mitigation is that developed by the Council of Environmental Quality (CEQ) in its regulations implementing the National Environmental Policy Act (83 Stat. 852) and later adopted in the Service’s mitigation policy (46 FR 7657; January 23, 1981). The five alternatives provided in the regulations (40 CFR 1508.20) for avoiding or mitigating environmental impacts of a Federal project are:

- “(a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- “(b) Minimizing the impact by limiting the degree or magnitude of the action and its implementation.
- “(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- “(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the act [or project].
- “(e) Compensating for the impact by replacing or providing substitute resources or environments.”

The CEQ's regulations provide that the first option in assessing Federal water development projects is to prevent adverse impacts to the Nation's fish and wildlife resources. However, when adverse impacts cannot be prevented, the Service seeks mitigation for these impacts. Mitigation can take many forms, such as actions to minimize the effects of the development (e.g., fish ladders to allow fish passage over a dam), the creation of replacement habitats in locations off-site from the development project, or establishing self-sustaining populations of fish that are compatible with the altered habitat. Where development projects have altered the habitats to the point where native, self-sustaining fish populations cannot survive, the stocking of propagated fish to provide fishing opportunities to replace economic potential lost by the development project has been an accepted alternative. Provision of these replacement or substitute fisheries is consistent with 40 CFR 1508.20 (e).

Current dialog with the Interior Appropriations Committee, OMB, GAO, and the SFBPC agree that when Service hatcheries are used to mitigate damages caused by Federal water resource development projects, either the project beneficiaries or the Federal development agency should pay the costs incurred by those hatcheries. This Report identifies those costs and the agencies responsible for the water resource development project and/or the agencies responsible for mitigating for those projects and provides recommendations for obtaining full cost recovery for those fishery mitigation programs.

DEFINITION OF TERMS

For this Report, the following definitions have been applied to key terms to ensure consistency in their use and meaning.

Costs

Annual Operation Costs - All operation costs associated with a fisheries mitigation program conducted by the Service's Fisheries Program to include salaries, training, fish feed, fish collection, fish health evaluation, fish marking and evaluation, appropriate research at Fish Technology Centers, fish distribution, and supply costs.

Annual Maintenance Costs - All costs associated with maintaining fixed and movable assets that support a fisheries mitigation program conducted by the Service's Fisheries Program to include annual, cyclical, and deferred maintenance, equipment replacement, and capital improvements.

Associated Costs - All direct and indirect costs associated with a fisheries mitigation program conducted by the Service's Fisheries Program. These costs are not actual costs, but reflect the costs to conduct the mitigation program if a reimbursable agreement were in place.

Direct Costs - Costs which can be specifically identified with a service or product, such as salary, travel, equipment, and supply costs that are directly associated with a project. For fisheries mitigation programs, these costs include salaries, fish feed, fish health evaluations, fish

distribution, fish marking and stock evaluation, annual and deferred maintenance, and Regional Office and Washington Office management costs.

Indirect Costs - Costs which cannot be identified with a specific service or product but which support the provision of same. They may include such things as space rental, telephone service, postage, radio systems, workers compensation, printing and reproduction costs, as well as Regional Office administrative support. Overhead was calculated following principles cited in the Service's current policy on reimbursable agreements (FWS Manual 267 FW 1).

Funding/Reimbursement

Fully Reimbursed - A mitigation program is considered fully reimbursed when all direct and indirect costs associated with the program are provided by an entity other than the Service.

Partially Reimbursed - Partially reimbursed mitigation programs receive some funding to cover direct and indirect costs associated with the program from an entity other than the Service. The costs not covered by that entity are provided by the Service.

Non-Reimbursed - For non-reimbursed mitigation programs, all direct and indirect costs associated with conducting the program are provided by the Service.

General

Legal Authority or Authorization - A specific statute enacted by the U.S. Congress and signed into law by the President of the United States, a court order involving the United States, or a treaty between the U.S. and another entity.

Mitigation Program - A distinct activity undertaken by the Service to mitigate the adverse impact of a Federal water resource development project. The stocking of a specific species of fish and/or fish eggs of a specific species from one hatchery into a specific body of water for the purpose of compensating for the impact of a Federal water resource development project constitutes one distinct mitigation program.

ANALYSIS/METHODOLOGY

This Report includes only ongoing fisheries mitigation programs conducted by the Service. The Report does not address the issue of fisheries mitigation programs that are being conducted by States with non-Federal funding. Nor does it address the issue of whether environmental damages caused by Federal water development projects are being adequately mitigated.

This Report (1) identifies all Federal water resource development projects for which fisheries mitigation programs are currently conducted by the Service, and the agency responsible for each project, (2) identifies authorities for the Service to conduct the mitigation work, (3) identifies

authorities which allow or prohibit the Service from receiving full cost reimbursement to conduct fisheries mitigation programs, and (4) identifies the total associated costs of the fisheries mitigation program at that project, including whether the program is currently reimbursed.

Total associated costs were calculated by adding all direct and indirect costs at each station that were associated with a fisheries mitigation program. For fisheries mitigation programs, direct costs include salaries, fish feed, fish health evaluations, fish distribution, fish marking and stock evaluation, annual and deferred maintenance, and Regional Office and Washington Office management costs. Indirect costs include such things as space rental, telephone service, postage, radio systems, workers compensation, printing and reproduction costs, as well as Regional Office administrative support. These costs were calculated following principles cited in the Service's current policy on reimbursable agreements (FWS Manual 267 FW 1). The total associated costs therefore are not the amount of operating money currently available on each station, rather they include a percent overhead for items billed through the Service's Cost Accounting Methodology, Regional and Washington management costs, plus a maintenance estimate calculated as 3% of capital asset value.

Industry estimates that adequate annual maintenance budgets generally requires 2 - 4% of a facility's capital value ("Committing to the Cost of Ownership: Maintenance and Repair of Public Buildings," 1990). Construction and maintenance projects at hatcheries are costly and periodic. Thus, inclusion of actual construction and maintenance costs would skew annual cost estimates; therefore, actual construction and maintenance costs were not used in this Report. However, the Service is not currently funded at a level which would allow the expenditure of 3% of any station's capital asset value each year for maintenance. This means that the total associated costs figure which is shown in the table for each mitigation hatchery is generally greater than the amount actually spent for that program in any year. However, because the same formula was used in each case, the figures for total associated costs can be compared between stations. During negotiations to develop full cost recovery agreements between the Service and the action agencies, the total associated costs figures in this report will provide a financial context.

While, maintenance costs are estimated at 3% of capital asset value across all mitigation programs, in reality, these costs vary according to a number of factors such as the temperature and purity of incoming water, effluent standards of the state where the hatchery is located, the needs of the species being reared, and environmental conditions at the hatchery site. Maintenance costs at any particular hatchery could be more or less than 3% and would require a more detailed analysis to determine site-specific costs prior to establishing and requesting full cost-reimbursement for a project agency or beneficiary.

Identity of the Federal water resource development project for which fisheries mitigation programs are conducted by the Service, and the agency responsible for that project, were obtained from the Service's Fish and Fish Egg Distribution module of the Fisheries Information System (FIS) or provided directly by the field station involved in the program. Authority for

Service involvement in a particular hatchery program was determined by review of both general and project-specific construction and operations authorities. The actual legislation, from "Statutes at Large" and/or U.S.C. citations were reviewed to verify authorities for construction of water development projects being mitigated. FY 2001 data from the Federal Financial System were used, along with additional FIS information, to determine the direct and indirect costs associated with the fisheries mitigation programs, including whether the program was reimbursed.

Data from the Service's Fish and Fish Egg Distribution module of the FIS were analyzed to characterize fisheries mitigation programs conducted in FY 2001 and/or FY 2000. Two years of data were analyzed to capture variations in the number of fish and/or fish eggs distributed and in the associated expenses that support a particular program. A mitigation program may not require distributing fish and/or fish eggs on an annual basis.

In order to provide the most comprehensive review possible, all programs tied to a Federal water development project, no matter how far removed from that project, are included. In other words, programs to restore native species that are in anyway necessitated by a Federal water resource development project, are included in this Report, although some of those programs are appropriately coded as "restoration" in the Fish and Fish Egg Classification System, as developed in response to the 1999 - 2000 GAO audit of the NFHS. This is consistent with the definition of "mitigation" in 40 CFR 1508.20(c).

"Mitigation programs" were selected as the management unit for these analyses. By using "mitigation program" as the management unit, discrete groups of fish and/or fish eggs propagated and distributed to mitigate for a Federal water resource development project could be tracked and used as a common denominator by which all fisheries mitigation activities and associated costs were analyzed.

This Report recognizes that the costs of conducting fisheries mitigation programs involve annual costs and costs that are amortized. There are direct and indirect costs that are incurred both on station and off the the hatchery. The annual costs cited in this report include all direct and indirect costs for that year. The direct costs include a maintenance estimate of 3% of the station's capital assets value, adjusted for the percent that field station is involved in mitigation. If the percent of production dedicated to mitigation, on an individual station changed from 2000 to 2001, the maintenance estimate varies.

Indirect costs and direct management costs were estimated following principles cited in the Service's current policy on reimbursable agreements (FWS Manual 267 FW 1). This report recognizes that in most cases, not all costs are recovered by the Service. While the direct and indirect costs for some mitigation programs are totally reimbursed, other programs receive partial funding from other entities (partially reimbursed). Most fisheries mitigation programs receive no funding for mitigation programs.

This Report made no attempt to examine the qualitative nature of mitigation programs. In all cases, the costs provided only depict the past operational expenses and maintenance costs (whether met or deferred) associated with the program and may not reflect the budgets necessary to fulfill the mitigation obligation or fulfill the obligation in an efficient manner.

GENERAL AUTHORITIES

The Service conducts mitigation programs under the broad authorities of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-747j) (FWA), the Fish and Wildlife Coordination Act (16 U.S.C. 661-666) and its amendments (FWCA), and the Federal Power Act (16 U.S.C. 791A, 803, 811), as well as authorities for specific Federal water development projects.

At least three laws (the Colorado River Storage Project Act (43 U.S.C. 620), the Palisades Dam and Reservoir Project (64 Stat. 1083) and the Washoe Project Act (770 Stat. 775-777) prohibit reimbursement from project beneficiaries. These cases suggest that Congress perceived that the Service should use appropriated dollars to carry out fisheries programs. However, no legal impediments were found in these statutes that would prevent the Service from receiving reimbursement for mitigation activities from dollars appropriated to Federal water resource development agencies. The Water Resources Development Act (WRDA) requires mitigation to be a part of project costs for U.S. Army Corps of Engineers (COE) projects constructed after 1986, but prohibits cost recovery on projects prior to 1986 "without the consent of the non-Federal interests or until such contracts are complied with or renegotiated." Most construction authorities are silent on the subject of mitigation.

The Service has the authority under the FWA, the FWCA, the Economy Act of June 30, 1932 (31 U.S.C. 1535A), and other authorities to enter into agreements with other Federal agencies. Such agreements are currently used to establish and administer some fisheries mitigation programs. Section 742f of the FWA authorizes the Secretaries of the Interior and Commerce to:

"develop and recommend measures which are appropriate to assure the maximum sustainable production of fish and fishery products and to prevent unnecessary and excessive fluctuations in such production; take such steps as may be required for the development, advancement, management, conservation, and protection of fish and wildlife resources, including, but not limited to, research, development of existing facilities, and acquisition by purchase or exchange of land and water, or interests therein."

Section 803 of the Federal Power Act authorizes mitigation pursuant to the FWCA. The FWCA provides authorization to:

"determine the possible damage to wildlife resources and for the purpose of determining means and measures that should be adopted to prevent the loss of or damage to such wildlife resources . . . whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or

other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, or by any public or private agency under Federal permit or license, such department or agency first shall consult with the United States Fish and Wildlife Service, Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular State wherein the impoundment, diversion, or other control facility is to be constructed, with a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement thereof in connection with such water-resource development.”

While the FWCA allows for hatcheries to be built as part of project costs, it forbids the inclusion of operations funds for wildlife facilities in projects costs:

“The cost of planning for and the construction or installation and maintenance of such means and measures adopted to carry out the conservation purposes of this section shall constitute an integral part of the cost of such projects: Provided, that such cost attributable to the development and improvement of wildlife shall not extend beyond that necessary for (1) land acquisition, (2) facilities as specifically recommended in water resource reports, (3) modification of the project, (4) modification of project operations, but shall not include the operation of wildlife facilities.”

Authorities for specific water development projects and how those authorities affect the potential for cost recovery, if at all, are provided in the Description of Fisheries Mitigation Programs section of this Report.

Additional authority for the Service to conduct fisheries mitigation programs comes through the annual Federal appropriations process. While some see these programs as a Federal responsibility for mitigating fish losses caused by Federal projects and carried out by the Service with directly appropriated dollars, others question the responsibility of the Service to fund these programs rather than being reimbursed by the development agency. Recent Interior Appropriations Committees, the GAO (*National Fish Hatcheries: Authority Needed to Better Align Operations with Priorities*, June 2000), and the Special Reports of the SFBPC (*Saving a System in Peril*, September 2000, and *Report of the Fisheries Program Strategic Planning Steering Committee to the SPBPC*, 2002) have all recognized that the Service cannot meet the conflicting mandates of their various authorities. Some recommendations include full reimbursement for mitigation programs by the Federal project agency, and that except where specifically prohibited by law, that project beneficiaries should ultimately bear the cost rather than the American public in general.

RECOMMENDATIONS TO FACILITATE FULL COST RECOVERY

Mitigation programs are conducted on 35 NFHs and three associated fisheries facilities across the Nation, 21% of these NFHs were fully reimbursed the total associated costs for conducting these

programs, while 26% were partially reimbursed and 53% were not reimbursed at all. Many, if not most, of these facilities are involved in programs aimed at mitigating development projects for multiple agencies.

The Service is committed to working with the Administration and Congress to take the necessary steps to ensure that its 38 fisheries facilities are fully reimbursed for these programs. Fortunately, there are a variety of solutions that can be offered to ensure full cost recovery is achieved at the 30 NFHs which are currently not receiving full reimbursement for conducting fisheries mitigation programs.

Certain stipulations regarding cost recovery for fisheries mitigation programs apply to all of the following recommendations for both administrative and legislative actions:

- The Service will receive full cost recovery, including all direct and indirect costs, from the Federal agency on whose behalf the Fisheries mitigation programs are conducted. In cases where one or more of those Federal agencies lacks the authority or available funding to reimburse the Service, appropriate steps will be taken to address these shortcomings.
- Fisheries mitigation programs will be conducted as part of a formal mitigation plan developed by the Federal agency on whose behalf the mitigation programs are conducted. These plans must clearly state species mitigation goals and objectives to mitigate the unavoidable and permanent damages to fishery resources. These mitigation plans will be developed cooperatively with the Service and affected States and Tribes. While some mitigation programs have plans, others do not, making it difficult to evaluate progress.
- The responsibilities and role of the hatchery will be clearly established for conducting programs to mitigate for fishery impacts on Federal water development projects.
- Reimbursement agreements will reflect costs that are indexed to inflation, and these agreements will be renegotiated on some regular schedule.
- The Service will not undertake any new fisheries mitigation programs without receiving full cost recovery.

1. Recommendations for Administrative Actions

1.A. The Service will work within the Department of the Interior to resolve full cost recovery associated with fisheries mitigation programs conducted on behalf of the Bureau of Reclamation (BOR).

The Service entered into an Agreement with the BOR for "Fish and Wildlife Mitigation and Enhancement on Bureau of Reclamation Projects" (November 1988, incorporating previous

Agreements). The agreement provides for the BOR to reimburse the Service for fisheries mitigation programs. The BOR currently reimburses the Service for fisheries mitigation programs at five NFHs, but does not do so for programs at eleven other NFHs. The Office of the Inspector General audit (1991), examined four NFHS facilities (Hotchkiss NFH, Jones Hole NFH, Jackson NFH, and Lahontan NFH) in regard to the potential to recover costs of these facilities from project beneficiaries. The audit concluded that legislation for the Washoe Project, Colorado River Storage Project, and Palisades Dam and Reservoir Project did not authorize reimbursement of costs through collection of funds from project beneficiaries. However, these laws do not prohibit the full cost recovery of Fisheries mitigation programs associated with the BOR projects through the transfer of appropriated dollars.

After an analysis of BOR authorities and funding opportunities to address the Service's associated Fisheries mitigation programs, the Secretary may find it necessary to seek legislation to remedy the prohibitions in the above cited legislation.

1.B. The Service will enlist the support of the Secretary's Office to work with agencies outside the Department of the Interior to resolve full cost recovery associated with Fisheries mitigation programs conducted on their behalf.

There may be open avenues for the Service to recover full costs for current fisheries mitigation programs from Federal project agencies. However, the fact that appropriated funds have been provided to the Service to conduct those programs in the past will lead project agencies to question their responsibility. The SFBPC recognized (*Report of the Fisheries Program Strategic Plan Steering Committee to the Sport Fishing and Boating Partnership Council, 2002*) that it may take the weight of the Secretary's Office to obtain reimbursement. While local and Regional efforts will be necessary to reach full and fair reimbursable agreements with agencies responsible for mitigating Federal water development projects, involvement of DOI, the Administration, and possibly OMB is critical to the Service receiving full reimbursement for its mitigation programs from these agencies.

Examples of opportunities for funding mitigation programs include:

- determining the appropriateness of using the Environmental Protection and Mitigation Fund authorized under the Water Resources Development Act of 1986 for the COE's mitigation programs and supporting Congressional appropriations to that fund;
- determining the Tennessee Valley Authority's (TVA) ability to reimburse the Service for mitigation programs; and
- renegotiating with NMFS to provide maintenance funding for Mitchell Act hatcheries in the Pacific Northwest.

Legislation may ultimately be needed to successfully follow these avenues.

In all cases, existing agreements for cost reimbursement should be reviewed and renegotiated to implement full cost recovery for fisheries mitigation programs.

1.C. The Service will work with Federal power marketing administrations to obtain cost reimbursement where possible.

Federal power marketing administrations (PMAs), within the Department of Energy, market power generated by Federal water projects. The Service conducts fisheries mitigation programs to mitigate the impacts for many of those projects. Depending on the location of the Federal water resource development project, Bonneville Power Administration, Southeastern Power Administration, Southwest Power Administration, or Western Area Power Administration markets the power for Federal water projects. The Service conducts fisheries mitigation programs to mitigate the impacts for many of those projects. The Pacific Northwest Electric Power Planning and Conservation Act of 1980 (16 U.S.C. 839-839h) extended BPA's responsibilities to include the development of conservation resources in the region and the improvement of the Northwest's fish and wildlife resources that have been affected by the construction of hydropower plants in the Columbia River Basin. Similar responsibilities could be given to the other PMAs which may require legislation. Additionally, some of these Federal PMAs manage limited budgets for programs such as fisheries mitigation.

Additionally, an innovative approach might be to develop incentive based programs, modeled after the current carbon sequestration program. In some cases, this might provide limited relief until reimbursable agreements with the Federal development agency are negotiated.

1.D. The Service will work with States to develop cost sharing arrangements as an interim approach to obtaining full cost recovery.

The Service has entered into reimbursable agreements with several southeastern States to rear and stock rainbow trout in waters impacted by Federal water resource development projects. Despite their participation, these States do not consider these activities to be State responsibilities and believe that they should be funded and conducted as Federal activities. Additionally, many States support the recommendation in the SFBPC Report to have the Service seek and obtain reimbursement from the Federal water development agency. Moreover, the States have supported the recommendation that the Service should continue to provide funding for mitigation programs while the Service seeks reimbursable agreements.

2. Recommendations for Legislative Opportunities

In its June 2000 Report to the Ranking Minority Member, Committee on Resources, House of Representatives, the GAO documented the results of their audit of the NFHS. The GAO recognized the maze of laws regarding fisheries mitigation programs and recommended that "...Congress provide the Service with clear authority to seek reimbursement from Federal water development agencies and/or project beneficiaries for all hatchery operation and maintenance

expenses associated with such projects.” In a September 2000 Special Report on the National Fish Hatchery System, the SFBPC further identified that “Legislation is necessary to clarify various existing legislative mandates...” and “New legislation must articulate clearly the role of the NFHS in mitigating for federal water and other development projects and how these mitigation activities are to be funded.” OMB has further directed the Service, in its Passback of the Department of Interior FY 2003 budget, that the Service should prepare a report that “provide [s] recommendations and suggested legislative fixes to facilitate full cost recovery of these services as recommended by GAO and Congress in the FY 2002 Interior Appropriations Conference report.”

The Service supports these findings and recommendations and concludes that any legislative option considered should:

- Ensure that the authorities of Federal water development projects include the responsibility to mitigate for damages to fishery resources resulting from the Federal water project.
- Ensure that Federal water development agencies have the authority to provide compensation for damages to fish and wildlife caused by Federal water development projects.
- Ensure that Federal water development agencies have adequate funding to pay for mitigation costs either through Congressional appropriation processes or by Federal water development agencies recovering mitigation costs from beneficiaries of Federal water projects, including companies that market power and water.
- Ensure that Federal water development agencies review their Federal water projects and that they develop fisheries mitigation plans to compensate for the damage to fishery resources. These plans must clearly state species population goals and objectives to mitigate for the unavoidable and permanent damages/changes to native fishery resources. These mitigation plans should be developed cooperatively with the Service and affected States and Tribes.
- Ensure that the Service’s role is clearly defined for conducting fisheries mitigation programs for Federal water development projects and that there is well defined direction to the Service for operating and paying for fisheries mitigation programs.

With these criteria in mind, the Service recommends three approaches where legislative opportunities could strengthen the capability of the Service’s fisheries mitigation programs to recover costs from Federal agencies responsible for water develop projects across the Nation.

2.A. Comprehensive Legislation.

Comprehensive legislation should supercede all previous legislation on the subject, and require

full cost recovery for fisheries mitigation programs from the Federal action agency for all existing or proposed water resource development projects. Federal agencies could then use existing authorities to recover costs from project beneficiaries.

The "Freedom to Manage" Act could be used to repeal language in previous laws where cost recovery from project beneficiaries is specifically prohibited. However, given the plethora of legislation which is already extant on the subject of federal water developments, hatcheries and mitigation it is not recommended that the "Freedom to Manage" Act be used to remedy all existing statutes which are silent or unsupportive of cost recovery.

Comprehensive legislation should:

- Require federal action agencies to fully reimburse federal, tribal and state fisheries mitigation programs conducted for federal water development projects.
- Require that federal action agencies recover the costs of mitigating the impacts of water resource development projects from project beneficiaries, provided that prohibitive legislative language is modified. Or specifically support new budget initiatives to examine funding needs.
- Require that federal action agencies review their federal water projects and ensure fisheries mitigation plans have been developed to compensate for the damages to fishery resources. These plans must clearly state species mitigation goals and objectives to remedy the unavoidable and permanent damages to fishery resources at each of the water development projects. These mitigation plans should be developed cooperatively with the Service and affected States and Tribes.
- Clarify the Service's role in conducting fisheries mitigation programs for federal water resource development projects and provide direction to the Service for operating and paying for fisheries mitigation programs.

2.B. Agency-Specific Legislation.

Agency-specific legislation would address the impediments to cost reimbursement that are specific to a federal agency and the federal water development projects they operate or have responsibility for funding mitigation programs associated with specific projects. Those impediments would first have to be determined with each agency. Examples include:

- The TVA may need new legislation for the authority to recover costs of fisheries mitigation programs from rate payers;
- The COE would require appropriations to the Environmental Protection and Mitigation Fund (authorized at \$35 M in the WRDA of 1976). This would make funds available for fisheries mitigation programs; and

- The National Marine Fisheries Service (NMFS) be directed to: 1) fully fund Service, State, and Tribal mitigation programs to achieve stated goals to fully compensate for the loss of anadromous and resident fish at mitigation facilities funded through the Mitchell Act; and 2) work with the COE, Service, States and Tribes to develop fisheries mitigation plans that will establish the appropriate species goals for mitigating fisheries impacts at federal water development projects. Congress might further consider transferring administration of Mitchell Act facilities from the NMFS to the COE.

2.C. Geographic Legislation.

Geographic legislation would address the biological and administrative situations specific to a particular region of the Nation and would be more limited than comprehensive or agency-specific legislation. For example, the Lower Snake River Compensation Plan (LSRCP) was authorized by the WRDA of 1976 to compensate for fishery losses caused by the construction of four dams on the Lower Snake River within the Columbia River Basin. Specific fisheries mitigation goals were established. The Service administers the LSRCP which includes 27 hatcheries in the states of Washington, Oregon and Idaho that are operated by the Service, States and Tribes. The costs for conducting this Program are reimbursed by BPA. The LSRCP could serve as a model for geographic legislation. Geographic "watershed areas" could be established around the Country. A different version of this concept would be to select regional areas for administrative convenience (such as the Southeast) for targeted legislation. State resource agencies, Native American Governments, and/or the Service could operate the mitigation hatcheries. Mitigation programs would be paid for by the Federal water development agencies, the companies marketing the electricity or water, and the users of the water and power. As with the LSRCP, the Service could have the responsibility to administer and coordinate the programs.

CURRENT FISHERIES MITIGATION PROGRAMS

Overview

Thirty-five National Fish Hatcheries (NFHs) and three associated facilities were involved in fish and/or fish egg distribution to mitigate the adverse impacts of Federally constructed dams across the U.S. in FY 2000 and/or FY 2001. Four NFHs provided fish eggs to other hatcheries for growout to stockable size fish. Many hatcheries also collected fish eggs from wild stocks or maintained captive broodstocks on station for use in mitigation programs. During the two years evaluated, the Service conducted three hundred fifty-seven mitigation programs. Many of the mitigation programs involving egg distribution often provided eggs for multiple Federal water resource development projects.

In FY 2001, the Service distributed nearly 77 million fish weighing 5.3 million pounds and 34 million fish eggs to mitigate the adverse impacts of Federal water resource development projects across the U.S. In FY 2000, the Service distributed nearly 83 million fish weighing 5.3 million

pounds and 34 million fish eggs for fisheries mitigation programs. The Service's 3A's analysis of the NFHS indicated approximately 67.7 million fish were directed towards mitigation programs in 1987-1988 (*Hatchery System Alignment: National Fish Hatchery System Alignment, Appropriateness, and Adequacy (3As) Evaluation* March 2001). Applying a broader definition of mitigation in this Report increased distribution by 123% in FY 2000 and 114% in FY 2001.

Two fish passage facilities associated with mitigation programs are the Tehama Colusa Fish Facility (CA) and Marble Bluff Fish Research and Control Station (NV), operated in conjunction with Red Bluff Fish and Wildlife Office (CA) and Reno Fish and Wildlife Office (NV), respectively. The other associated facility, the Lower Snake River Compensation Plan Office, coordinates mitigation activities associated with four COE dams on the Lower Snake River under the WRDA of 1976 (90 Stat. 2917).

For FY 2001, the total associated costs of conducting fisheries mitigation programs was \$40 million (Table 1). The Service was reimbursed approximately \$25 million from responsible federal agencies and State agencies in FY 2001. For FY 2000, the total associated costs of conducting fisheries mitigation programs was \$38 million (Table 2). The Service was reimbursed nearly \$23 million from responsible agencies and State agencies in FY 2000. Approximately \$15 million was needed in each year for all of the fisheries mitigation programs to be considered fully reimbursed. Of the \$15 million, \$6.7 million would be for operation costs, \$5.5 million for maintenance costs, and nearly \$3 million for management support and indirect costs.

Service hatcheries throughout the Nation are interconnected in a manner that improves both effectiveness and efficiency. Many Service (along with some State) mitigation hatcheries receive disease-free, strain specific, eyed eggs produced at NFHs that are part of the Service's National Broodstock Program. Connectivity enables propagation regimes to be adapted to effectively meet modifications to production and distribution schedules. Personnel and equipment are also used flexibly to improve efficiency in fish production and distribution.

In many cases Service mitigation hatcheries work in partnership with State counterparts to help meet mitigation requirements. States provide funding for the operation of some mitigation programs, in other cases conservation exchanges are made with States. Conservation exchanges include having Federal hatcheries produce rainbow trout for the State, while the State provides listed species for Federal mitigation. This is done to maximize the use of appropriate facilities or to reduce transport costs.

Fisheries mitigation programs in the Northwest generally involve stocking Pacific salmon and steelhead trout, species native to the altered watersheds. Most of the salmon caught by recreational, commercial, and Tribal fishermen today are propagated fish. Considerable reimbursement to the Service for its portions of the fisheries mitigation programs in the Northwest is provided by the COE, BOR, NMFS, and Bonneville Power Administration (BPA).

Table 1. A summary of the total associated costs for fisheries mitigation programs conducted by the Service in FY 2001 for each agency responsible for mitigating Federal water resource development projects. The amount reimbursed and the amount needed for the fisheries mitigation program to be fully reimbursed are included.

Responsible Agency	Total Associated Costs	Amount Reimbursed	Amount Needed for Full Cost Recovery
Bureau of Reclamation	\$10,330,138	\$5,278,586	\$5,051,552
U.S. Army Corps of Engineers ¹	\$9,406,833	\$2,978,480	\$6,428,353
Tennessee Valley Authority ²	\$1,040,841	\$15,500	\$1,025,341
National Marine Fisheries Service	\$5,148,083	\$3,449,216	\$1,698,867
Bonneville Power Administration	\$13,415,645	\$13,375,878	\$39,767
Bureau of Indian Affairs	\$914,195	\$0	\$914,195
U.S. Department of Agriculture	\$0	\$0	\$0
Total	\$40,255,735	\$25,097,660	\$15,158,075

¹Both the responsible agency and one or more State agencies reimbursed the Service for the costs of conducting fisheries mitigation programs.

²A State agency reimbursed the Service for the costs of conducting fisheries mitigation programs.

Table 2. A summary of the total associated costs for fisheries mitigation programs conducted by the Service in FY 2000 for each agency responsible for mitigating Federal water resource development projects. The amount reimbursed and the amount needed for the fisheries mitigation program to be fully reimbursed are included.

Responsible Agency	Total Associated Costs	Amount Reimbursed	Amount Needed for Full Cost Recovery
Bureau of Reclamation	\$9,821,688	\$4,824,345	\$4,997,343
U.S. Army Corps of Engineers ¹	\$9,372,791	\$2,773,770	\$6,599,021
Tennessee Valley Authority ²	\$1,085,006	\$15,115	\$1,069,891
National Marine Fisheries Service	\$4,665,672	\$2,986,030	\$1,679,642
Bonneville Power Administration	\$12,345,769	\$12,297,110	\$48,659
Bureau of Indian Affairs	\$892,846	\$0	\$892,846
U.S. Department of Agriculture	\$20,811	\$0	\$20,811
Total	\$38,204,583	\$22,896,370	\$15,308,213

¹Both the responsible agency and one or more State agencies reimbursed the Service for the costs

of conducting fisheries mitigation programs.

²A State agency reimbursed the Service for the costs of conducting fisheries mitigation programs.

Fisheries mitigation programs in the Southeast and Southwest generally involve stocking rainbow trout into altered cold water environments that can no longer support native fish. Trout fishing in the Southwest is estimated to provide over \$100.00 dollars to the economies of the States for each Federal dollar spent. In the Southeast, that figure is estimated at \$140.00, resulting in a total economic benefit of over \$400 million to the local economies (*The Economic Effects of National Fish Hatchery Trout Production and Distribution in the Southeastern US*, Dr. James Caudill, USFWS, 2001). Most of these programs are conducted on behalf of the COE, TVA or BOR and are not reimbursed.

Description of Fisheries Mitigation Programs

The Service conducts fisheries mitigation programs on behalf of the BOR, the COE, the TVA, the NMFS, and the BPA. One mitigation program is conducted for the Bureau of Indian Affairs (BIA), and six mitigation programs were conducted on behalf of the U.S. Department of Agriculture (USDA) in FY 2000. All USDA mitigation programs were discontinued in FY 2001. The following section provides a brief description of the Federal water resource development project being mitigated for, the services provided, and associated costs for each agency responsible for the water development project.

Bureau of Reclamation

The BOR has developed Federal water projects throughout the arid west. The purposes of these water development projects have generally been to provide power generation, irrigation and municipal and industrial water supplies, flood control, fish and wildlife enhancement, and outdoor recreation. The BOR is second only to the COE in the operation of hydroelectric powerplants in the U.S. Operation and maintenance responsibilities for several BOR projects have been delegated to other entities, but are still owned by the Federal government.

The Service operates twenty facilities (eighteen hatcheries and two fish passage facilities) that are involved in mitigation programs for BOR water development projects. These hatcheries are: Coleman NFH, CA; Ennis NFH, MT; Entiat NFH, WA; Garrison Dam NFH, ND; Hotchkiss NFH, CO; Inks Dam NFH, TX; Jackson NFH, WY; Jones Hole NFH, UT; Lahontan NFH, NV; Leadville NFH, CO; Leavenworth NFH, WA; Livingston Stone NFH, CA; Saratoga NFH; Tishomingo NFH, OK; Valley City NFH, ND; White Sulphur Springs NFH, WV; Willow Beach NFH, AZ; and Winthrop NFH, WA. The two fish passage facilities are Tehama Colusa Fish Facility, CA and Marble Bluff Fish Research and Control Station, NV. Other agencies (e.g., the California Department of Fish and Game) also operate facilities to mitigate for BOR water development projects. The BOR reimbursed the Service for all costs associated with fisheries mitigation programs at Coleman NFH, Entiat NFH, Leavenworth NFH, Livingston Stone NFH and Winthrop NFH. However, the BOR does not reimburse the Service for fisheries mitigation programs conducted at other NFHS facilities. The State of New Mexico reimbursed the Service nearly \$9,300 in FY 2000 for the mitigation program associated with Elephant Butte Dam. This program was conducted at Inks Dam NFH and was terminated in FY 2001.

Fish and Wildlife Service Region 1

Boca Dam, Derby Dam, Marble Bluff Dam, Prosser Dam, and Stampede Dam

Boca Dam was constructed by the BOR in 1937 as part of the Truckee Storage Project. The dam is located on the Little Truckee River about 3 miles down stream from Stampede Reservoir. Primary water use is for irrigation and municipal development. The Washoe County Water Conservation District operates the dam under contract to the BOR.

Derby Dam was constructed by the BOR in 1902 under the Newlands Project to divert water from the Truckee River to Lahontan Reservoir in the Carson River drainage for irrigation purposes. Construction of Derby Dam essentially blocked all access to spawning habitat in the upper Truckee River for Lahontan cutthroat trout and cui-ui migrating from Pyramid Lake and eventually led to the loss of the original population of Lahontan cutthroat trout in Pyramid Lake.

Stampede, Prosser and Marble Bluff Dams were constructed between 1962 and 1975 as authorized by the Washoe Project Act of 1956. Stampede Dam was constructed in 1970 and is used primarily to store water for fishery flows for Pyramid Lake. Prosser Creek Reservoir, identified in the Washoe Project Act as the Watasheamus site, was constructed in 1962 primarily for flood control. Marble Bluff Dam was constructed in 1975 to provide grade control for the lower Truckee River and to impound and divert water to a 3.1 mile earthen fishway to improve access to spawning habitat for Pyramid Lake fisheries.

The Washoe Project Act identifies the need to mitigate for damage to fish and wildlife resources impacted by the Washoe Project. The Service operates the Lahontan NFH, Marble Bluff Fish Facility, and the Northern Nevada Fishery Resource Office as a complex to mitigate and to recover the loss of the native fishery in the Truckee River and Pyramid Lake. The Lahontan NFH produces threatened Lahontan cutthroat trout to maintain the existing Lahontan cutthroat population found in Pyramid Lake. This cutthroat population is not self-sustaining due to limited access to and lack of quality spawning habitat in the Truckee River. The Pyramid Lake cutthroat population is entirely maintained through hatchery production.

The Service operates the Marble Bluff Fish Facility for passage of endangered cui-ui and threatened Lahontan cutthroat trout to spawning habitat above Marble Bluff Dam. The facility, which is co-located with Marble Bluff Dam, three miles upstream from Pyramid Lake, consists of a 3.1 mile earthen fishway and a fish lock at the base of the Dam. Operation of the Marble Bluff Fish Facility is essential to maintaining the only existing cui-ui population. No funds were received from BOR to offset the cost of either of these two programs.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	432,971 ¹	-	0%	\$872,803	\$237,599	\$1,110,402
2000	182,566 ²	-	0%	\$876,548	\$237,599	\$1,114,147

¹ An extremely low water year - management strategy was to discourage spawning migration.

² Furunculosis outbreak at the hatchery resulted in 395,000 fish, scheduled for Pyramid Lake, to be euthanized.

Grand Coulee Dam

The Grand Coulee Dam was constructed on the Columbia River in 1938. Authorized by the Columbia Basin Project Act to provide irrigation and power with other benefits for downstream navigation and flood control. The Grand Coulee Dam created a permanent barrier for migrating fish. To mitigate the damages, BOR built the Leavenworth National Fish Hatchery Complex (Complex), composed of the Entiat, Leavenworth and Winthrop NFHs. Since 1949, the hatcheries have been operated and maintained by the Service under a memorandum of agreement with the BOR. The Complex's fish propagation programs include summer steelhead and spring chinook salmon. Specific fishery objectives originally established for the Complex were, and continue to be:

1. *"...to bring, by stream rehabilitation and supplemental planting, the fish populations in the 677 miles of tributary streams between Grand Coulee Dam and Rock Island Dam, up to figures commensurate with the earlier undisturbed conditions and with the natural food supply in the streams."*
2. *"...to produce in addition, by the combination of artificial spawning, feeding, rearing and planting in these streams, a supplemental downstream migration equivalent to that normally produced by the 1,245 miles of streams and tributaries above the Grand Coulee Dam."*

The total associated costs of the nine programs for Grand Coulee Dam are fully reimbursed by the BOR.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs ¹	Annual Maintenance Costs ¹	Total Associated Costs
2001	2,917,600	-	100%			\$2,611,586
2000	3,313,000	-	100%			\$2,266,025

¹ Annual operation and maintenance costs associated with this dam are not provided as all associated costs are recovered by the Service.

Keswick and Shasta dams

The Sacramento River in northern California is the only river in the world which has four distinct runs of chinook salmon (fall, late fall, winter and spring) and steelhead trout. The Central Valley Project was initially authorized under the Act of October 26, 1937 (50 Stat. 844, 850), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198, 1199). The Act authorized the construction of Shasta and Keswick dams, and by 1942, 187 miles of the uppermost drainage of the Sacramento River system was permanently blocked (approximately 50% of chinook salmon and steelhead trout spawning and rearing habitats in the system). To mitigate for lost habitat, the Federal government established the Shasta Salvage Plan, which included the construction and operation of a fish hatchery. Coleman NFH was constructed on Battle Creek (a tributary of the Sacramento River) in 1942, and fish culture operations began in 1943. Coleman NFH currently propagates three salmonid stocks, and releases a total of approximately 13.6 million chinook salmon and steelhead trout.

Due largely to environmental impacts associated with water use and manipulation in California's Central Valley, the estimated numbers of winter chinook salmon plummeted to less than 200 individuals by 1991. Winter chinook salmon is currently listed as an endangered species. The propagation program for this endangered species was transferred from Coleman NFH to Livingston Stone NFH when that facility was constructed by the BOR in 1997. Livingston Stone NFH, one of the newest hatcheries in the NFHS, was constructed for the explicit purpose of propagating Endangered Species Act (ESA) listed winter chinook salmon to assist in the recovery of that endemic population. Current recovery efforts for winter chinook salmon at Livingston Stone NFH involve two programs, a propagation program and a captive broodstock program. Together the programs are intended to prevent further loss of genetic variability and supplement reproduction of the naturally spawning population. Both programs are supported in the NMFS's draft Recovery Plan for winter chinook salmon. Actual release numbers of winter chinook salmon from Livingston Stone NFH are variable, and depend upon the estimated upriver escapement of adults for any given brood year. Juvenile capacity of the facility is approximately 250,000 pre-smolts.

Funding for the three programs at the Coleman NFH Complex (Coleman and Livingston Stone NFHs) are fully reimbursed by the BOR.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs ¹	Annual Maintenance Costs ¹	Total Associated Costs
2001	14,264,544	-	100%			\$2,667,000
2000	13,720,722	-	100%			\$2,549,020

¹ Annual operation and maintenance costs associated with this dam are not provided as all associated costs are recovered by the Service.

Red Bluff Diversion Dam

The Central Valley Project was initially authorized under the Act of October 26, 1937 (50 Stat. 844, 850), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198, 1199). Additional reauthorizing legislation, which included the concept for the Red Bluff Diversion Dam, was passed in 1950 [P. L. 839 (64 Stat. 1036), September 26, 1950]. Section 5 of this 1950 legislation required the Secretary of the Interior to submit to Congress, a completed report finding the project to be feasible under the provisions of the Federal reclamation laws. Thereafter, a report was presented (House Document No. 73, 83rd Congress, 1st Session) providing for the construction of the Corning Canal, the Tehama Colusa Canal, and the Red Bluff Diversion Dam.

As a mitigation feature, the Red Bluff Diversion Dam has two permanent fish ladders: one on the west bank and one on the east bank. A temporary center ladder is also installed annually in conjunction with the lowering of the dam gates. During the time period of ladder operation, adult winter, spring, and fall chinook salmon and steelhead migrate upstream. The ladders are essential for passing adults of these species, three of which are Federally listed (winter and spring chinook salmon and steelhead). These fish ladders are operated by the Service's Tehama-Colusa Fish Facility which is collocated with and a substation of the Red Bluff Fish and Wildlife Office. The Service does not receive any funds to offset the costs of the Red Bluff Diversion Dam mitigation program.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	\$149,954	\$47,613	\$197,567
2000	-	-	0%	\$145,214	\$47,613	\$192,827

Fish and Wildlife Service Region 2

Arbuckle Dam

Arbuckle Dam (OK) was constructed in 1964. The project was authorized by P. L. 87-594. Tishomingo NFH distributed smallmouth bass to mitigate the impacts of Arbuckle Dam on Rock Creek a part of Oklahoma's Red River system. This program is part of a conservation exchange with Oklahoma Department of Wildlife Conservation. The Service raises and distributes smallmouth bass in exchange for paddlefish for restoration activities. The FWCA, as amended, enables the Service to undertake activities to mitigate for this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Arbuckle Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	23,500	-	0%	\$291	\$7,388	\$7,679
2000	23,500	-	0%	\$368	\$9,977	\$10,345

Davis Dam and Parker Dam

The Davis Dam (AZ) was constructed in 1953. Construction was authorized in the Reclamation Act of 1939, and resulted in creation of Lake Mohave. The construction of Davis Dam has altered environmental conditions significantly reducing native species survival. Out-of-kind mitigation efforts have established rainbow trout fisheries in the upper reservoir below Hoover and Davis Dams in the Colorado River. The FWCA, as amended, enables the Service to undertake activities to mitigate for this project. Willow Beach NFH distributed rainbow trout to mitigate the impacts of Davis Dam. White Sulphur Springs NFH and Ennis NFH provided strain specific, disease free rainbow trout eggs to Willow Beach NFH to support the mitigation efforts for Davis Dam. Additionally, five mitigation programs at Inks Dam NFH mitigate for Davis Dam and Parker Dam via a conservation agreement with the Arizona Game and Fish Department (AGFD). The agreement stipulates that the AGFD will stock razorback sucker and bonytail chub in Lake Mohave in exchange for channel catfish provided by Inks Dam NFH. The Service did not receive any funds to offset the costs of the twelve programs to mitigate for Davis Dam or Parker Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	147,576	305,849	0%	\$551,018	\$248,730	\$799,748
2000	258,193	475,857	0%	\$650,460	\$301,949	\$952,409

Elephant Butte Dam

Elephant Butte Dam (NM) was constructed in 1915 under the Rio Grande Project Act of 1905 and under provisions of the Reclamation Act. The construction of Elephant Butte Dam has altered environmental conditions on the Rio Grande River eliminating native species. Out-of-kind mitigation efforts have established largemouth bass fisheries within the reservoir. The FWCA, as amended, enables the Service to undertake activities to mitigate for this project. Inks Dam NFH distributed largemouth bass to mitigate the impacts of Elephant Butte Dam. The Service received funds from the New Mexico Department of Game and Fish (NMDGF) to offset the costs of this program in 2000. The agreement with the NMDGF was terminated in 2000 to provide catfish production capability at Inks Dam NFH for Native American tribes in the southwest and to obtain a conservation exchange with Arizona which provides endangered fish species for stocking in Lake Mohave.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	467,670	-	60%	\$12,651	\$142,292	\$15,494

Fish and Wildlife Service Region 6

Blue Mesa Dam

Blue Mesa Dam was constructed in 1966 as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. The BOR is the agency responsible for this Gunnison River development. Rainbow trout from Hotchkiss NFH are stocked in Blue Mesa Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Rainbow trout eggs are supplied from Ennis NFH. Stocking activities are conducted in accordance with the Blue Mesa Reservoir Management Plan developed and implemented cooperatively by the Colorado Division of Wildlife (CDOW). The Service did not receive any funds to offset the costs of the two programs to mitigate for Blue Mesa Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	212,372	859,250	0%	\$56,645	\$82,353	\$138,998

Buffalo Bill Dam

Buffalo Bill Dam was constructed in 1911 under the authority of the Reclamation Act of 1902, which was amended by the Palisades Dam and Reservoir Project Act, 64 Stat. 1083 and the Buffalo Bill Dam and Reservoir Modification Act of 1982. The BOR is the agency responsible for this development on the Shoshone River. Cutthroat trout from Jackson NFH are stocked in the Shoshone River under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the Shoshone River Basin Management Plan. The Palisades Dam and Reservoir Project legislation prohibits collection of mitigation costs from project beneficiaries. However, there is no known legislation that prohibits the BOR from reimbursing the Service for the costs associated with this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Buffalo Bill Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	34,074	-	0%	\$25,485	\$20,463	\$45,948
2000	25,593	-	0%	\$22,315	\$17,870	\$40,185

Canyon Ferry Dam and Yellowtail Dam

Canyon Ferry Dam was completed in 1954 under the authority of P.L. 89-108 as part of the Pick-Sloan, Missouri River Basin Program. Yellowtail Dam was completed in 1966, also under the authority of P.L. 89-108 as part of the Pick-Sloan, Missouri River Basin Program. Canyon Ferry Dam is located on the Missouri River while Yellowtail Dam is on the Bighorn River. The BOR is the agency responsible for these developments. Rainbow trout produced at Big Springs SFH (MT), Bluewater Springs SFH (MT), Giant Springs SFH (MT), Murray Springs SFH (MT), and Washoe Park SFH (MT) are stocked as part of the mitigation activities for this dam. Ennis NFH provides strain specific, disease free eggs to these stations. Stocking activities are conducted under the authority of the FWCA and in accordance with fishery management plans developed by the Montana Game, Fish, and Parks. The Service did not receive any funds to offset the costs of the five programs to mitigate for Canyon Ferry Dam or Yellowtail Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	1,200,569	0%	\$17,422	\$19,890	\$37,312
2000	-	-	0%	-	-	-

Crawford Dam

Crawford Dam was constructed in 1962 as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. The BOR is the agency responsible for this development. Rainbow trout from Hotchkiss NFH are stocked in Crawford Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Disease free, strain-specific rainbow trout eggs are provided by Ennis NFH. Stocking activities are conducted in accordance with the Crawford Reservoir Management Plan, developed and implemented cooperatively by the CDOW. The Service did not receive any funds to offset the costs of the two programs to mitigate for Crawford Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	10,713	49,100	0%	\$7,587	\$11,369	\$18,956

Dickinson Dam

The Dickinson Dam was constructed in 1949 under the authority of the Flood Control Act of 1944 and P.L. 78-534, as part of the Pick-Sloan, Missouri River Basin Program. The BOR is the agency responsible for this development. Rainbow trout and walleye from Garrison Dam NFH and largemouth bass and northern pike from Valley City NFH are stocked in Dickinson Dike under the authority of the FWCA as part of the mitigation activities for this pumping station. Rainbow trout eggs are supplied by Ennis NFH. Stocking activities are conducted in accordance with the Guidelines for Small Reservoirs developed by the North Dakota Game and Fish Department (NDGFD). The Service did not receive any funds to offset the costs of the five programs to mitigate for Dickinson Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	362,690	248,912	0%	\$17,426	\$41,175	\$58,601
2000	302,117	315,973	0%	\$17,720	\$49,789	\$67,509

Flaming Gorge Dam

Flaming Gorge Dam was constructed in 1964 under the authority of the Colorado River Storage Project, 70 Stat. 110, and the Central Utah Project Completion Act. The BOR is the agency responsible for this development. Brook trout from Jones Hole NFH are stocked in Cedarview Reservoir and Twin Pots Reservoir; brown trout are stocked in Cedarview Reservoir, Coyote Basin Reservoir, Bottle Hollow Reservoir, and Midview Reservoir; rainbow trout are stocked in Big Springs Reservoir, Clay Basin Reservoir, Flaming Gorge Reservoir, the Power Plan Canal, Bottle Hollow Reservoir, the Duchesne River, Midview Reservoir, and Twin Pots Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Ennis NFH provides disease free, strain specific rainbow trout eggs to Jones Hole NFH for these mitigation programs. Glenwood SFH (UT) and Springville SFH (UT) also stock rainbow trout in Flaming Gorge Reservoir with fish grown from eggs supplied from Ennis NFH. Saratoga NFH provides disease free, strain specific brown trout eggs to Jones Hole NFH for its mitigation programs. Stocking activities are conducted in accordance with an MOA between the Service, the BIA, and the Ute Tribe: Uintah and Ouray Indian Reservation, and a Fisheries Management Plan developed cooperatively with the Wyoming Fish and Game Department. The Central Utah Project Completion Act provides for Department level participation by the DOI in the administration of Project funds. The Service did not receive any funds to offset the costs of the nineteen programs to mitigate for Flaming Gorge Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	1,163,705	1,415,226	0%	\$358,281	\$688,999	\$1,047,280
2000	890,727	904,712	0%	\$274,624	\$646,994	\$921,618

Grassy Lake Dam

Grassy Lake Dam, in the Upper Snake River Reservoir System, was constructed in 1937 under the authority of the Reclamation Act of 1902 and the Palisades Dam and Reservoir Project Act, 64 Stat. 1083. The BOR is the agency responsible for this development. Cutthroat trout from Jackson NFH are stocked in Grassy Lake under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the Teton Basin Management Plan. The Palisades Dam and Reservoir Project legislation prohibits collection of mitigation costs from project beneficiaries. However, there is no known legislation that prohibits the BOR from reimbursing the Service for the costs associated with this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Grassy Lake Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	16,535	-	0%	\$13,076	\$10,499	\$23,575
2000	15,436	-	0%	\$12,299	\$9,850	\$22,149

Heart Butte Dam

Heart Butte Dam was constructed in 1948 under the authority of the Flood Control Act of 1944 and P.L. 78-534, as part of the Pick-Sloan, Missouri River Basin Program. The BOR is the agency responsible for this development. Smallmouth bass from Garrison Dam NFH and northern pike from Valley City NFH are stocked in Heart Butte Reservoir under the authority of the FWCA as part of the mitigation activities for this pumping station. Stocking activities are conducted in accordance with the Heart Butte Reservoir Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the three programs to mitigate for Heart Butte Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	539,992	-	0%	\$19,585	\$53,710	\$73,295
2000	199,980	-	0%	\$15,449	\$60,707	\$76,156

Heron Dam

Heron Dam was constructed in 1971 as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. The BOR is the agency responsible for this development. Rainbow trout from Hotchkiss NFH are stocked in Heron Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Rainbow trout eggs are supplied from Ennis NFH. The Heron Reservoir Management Plan was developed cooperatively with the CDOW. Stocking activities are conducted in accordance with this Plan. The Service did not receive any funds to offset the costs of the two programs to mitigate for Heron Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	97,014	436,170	0%	\$79,188	\$121,566	\$200,754
2000	81,069	319,150	0%	\$54,180	\$80,247	\$134,427

Island Park Dam

Island Park Dam was completed in 1938 as one of five storage dams for the Minidoka Project, which was authorized by the Secretary of the Interior on April 24, 1904. The Upper Snake River storage component of the Minidoka Project was authorized by the Secretary's finding of feasibility and approved by the President on September 20, 1935. The BOR is the agency responsible for this development. Rainbow trout eggs from Ennis NFH are provided to Mackay SFH under the authority of the FWCA. Subsequently, fish from Mackay SFH are stocked in Island Park Reservoir as part of the mitigation activities for this dam. Stocking activities are conducted under plans developed by the Idaho Department of Fish and Game. The Service did not receive any funds to offset the costs of the one program to mitigate for Island Park Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	140,575	0%	\$2,090	\$2,386	\$4,476
2000	-	-	0%	-	-	-

Jackson Lake Dam

Jackson Lake Dam, a part of the Upper Snake River Reservoir System, was constructed in 1950 under the authority of the Reclamation Act of 1902. The Palisades Dam and Reservoir Project Act, 64 Stat. 1083 provides additional authorities. The BOR is the agency responsible for this development. Lake trout from Jackson NFH are stocked in Jackson Lake under the authority of the FWCA and the FWA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the Upper Snake River Basin Management Plan. The Palisades

Dam and Reservoir Project legislation prohibits collection of mitigation costs from project beneficiaries. However, there is no known legislation that prohibits the BOR from reimbursing the Service for the costs associated with this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Jackson Lake Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	46,510	-	0%	\$57,939	\$46,521	\$104,460
2000	26,288	-	0%	\$33,818	\$27,082	\$60,890

Jamestown Dam

The Jamestown Dam was constructed in 1954 under the authority of the Flood Control Act of 1944, P.L.78-534 and P.L.89-108, as part of the Garrison Diversion Unit of the Pick-Sloan, Missouri River Basin Program. The BOR is the agency responsible for this development. Walleye from Garrison Dam NFH and Valley City NFH, as well as northern pike from Valley City NFH, are stocked in Jamestown Reservoir and the James River under the authority of the FWCA as part of the mitigation activities for this pumping station. Stocking activities are conducted in accordance with the Guidelines for Mid-sized Reservoirs developed by the NDGFD. The Service did not receive any funds to offset the costs of the two programs to mitigate for Jamestown Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	75,000	-	0%	\$4,144	\$11,397	\$15,541
2000	75,000	-	0%	\$1,220	\$2,372	\$3,592

Jordanelle Dam

Jordanelle Dam was constructed in 1993 by the BOR under the authority of the Colorado River Storage Project, 70 Stat. 110, and the Central Utah Project Completion Act. Native fish production was eliminated by the alteration of environmental conditions. Rainbow trout from Jones Hole NFH are stocked in Jordanelle Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with a Fisheries Management Plan developed and implemented cooperatively by the Utah Division of Wildlife Resources and the Service. The Central Utah Project Completion Act provides for Department level participation by the DOI in the administration of Project funds. The Service did not receive any funds to offset the costs of the one program to mitigate for Jordanelle Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	11,000	-	0%	\$4,879	\$9,627	\$14,506
2000	59,549	-	0%	\$4,879	\$11,599	\$16,478

Lemon Dam

Lemon Dam was constructed in 1963 as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. The BOR is the agency responsible for this development; however, since 1989, operation, maintenance as well as marketing responsibility for the dam rests with the Florida Water Conservancy District which has a lease of power privilege. Rainbow trout from Hotchkiss NFH are stocked in Lemon Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Disease free, strain specific rainbow trout eggs are provided to Hotchkiss NFH by Ennis NFH. Stocking activities are conducted in accordance with the Lemon Reservoir Management Plan developed and implemented cooperatively by the CDOW. The Service did not receive any funds to offset the costs of the two programs to mitigate for Lemon Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	13,100	56,892	0%	\$10,468	\$16,076	\$26,544
2000	12,917	49,100	0%	\$8,452	\$12,519	\$20,971

McPhee Dam

McPhee Dam was constructed in 1984 by the BOR as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. Rainbow trout from Hotchkiss NFH are stocked in McPhee Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Rainbow trout eggs are supplied from Ennis NFH. Stocking activities are conducted in accordance with the McPhee Reservoir Management Plan developed and implemented cooperatively by the CDOW. The Service did not receive any funds to offset the costs of the two programs to mitigate for McPhee Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	83,104	379,279	0%	\$41,012	\$61,987	\$102,999
2000	93,776	368,250	0%	\$38,520	\$56,636	\$95,156

Mount Elbert Forebay Dam, Sugar Loaf Dam, and Twin Lakes Dam

Mount Elbert Forebay Dam was constructed in 1977 as part of the Frying Pan-Arkansas Project, under the authority of the P.L. 95-586. Sugar Loaf Dam was constructed in 1965 as part of the Frying Pan-Arkansas Project, under the authority of the P.L. 87-590, P.L. 93-493, and P.L. 95-586. Twin Lakes Dam was constructed in 1978 as part of the Frying Pan-Arkansas Project, under the authority of the P.L. 93-493. The BOR is the agency responsible for these developments. Cutthroat trout and rainbow trout from Leadville NFH are stocked under the authority of the FWCA as part of the mitigation activities for these dams. Cutthroat trout are stocked in Brush Hollow Reservoir, Cherry Creek Reservoir, Fountain Lake, Hasty Lake, Horseshoe Reservoir, Karval Reservoir, Kinney Lake, Martin Lake, Monument Lake, Ordway Reservoir, Palmer Lake, Prospect Lake, Quail Lake, Runyon Lake, Trinidad Reservoir, Turks Pond, and Twin Buttes/Black Hole Lake, and Twin Lakes Reservoir. Rainbow trout are stocked in Arvada Reservoir, Brush Hollow Reservoir, Carter Reservoir, Fountain Lake, Hasty Lake, Karval Reservoir, Kinney Lake, Monument Lake, Ordway Reservoir, Palmer Lake, Pinewood Reservoir, Prospect Lake, Quail Lake, Runyon Lake, and Trinidad Reservoir. Stocking activities are conducted in accordance with a Memorandum of Agreement with the BOR and an exchange agreement with the CDOW. The exchange agreement provides for stocking an array of sites by Leadville NFH in return for stocking mitigation sites by CDOW. The Service did not receive any funds to offset the costs of the thirty-three programs to mitigate for Mount Elbert Forebay Dam, Sugar Loaf Dam, or Twin Lakes Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	74,032	-	0%	\$116,453	\$196,667	\$313,120
2000	115,208	-	0%	\$147,931	\$196,663	\$344,594

Navajo Dam

Navajo Dam was constructed in 1963 as part of the Colorado River Storage Project by the BOR, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. Rainbow trout from Hotchkiss NFH are stocked in Navajo Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Rainbow trout eggs are supplied from Ennis NFH. Stocking activities are conducted in accordance with the Navajo Reservoir Management Plan developed and implemented cooperatively by the CDOW. The Service did not receive any funds to offset the costs of the two programs to mitigate for Navajo Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	200,298	910,269	0%	\$80,594	\$120,759	\$201,353
2000	188,735	761,050	0%	\$62,679	\$91,683	\$154,362

Palisades Dam

Palisades Dam, a part of the Upper Snake River Reservoir System, was constructed in 1950 under the authority of the Reclamation Act of 1902 and the Palisades Dam and Reservoir Project Act, 64 Stat. 1083. The BOR is the agency responsible for this development. Cutthroat trout from Jackson NFH are stocked in Palisades Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the Palisades Reservoir Fisheries Management Plan. The Palisades Dam and Reservoir Project legislation prohibits collection of mitigation costs from project beneficiaries. However, there is no known legislation that prohibits the BOR from reimbursing the Service for the costs associated with this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Palisades Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	245,683	-	0%	\$175,195	\$140,668	\$315,863
2000	272,319	-	0%	\$194,040	\$155,392	\$349,432

Red Fleet Dam

The BOR constructed the Red Fleet Dam in 1980 under the authority of the Colorado River Storage Project, 70 Stat. 110, and the Central Utah Project Completion Act. Rainbow trout from Jones Hole NFH are stocked in Red Fleet Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with a Fisheries Management Plan developed and implemented cooperatively by the Utah Division of Wildlife Resources and the Service. The Central Utah Project Completion Act provides for Department level participation by the DOI in the administration of Project funds. The Service did not receive any funds to offset the costs of the one program to mitigate for Red Fleet Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	57,568	-	0%	\$17,077	\$33,695	\$50,772
2000	60,000	-	0%	\$13,418	\$31,897	\$45,315

Silver Jack Dam

In 1971, the BOR constructed Silver Jack Dam as part of the Colorado River Storage Project, under the authority of the Colorado River Storage Project Act, 70 Stat. 110. Rainbow trout from Hotchkiss NFH are stocked in Silver Jack Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Rainbow trout eggs are supplied from Ennis NFH.

Stocking activities are conducted in accordance with the Silver Jack Reservoir Management Plan

developed and implemented cooperatively by the CDOW. The Service did not receive any funds to offset the costs of the two programs to mitigate for Silver Jack Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	20,065	94,820	0%	\$11,900	\$18,082	\$29,982
2000	14,542	49,100	0%	\$13,041	\$19,395	\$32,436

Snake Creek Pumping Station – Garrison Diversion Unit

The Snake Creek Pumping Station was constructed in 1965 under the authority of the P.L. 89-108 as part of the Pick-Sloan, Missouri River Basin Program. The BOR is the agency responsible for this development. Brown trout from Garrison Dam NFH are stocked in Lake Holmes, rainbow trout in Little Britches Pond and Lightning Lake, and walleye in Lake Brekken, Devils Lake, Garrison Dam Unit Canal Lakes, Harvey Dam, Lake Holmes, and South Hoffer-McClusky Lake. Northern pike from Valley City NFH are stocked in Harvey Lake and North Hoffer-McClusky Lake, walleye from Valley City NFH are stocked in Lake Harvey, and yellow perch from Valley City NFH are stocked in Lake Audubon and Stump Lake as part of the mitigation activities for this pumping station. Rainbow trout eggs are supplied by Ennis NFH. Stocking activities are conducted under the authority of the FWCA in accordance with the Guidelines for Small Lakes and Reservoirs, the Lake Brekken Fisheries Management Plan, the Devils Lake Fisheries Management Plan, the Fisheries Management Plan for Canal Lakes, and the Stocking Guidelines for Mid-sized Reservoirs developed by the NDGFD. The Service did not receive any funds to offset the costs of the fourteen programs to mitigate for Snake Creek Pumping Station - Garrison Diversion Unit.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	927,050	-	0%	\$46,874	\$128,610	\$175,484
2000	1,085,300	-	0%	\$15,992	\$38,620	\$54,612

Steinaker Dam

Steinaker Dam was constructed in 1962 as part of the Central Utah Project, under the authority of the Colorado River Storage Project, 70 Stat. 110. The BOR is the agency responsible for this development. Rainbow trout from Jones Hole NFH are stocked in Steinaker Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with a Fisheries Management Plan developed and implemented cooperatively by the Utah Division of Wildlife Resources and the Service. The Central Utah Project Completion Act provides for Department level participation by the DOI in the

administration of Project funds. The Service did not receive any funds to offset the costs of the one program to mitigate for Steinaker Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	100,645	-	0%	\$31,715	\$62,576	\$94,291
2000	133,708	-	0%	\$36,594	\$86,991	\$123,585

One hundred thirty-two mitigation programs conducted by the Service involved mitigating for BOR projects. For FY 2001, the total associated costs for all mitigation programs conducted by the Service for BOR dams totaled \$10.3 M. The BOR reimbursed the Service approximately \$5.3 M, resulting in nearly \$5.1 M needed for all fisheries programs to be considered fully reimbursed. The total associated costs for all mitigation programs conducted by the Service in FY 2000 totaled nearly \$9.9 M. The Service was reimbursed \$4.8 M by the BOR. An additional \$5 M was needed for all fisheries mitigation programs conducted in FY 2000 to be considered fully reimbursed.

U.S. Army Corps of Engineers

The COE has constructed numerous dams throughout the U.S. for the generation of hydroelectric power, the maintenance of municipal and industrial water supplies, for flood control, and for the promotion of navigable waterways. The Service operates twenty-four facilities that are involved in mitigation programs for COE water development projects. These hatcheries are: Chattahoochee Forest NFH, GA; Dale Hollow NFH, TN; Dworshak NFH, ID; Eagle Creek NFH, OR; Ennis NFH, MT; Erwin NFH, TN; Garrison Dam NFH, ND; Gavins Point NFH, SD; Greers Ferry NFH, AR; Hagerman NFH, ID; Jackson NFH, WY; Little White Salmon NFH, WA; Mammoth Spring NFH, AR; Neosho NFH, MO; Norfolk NFH, AR; Saratoga NFH, WY; Spring Creek NFH, WA; Tishomingo NFH, OK; Valley City NFH, ND; White Sulphur Springs NFH, WV; Willard NFH, AZ; and Wolf Creek NFH, KY.

The COE was given specific authority (WRDA of 1976 and the Lower Snake River Project authorization, March 2, 1945) by Congress in the Pacific Northwest, to reimburse agencies for conducting some mitigation programs. The COE fully funds mitigation programs at Dworshak NFH and Spring Creek NFH, and partially funds mitigation programs at Hagerman NFH and Little White Salmon NFH. These mitigation programs assist in compensating for the loss of anadromous and resident fish species from the construction of two hydroelectric dams in the Columbia River Basin: Dworshak Dam and John Day Dam. The COE reimbursed the Service approximately \$2.7 M and \$2.9 M in FY 2000 and FY 2001, respectively, for fisheries mitigation programs. Additionally, the State of Arkansas provided \$70,000 to the Service to offset the costs of fisheries mitigation programs at Norfolk NFH and Greers Ferry NFH.

Fish and Wildlife Service Region 1

Dworshak Dam

Dworshak Dam was constructed by the COE and completed in 1971. Dworshak Dam was authorized under the Rivers and Harbors Act of 1962 - Flood Control Act of 1962. A Memorandum of Understanding (MOU) was signed by the COE and Service in 1969 authorizing the Service to operate the Dworshak NFH with reimbursable funding from the COE. The mitigation goal for Dworshak NFH is to return 30,000 adult steelhead to the Columbia River with 20,000 adults entering the Clearwater River. The hatchery produces 2,200,000 smolts annually to meet this adult goal. In addition, a resident mitigation goal of 100,000 pounds of fish was in the 1969 MOU and is currently under review. The Hagerman NFH produces rainbow trout for the Dworshak Dam resident fish mitigation as an in-kind exchange program with the Idaho Department of Fish and Game (IDFG). Rainbow trout are reared at Hagerman NFH and stocked into Idaho state waters, then in return, IDFG rears a matching amount of sterile rainbow trout on specific pathogen free water for stocking into Dworshak Reservoir. Ennis NFH provides both Dworshak NFH and Hagerman NFH disease-free, strain specific rainbow trout eggs to support mitigation programs conducted at those stations.

The total associated costs of the steelhead programs are fully reimbursed by the COE, but the reimbursement for 18,000 pounds of resident fish at the Hagerman NFH does not include maintenance costs or egg production costs. The Service should renegotiate the reimbursable agreement with the COE to ensure that all direct and indirect costs associated with the thirteen mitigation programs are fully reimbursed.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs ¹	Total Associated Costs
2001	2,387,793	201,063	99%	\$1,937,310	\$3,414	\$1,940,724
2000	2,246,703	81,971	99%	\$1,786,830	\$1,621	\$1,788,451

¹ The COE directly pays for these costs at Dworshak NFH. BPA funds Hagerman NFH through the Lower Snake River Compensation Plan. Thus, these costs only depict the maintenance costs associated with Ennis NFH for its brood stock program associated with mitigating this project.

John Day Dam

The John Day Dam was built in 1957. It was established that the COE would mitigate for annual losses associated with the construction of the project that amounted to 60,000 adult fall chinook salmon returning to the Columbia River. The COE entered into an agreement with the Service in 1972 to increase smolt production of spring chinook salmon to mitigate for one half of the losses, 30,000 returning adults, associated with the John Day Project. In addition to funding the expansion of the facility, the COE also provides operation and maintenance funds for the increased production. Spring Creek NFH provides the largest portion of this mitigation program, and Little White Salmon NFH provides the remainder.

The total associated costs of the three programs are not fully reimbursed by the COE. Spring Creek NFH does receive full reimbursement for its mitigation program. Little White Salmon NFH only receives funds to purchase fish food for off-site rearing of these fish following transfer to acclimation sites. Maintenance and salary costs to support this program were not paid for by the COE. This situation resulted from the Service adjusting its programs at Spring Creek NFH and Little White Salmon NFH to promote cost effectiveness while dealing with inadequate and declining funding levels for Mitchell Act programs, which are funded by the NMFS. To address this problem, the Service should work with the NMFS to secure appropriate funding for all Mitchell Act programs.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	9,201,527	-	68%	\$1,218,996	\$232,715	\$1,451,711
2000	9,199,848	-	67%	\$1,160,128	\$232,715	\$1,392,843

Fish and Wildlife Service Region 2

Oologah Dam

Oologah Dam (OK) was constructed in 1963 via the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. The power portion of construction was authorized in the River and Harbor Act approved in 1946 and reauthorized by Public Law 93-251 in 1974. Tishomingo NFH distributed smallmouth bass to mitigate the impacts of Oologah Dam on the Verdigris River system (OK). This program is a conservation exchange with Oklahoma Department of Wildlife Conservation. The Service raises and distributes smallmouth bass in exchange for paddlefish for restoration activities. The FWCA, as amended, enables the Service to undertake activities to mitigate for this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Oologah Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	85,037	-	0%	\$953	\$23,118	\$24,071
2000	70,750	-	0%	\$1,184	\$34,099	\$35,283

Sardis Dam

Sardis Dam (OK) was constructed in 1975 via the Flood Control Act of 1962. Tishomingo NFH distributed smallmouth bass to mitigate the impacts of Sardis Dam on Jack Fork Creek of the Red River system (OK). This program is a conservation exchange with Oklahoma Department of Wildlife Conservation. The Service raises and distributes smallmouth bass in exchange for

paddlefish for restoration activities. The FWCA, as amended, enables the Service to undertake activities to mitigate for this project. The Service did not receive any funds to offset the costs of the one program to mitigate for Sardis Dam. The Service should negotiate the reimbursable agreement with COE to collect all direct and indirect costs associated with this mitigation program.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	43,000	-	0%	\$525	\$13,569	\$14,094
2000	-	-	0%	-	-	-

Fish and Wildlife Service Region 3

Table Rock Dam

The Table Rock Dam was built in 1958. Table Rock Dam construction altered the White River flows and environmental conditions. Thus, rainbow trout have been stocked to fill the vacant niche and mitigate for lost fishing opportunities on that river system. Originally, the mitigation stocking was performed by Norfolk NFH. In the mid 1960's, the propagation program was split between Greers Ferry NFH and Neosho NFH. Now, Neosho NFH produces all the mitigation obligation for Lake Taneycomo. The eggs for this program are provided by the Ennis and White Sulphur Springs NFH's. The Service did not receive any funds to offset the costs of the three programs to mitigate for Table Rock Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	225,757	400,000	0%	\$416,316	\$315,993	\$732,309
2000	240,480	400,000	0%	\$403,155	\$318,057	\$721,212

Fish and Wildlife Service Region 4

Barren Dam

The construction of Barren Dam, located on the Barren River in south-central Kentucky, was completed in 1964 by the COE to provide flood control, recreation, and water quality control. Authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946, Barren Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Barren River and the associated hypolimnetic discharges from Barren Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species

(i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Barren tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Barren Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the Kentucky Department of Fish and Wildlife Resources (KDFWR) under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Barren Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	8,500	38,024	0%	\$8,072	\$6,824	\$14,896
2000	7,200	35,483	0%	\$6,906	\$5,935	\$12,841

Beaver Dam

Beaver Dam was constructed by the COE across the White River about six miles west of Eureka Springs, Arkansas, and completed in May 1965 as authorized by the Flood Control Act of 1943. Beaver Dam is the first dam on the upper end of the White River watershed. The Beaver Lake Project contains 40,463 acres and provides storage capacity of 1.95 million acre feet of water. Native species such as largemouth bass, smallmouth bass, channel catfish were unable to maintain a viable populations in the tailwaters below the dam. To mitigate the loss of the native species, rainbow, brown, and cutthroat trout are stocked from the Norfolk NFH. Jackson NFH provides cutthroat trout eggs to Norfolk NFH. Additionally, Greers Ferry NFH distributes rainbow and brook trout in the Beaver Dam tailwaters. The Norfolk NFH was constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955. Greers Ferry NFH was constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D). The stockings are accomplished as agreed upon in an MOU with the State of Arkansas. Annual stocking meetings are held with the Arkansas Game and Fish Commission (AGFC) to discuss and refine the stocking program to meet the changing needs of the tailwater. Norfolk NFH receives \$35,000 annually from the State of Arkansas to conduct parts of its fifteen mitigation programs for Beaver Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	181,163	514,053	28.9%	\$91,120	\$30,385	\$121,505
2000	226,013	562,030	29.4%	\$87,756	\$31,419	\$119,175

Blakely Mountain Dam

Blakely Mountain Dam, located on the Ouachita River, was constructed by the COE as authorized by the Flood Control Act of 1944. The dam was completed in 1952 and created the 40,000 acre Lake Ouachita. The environmental conditions of the Ouachita River were altered, especially the waters immediately below Blakely Mountain Dam. To mitigate for the altered environmental conditions, the Norfolk NFH and Greers Ferry NFH stock rainbow trout into the tailwater. Norfolk NFH was constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955. Greers Ferry NFH was constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D). A MOU between the Service and the State of Arkansas describes the details of this mitigation activity. The Service did not receive any funds to offset the costs of the eight programs to mitigate for Blakely Mountain Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	168,928	354,113	0%	\$119,691	\$69,431	\$189,122
2000	156,600	391,262	0%	\$103,636	\$63,069	\$166,705

Broken Bow Dam

Broken Bow Dam is located on the Mountain Fork River, a tributary of the Little River approximately 9 miles north-northeast of Broken Bow in McCurtain County, Oklahoma. Broken Bow Dam, authorized by the Flood Control Act of 1946 (modified in 1958, 1967) was built by the COE for the purpose of flood control, hydroelectric power, water supply, recreation and fish and wildlife. Construction began in 1961 and the conservation pool was filled in April 1970. Norfolk NFH, constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955, and Greers Ferry NFH, constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D), provide the rainbow trout for this tailwater that are hauled by the State of Oklahoma. An MOU describes the agreement between the Service and the State of Oklahoma. The Service did not receive any funds to offset the costs of the nine programs to mitigate for Broken Bow Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	128,517	289,371	0%	\$54,211	\$30,879	\$85,090
2000	126,128	325,226	0%	\$50,410	\$30,294	\$80,704

Buckhorn Dam

Construction of Buckhorn Dam, located on the Middle Fork of the Kentucky River in eastern Kentucky, was completed in 1961 by the COE to provide flood control, recreation, and water quality control. Authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of

1946, Buckhorn Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Kentucky River and the associated hypolimnetic discharges from Buckhorn Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Buckhorn tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Buckhorn Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Buckhorn Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	6,000	19,012	0%	\$5,297	\$4,481	\$9,778
2000	6,000	17,741	0%	\$5,359	\$4,616	\$9,975

Buford Dam

Buford Dam and Lake Sydney Lanier were authorized by Congress in 1946 under the Flood Control Act of 1944. Buford Dam was designed and built by the COE in 1957, impounding the Chattahoochee River and creating Lake Sydney Lanier. The authorized purposes for the Lake Lanier project included power production, navigation, recreation, flood control, water supply and quality, and fish and wildlife management. Within the 77-km section of the Chattahoochee River, Buford Dam tailwater, a trout fishery results from cold, hypolimnetic releases from Lake Lanier. Native warmwater fish no longer maintain a significant fishery because of the altered thermal regime. The Georgia Department of Natural Resources has stocked trout in this tailwater since 1960 to mitigate the loss of the native species because of the cold tailwater releases. The Chattahoochee Forest NFH has a long-standing commitment with the State of Georgia which was formalized by a Memorandum of Understanding in 1998.

On May 23, 1980, a cooperative agreement between the Southeast Regional Director and the State of Georgia was signed into effect. The document, Region 4 - State/Federal Fish Stocking Cooperative Agreement, directs that "The Service and State may exchange manpower, equipment, and facilities, as mutually agreed to accomplish the objectives as set forth in this agreement" and to "provide a comparable stocking schedule from hatcheries into waters that are identified Federal responsibility." The 1998 MOU solidifies this agreement by stating that "the

Service will produce rainbow trout at Chattahoochee Forest NFH to meet Federal mitigation requirements in tailwaters of Lake Lanier, Lake Hartwell and Blue Ridge Lake.”

Due to a lack of rainfall and low water supply to the Chattahoochee Forest NFH, Norfolk NFH assisted with the fish production in FY 2000. Dale Hollow NFH supplies rainbow trout fingerlings to Chattahoochee Forest NFH and Lake Burton SFH, GA for grow-out and subsequent distribution into Lake Sidney Lanier in order to mitigate for lost fisheries due to the construction of Buford Dam. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and White Sulphur Springs NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the fourteen mitigation programs for Buford Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	1,382,371	4,929,970	0%	\$684,687	\$555,626	\$1,240,313
2000	1,099,121	4,947,727	0%	\$641,821	\$838,594	\$1,480,415

Bull Shoals Dam

Bull Shoals Dam is the third COE dam from the upper end of the White River Watershed. Bull Shoals Dam was completed in July of 1951 and is located approximately 7 miles north of Cotter, Arkansas. Construction was authorized by the Flood control act of 1941. It is the fifth largest concrete dam in the U.S. The impoundment of Bull Shoals Lake caused environmental changes in the tailwater portion of the White River downstream of the dam. Cold tailwater releases from the lake produced habitat suitable for rainbow, brown, and cutthroat trout. However, because of various unfavorable environmental factors such as lack of suitable substrate, fluctuation of water temperatures, and pulsation of current and water levels, trout reproduction has been unsatisfactory. The tailwater below Bull Shoals possesses 92 miles of habit which is suitable for trout, the longest reach of any in the White River system. This is due to the influx of cold water from the Norfolk Dam Tailwater in the White River 44 miles below the Bull Shoals Dam.

To mitigate the loss of the native species, rainbow, brown, and cutthroat trout are stocked from the Norfolk NFH. Additionally, Greers Ferry NFH distributes rainbow and brook trout in the Bull Shoals Dam tailwaters. The Norfolk NFH was constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955. Greers Ferry NFH was constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D). The stockings are accomplished as agreed upon by the MOU with the State of Arkansas. Annual stocking meetings are held with the AGFC to discuss and refine the stocking program to meet the changing needs of the tailwater. Greers Ferry NFH receives \$35,000 annually from the State of Arkansas to conduct parts of its mitigation programs.

Mammoth Spring NFH has entered into MOUs with the States of Arkansas and Missouri to restore native walleye through a Federal and State partnership having common goals and objectives. Partnering with the State of Arkansas, Mammoth Spring NFH distributes native walleye in the Current River, Eleven Point River, Spring River, and Strawberry River. Stocking sites are approximately 150+ miles down stream from the Bull Shoals Dam. Partnering with the State of Missouri, Mammoth Spring NFH distributes native walleye in the Norfork River and White River. The stocking sites on the White River are approximately 50+ miles upstream from the Bull Shoals Dam. The hatchery was authorized by 32 Stat. 1107, March 3, 2003.

The Service did not receive any funds to offset the costs of the nineteen programs to mitigate for Bull Shoals Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	2,731,184	2,888,603	2.9%	\$799,948	\$410,287	\$1,210,235
2000	2,280,318	3,560,276	3.5%	\$730,701	\$260,420	\$991,121

Carr Creek Dam

Construction of Carr Creek Dam, located on the North Fork of the Kentucky River in southeastern Kentucky, was completed in 1976 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. Carr Creek Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Kentucky River and the associated hypolimnetic discharges from Carr Creek Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Carr Creek tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Carr Creek Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Carr Creek Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	10,800	57,036	0%	\$10,577	\$8,938	\$19,515
2000	11,700	53,224	0%	\$10,901	\$9,372	\$20,273

Cave Run Dam

Construction of Cave Run Dam, located on the Licking River in northeastern Kentucky, was completed in 1974 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Cave Run Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Licking River and the associated hypolimnetic discharges from Cave Run Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Cave Run tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Cave Run Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Cave Run Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	8,500	38,024	0%	\$7,989	\$9,754	\$17,743
2000	8,500	35,483	0%	\$8,003	\$6,884	\$14,887

Center Hill Dam

Construction of Center Hill Dam, located on the Caney Fork River in north-central Tennessee, was completed in 1948 by the COE to provide flood control and hydroelectric power. Construction of the dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. The impoundment of the Caney Fork River and the associated hypolimnetic discharges from Center Hill Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown

trout for stocking the Center Hill tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Center Hill Dam. The fishery is managed by the Tennessee Wildlife Resources Agency (TWRA) under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the five programs to mitigate for Center Hill Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	129,975	473,331	0%	\$89,113	\$116,545	\$205,658
2000	132,014	518,326	0%	\$87,155	\$131,853	\$219,008

Dale Hollow Dam

Construction of Dale Hollow Dam, located on the Obey River in north-central Tennessee, was completed in 1945 by the COE to provide flood control and hydroelectric power. Construction of the dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. The impoundment of the Obey River and the associated hypolimnetic discharges from Dale Hollow Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking Dale Hollow Reservoir, one of Dale Hollow Reservoir's main tributaries (i.e., Wolf River), and the Dale Hollow tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Dale Hollow Dam. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, Ennis NFH, Erwin NFH, and Saratoga NFH serve as broodstock hatcheries and supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the eight programs to mitigate for Dale Hollow Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	169,156	611,240	0%	\$113,889	\$148,950	\$262,839
2000	157,003	562,322	0%	\$119,485	\$161,932	\$281,417

Dewey Dam

Construction of Dewey Dam, located on Johns Creek a tributary of the Levisa Fork of the Big Sandy River in eastern Kentucky, was completed in 1949 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Dewey Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Big Sandy River and the associated hypolimnetic discharges from Dewey Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Dewey tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Dewey Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Dewey Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	5,600	19,012	0%	\$5,048	\$4,270	\$9,318
2000	5,600	17,741	0%	\$5,092	\$4,385	\$9,477

Fishtrap Dam

Construction of Fishtrap Dam, located on Levisa Fork of the Big Sandy River in eastern Kentucky, was completed in 1969 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Fishtrap Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Big Sandy River and the associated hypolimnetic discharges from Fishtrap Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Fishtrap tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Fishtrap Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs

for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Fishtrap Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	8,500	38,024	0%	\$7,929	\$6,703	\$14,632
2000	8,500	35,483	0%	\$6,481	\$5,606	\$12,087

Grayson Dam

Construction of Grayson Dam, located on the Little Sandy River in northeastern Kentucky, was completed in 1968 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Grayson is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Little Sandy River and the associated hypolimnetic discharges from Grayson Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Grayson tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Grayson Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Grayson Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	8,000	38,024	0%	\$7,665	\$6,479	\$14,144
2000	8,000	35,483	0%	\$7,676	\$6,601	\$14,277

Greers Ferry Dam

Greers Ferry Lake was formed when the COE constructed a dam on the Little Red River, 79 miles from its mouth at the White River. Construction of the dam was completed in December of 1962 as authorized by the Flood Control Act of 1938 (modified in 1954). The Service prepared a report on the fish and wildlife resources of this project. The report stated that the water discharges from the dam would normally be too cold to support warm water fish and that the characteristics of the tailwater were not conducive to the support of a trout fishery. The Service recommended in this report that the design of the dam be modified to provide warm-water discharges through the turbines to preserve the existing warm-water fishery in the Little Red River downstream of the dam. Extensive studies were carried out relative to this problem. The COE determined that compliance with this recommendation was not feasible. Subsequently a trout fishery was established in the tailwater and has proven to be quiet successful. In fact, the world record brown trout of 40 lbs. and 4 ozs. was caught here. Greers Ferry NFH, constructed in 1965 as authorized by 76 Stat. 1195, stocks rainbow and brook trout in the Greers Ferry Dam tailwaters. Additionally, Norfork NFH, constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955, stocks this tailwater with cutthroat trout. The Service did not receive any funds to offset the costs of the thirteen programs to mitigate for Greers Ferry Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	375,335	777,652	0%	\$57,399	\$25,806	\$83,205
2000	429,987	1,001,983	0%	\$67,216	\$32,255	\$99,471

Hartwell Dam

The Hartwell Project was authorized by the Flood Control Act of 17 May 1950 as the second unit in the comprehensive development of the Savannah River Basin for the purposes of flood control, hydropower, and navigation. Authority for the development and utilization of reservoir lands for public access and recreational use was authorized by Section 4 of the Flood Control Act of 1944, as amended in 1946, 1954, 1962, and in Section 2a of the Land and Water Conservation Fund Act of 1965. Hartwell Dam was constructed in 1962 and is owned and operated by the COE.

Prior to the construction of the reservoir, the affected rivers were typical coolwater streams. The principal fish species caught by fishermen were smallmouth and largemouth bass. Impacts of the reservoir were conducted by the State of Georgia. Assessments determined that the reservoir was ecologically different from the original river and that the tailwaters would not be conducive to natural reproduction. Downstream fishing losses had occurred. Studies indicate that water quality patterns in the tailrace and the tailwaters are controlled primarily by outflows during both generation and non-generation. There are approximately 10 miles of the Hartwell Lake tailwater which support a cold water trout fishery. Rainbow and brown trout have been stocked in the

Hartwell tailrace by both South Carolina and Georgia Departments of Natural Resources since the construction of Hartwell Dam in 1962.

The Chattahoochee Forest NFH has a long-standing commitment with the State of Georgia which was formalized by a Memorandum of Understanding in 1998. On May 23, 1980, a cooperative agreement between the Southeast Regional Director and the State of Georgia was signed. The document, Region 4 - State/Federal Fish Stocking Cooperative Agreement, directs that "The Service and State may exchange manpower, equipment, and facilities, as mutually agreed to accomplish the objectives as set forth in this agreement" and to "provide a comparable stocking schedule from hatcheries into waters that are a Service identified Federal responsibility." The 1998 MOU solidifies this agreement by stating that "the Service will produce rainbow trout at Chattahoochee Forest NFH to meet Federal mitigation requirements in tailwaters of Lake Lanier, Lake Hartwell and Blue Ridge Lake." Dale Hollow NFH supplies rainbow trout fingerlings to Chattahoochee Forest NFH, GA and Lake Burton SFH, GA for grow-out and subsequent distribution into Lake Hartwell in order to mitigate for the lost fisheries due to the construction of Hartwell Dam. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and White Sulphur Springs NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the twelve programs to mitigate for Hartwell Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	18,391	50,820	0%	\$15,430	\$12,014	\$27,444
2000	13,337	50,839	0%	\$15,292	\$15,754	\$31,046

J. Percy Priest Dam

Construction of J. Percy Priest Dam, located on the Stones River in north-central Tennessee, was completed in 1967 by the COE to provide flood control and hydroelectric power. Construction of the dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. The impoundment of the Stones River and the associated hypolimnetic discharges from J. Percy Priest Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout for stocking J. Percy Priest tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of J. Percy Priest Dam. This program has the added benefit of creating an urban recreational fishery for the people of Nashville. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, Ennis NFH and Erwin NFH supply Dale Hollow NFH with

disease-free, genetically distinct, eyed eggs in support of this mitigation program. The Service did not receive any funds to offset the cost of the three programs to mitigate for J. Percy Priest Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	14,017	33,923	0%	\$9,749	\$12,906	\$22,655
2000	14,017	64,036	0%	\$12,022	\$16,214	\$28,236

Laurel Dam

Construction of Laurel Dam, located on the Laurel River in south-central Kentucky, was completed in 1973 by the COE to provide flood control, hydroelectric power, recreation, and water quality control. Authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946, Laurel Dam is one of several multi purpose projects operated and maintained by the COE as part of a coordinated plan for development of water resources in the Cumberland River Basin. This impoundment of the Cumberland River system and the associated hypolimnetic discharges from Laurel Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout and brown trout for stocking the Laurel reservoir and tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Laurel Dam. Additionally, four mitigation programs at Erwin NFH, Ennis NFH, White Sulphur Springs NFH, and Saratoga NFH, support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the six programs to mitigate for Laurel Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	121,850	530,295	0%	\$109,657	\$93,168	\$202,825
2000	112,500	461,279	0%	\$101,632	\$87,418	\$189,050

Martins Fork Dam

Construction of Martins Fork Dam, located on the Martins Fork of the Cumberland River in southeastern Kentucky, was completed in 1978 by the COE to provide flood control, recreation,

and water quality control. Dam construction was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Martins Fork Dam is one of several multi purpose projects operated and maintained by the COE as part of a coordinated plan for development of water resources in the Cumberland River Basin. This impoundment of the Cumberland River and the associated hypolimnetic discharges from Martins Fork Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Martins Fork tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Martins Fork Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH, support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Martins Fork Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	5,900	19,012	0%	\$5,118	\$4,329	\$9,447
2000	5,900	17,741	0%	\$5,131	\$4,419	\$9,550

Narrows Dam

Narrows Dam is located on the Little Missouri River 6 miles north of Murfreesboro, in Pike County, Arkansas. The Dam was authorized by the Flood Control Act of 1941 and was built by the COE for purpose of flood control and hydroelectric power. Construction began in 1947 and was dedicated in July 1951. In June 1952, Congress authorized the water held back by Narrows Dam to be named Lake Greeson. The tailwaters below Narrows Dam created a cold water fishery, replacing the native warm water Ozark stream habitat. Since the native species such as smallmouth bass and catfish were lost, trout were used to mitigate for their losses. Greers Ferry NFH, constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D) provides rainbow trout for the tailwaters as agreed upon with the AGFC. Annual stocking meetings are held with the AGFC to discuss and refine the stocking program. The Service did not receive any funds to offset the costs of the three programs to mitigate for Narrows Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	17,800	31,286	0%	\$12,851	\$7,614	\$20,465
2000	29,800	75,956	0%	\$20,415	\$12,693	\$33,108

Nolin Dam

Construction of Nolin Dam, located on the Nolin River in central Kentucky, was completed in 1963 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Nolin Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Nolin River and the associated hypolimnetic discharges from Nolin Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Nolin tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Nolin Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Nolin Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	17,600	76,048	0%	\$16,392	\$13,858	\$30,250
2000	16,600	70,966	0%	\$15,549	\$13,374	\$28,923

Norfolk Dam

Norfolk Dam is located on the North Fork River, 4.8 miles upstream from the White River, and approximately 12 miles south of Mountain Home, Arkansas. Construction of the dam was initiated in 1941 by the COE and was completed in 1944 as authorized by the Flood Control Act of 1938. Norfolk Lake is located in Baxter and Fulton Counties in Arkansas and Ozark County in Missouri. Because of the cold tailwater releases from the dam, native species can no longer maintain a viable population. To mitigate this loss, rainbow, brown, and cutthroat trout are

stocked in the tailwater from the Norfolk NFH. Additionally, Greers Ferry NFH distributes rainbow and brook trout in the Norfolk Dam tailwaters. The Norfolk NFH, located at the base of the dam on COE's property, was constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955. Greers Ferry NFH was constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D).

Mammoth Spring NFH has entered into MOUs with the States of Arkansas and Missouri to restore native walleye through a Federal and State partnership having common goals and objectives. Partnering with the State of Missouri, Mammoth Spring distributes native walleye in the Norfolk River and White River. The stocking site on the Norfolk River is approximately 30+ miles upstream from the Norfolk Dam. The hatchery was authorized by 32 Stat. 1107, March 3, 2003. Annual discussions are held with the Missouri Department of Natural Resources to discuss, refine and meet the changing needs of the native walleye restoration program.

The Service did not receive any funds to offset the costs of the ten programs to mitigate for Norfolk Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	581,443	795,443	0%	\$107,290	\$39,179	\$146,469
2000	591,941	899,908	0%	\$99,357	\$38,379	\$137,736

Paintsville Dam

Construction of Paintsville Dam, located on Paint Creek, a tributary of the Levisa Fork of the Big Sandy River in eastern Kentucky, was completed in 1984 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Paintsville Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Big Sandy River system and the associated hypolimnetic discharges from Paintsville Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow and brown trout for stocking the Paintsville reservoir and tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Paintsville Dam. Additionally, four mitigation programs at Erwin NFH, Ennis NFH, White Sulphur Springs NFH, and Saratoga NFH, support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which

became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the six programs to mitigate for Paintsville Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	41,300	497,582	0%	\$48,306	\$40,756	\$89,062
2000	41,300	464,280	0%	\$47,206	\$40,388	\$87,594

Rough River Dam

Rough River Dam, located on the Rough River in south-central Kentucky, was completed in 1961 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946. Rough River Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Rough River and the associated hypolimnetic discharges from Rough River Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Rough River tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Rough River Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Rough River Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	7,300	38,024	0%	\$7,115	\$6,012	\$13,127
2000	8,300	35,483	0%	\$7,912	\$4,882	\$12,794

Tenkiller Dam

Tenkiller Dam is located on the Illinois River at river mile 12.8, in Cherokee and Sequoyah counties, about 7 miles northeast of Gore, Oklahoma and about 22 miles southeast of Muskogee, Oklahoma. It was authorized by the Flood Control Act of 1938 and was built for the purpose of flood control and hydroelectric power. Construction began in 1947 and the impoundment of the

power pool began in July of 1952. Norfork NFH, constructed in 1957 as authorized by 69 Stat. 460, August 4, 1955, and Greers Ferry NFH, constructed in 1965 as authorized by 76 Stat. 1195 (16 U.S.C. 460D), provide the rainbow trout for this tailwater that are hauled by the State of Oklahoma. An MOU describes the agreement between the Service and the State of Oklahoma. The Service did not receive any funds to offset the costs of the seven programs to mitigate for Tenkiller Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	94,750	212,038	0%	\$58,607	\$34,852	\$93,459
2000	91,000	237,802	0%	\$54,032	\$33,782	\$87,814

Wolf Creek Dam

Construction of Wolf Creek Dam, located on the Cumberland River in south-central Kentucky, was completed in 1950 by the COE to provide flood control, hydroelectric power, recreation, and water quality control. Wolf Creek Dam, authorized by the Flood Control Act of 1938 and the Rivers and Harbors Act of 1946, is one of several multi purpose projects operated and maintained by the COE as part of a coordinated plan for development of water resources in the Cumberland River Basin. This impoundment of the Cumberland River and the associated hypolimnetic discharges from Wolf Creek Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout and brown trout for stocking the Cumberland tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Wolf Creek Dam. Additionally, four mitigation programs at Erwin NFH, Ennis NFH, White Sulphur Springs NFH, and Saratoga NFH, support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the seven programs to mitigate for Wolf Creek Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	264,550	782,190	0%	\$199,303	\$172,354	\$371,657
2000	255,850	758,363	0%	\$191,756	\$170,503	\$362,259

Yatesville Dam

Yatesville Dam, located on Blaine Creek, a tributary of the Big Sandy River in northeastern Kentucky, was completed in 1991 by the COE to provide flood control, recreation, and water quality control. Construction of the dam was authorized by the Flood Control Act of 1965 and the Rivers and Harbors Act of 1946. Yatesville Dam is one of several multi purpose projects operated and maintained by the COE as part of a comprehensive plan for development of water resources in the Ohio River Basin. This impoundment of the Big Sandy River and the associated hypolimnetic discharges from Yatesville Dam have severely depressed or eliminated the natural reproduction of indigenous riverine fish species (i.e., smallmouth bass, walleye, paddlefish, etc.). If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Wolf Creek NFH supplies rainbow trout for stocking the Yatesville tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Yatesville Dam. Additionally, three mitigation programs at Erwin NFH, Ennis NFH, and White Sulphur Springs NFH support Wolf Creek NFH's distribution by providing disease free, strain specific trout eggs for growout to stockable size. The fishery is managed by the KDFWR under their "Trout Management Plan." Wolf Creek NFH is responsible for all trout stocked in Kentucky waters, resulting in a total economic effect of \$40 million annually. Construction of the hatchery, which became operational in 1975, was authorized by the FWCA of 1934 and FWA. The Service did not receive any funds to offset the costs of the four programs to mitigate for Yatesville Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	3,000	19,012	0%	\$3,018	\$2,550	\$5,568
2000	3,000	17,741	0%	\$2,984	\$2,562	\$5,546

Fish and Wildlife Service Region 6

Baldhill Dam

Baldhill Dam was constructed in 1950 under the authority of the Flood Control for the Red River of the North, Flood Control Act of 1944, P.L. 78-534. The COE is the agency responsible for this development. Walleye from Garrison Dam NFH and northern pike from Valley City NFH are stocked in Lake Ashtabula under the authority of the FWCA, as part of the mitigation activities for this dam. Stocking activities are managed through the Mid-sized Reservoir Stocking Guidelines developed by the NDGFD. The Service did not receive any funds to offset the costs of the two programs to mitigate for Baldhill Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	250,000	-	0%	\$2,440	\$6,390	\$8,829
2000	352,100	-	0%	\$20,695	\$78,901	\$99,596

Bowman-Haley Dam

The Bowman-Haley Dam was constructed in 1964 under the authority of the Flood Control Act of 1962, P.L. 88-140 as part of the Pick-Sloan, Missouri River Basin Program. The COE is the agency responsible for this development. Brown trout, northern pike, rainbow trout, smallmouth bass, and walleye from Garrison Dam NFH are stocked in Bowman-Haley Reservoir under the authority of the FWCA, as part of the mitigation activities for this dam. Northern pike from Valley City NFH are stocked in Lake Ashtabula. Stocking activities are managed through the Bowman-Haley Reservoir Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the six programs to mitigate for Bowman-Haley Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	350,000	-	0%	\$4,880	\$12,780	\$17,660
2000	355,092	-	0%	\$14,101	\$38,454	\$52,555

Fort Peck Dam

Fort Peck Dam was constructed in 1933 under the authority of the Flood Control Act of 1944 and P.L. 78-534 as part of the Pick-Sloan, Missouri River Basin Program. The COE is the agency responsible for this development. Chinook salmon eggs from Garrison Dam NFH are sent to Giant Springs SFH and Miles City SFH. These eggs are subsequently grown to stockable size fish and stocked into Fort Peck Reservoir. Walleye produced at Garrison Dam NFH and northern pike produced at Valley City NFH are also stocked in Fort Peck Reservoir under the authority of the FWCA, as part of the mitigation activities for this dam. Stocking activities are managed through the Fort Peck Fisheries Management Plan developed by the Montana Game Fish and Parks Department. The Service did not receive any funds to offset the costs of the four programs to mitigate for Fort Peck Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	74,056	344,393	0%	\$6,969	\$18,848	\$25,817
2000	2,390,300	-	0%	\$3,659	\$7,115	\$10,774

Garrison Dam

Garrison Dam was constructed in 1946 under the authority of the Flood Control Act of 1944 and P.L. 78-534 as part of the Pick-Sloan, Missouri River Basin Program. The COE is the agency responsible for this development. Brown trout and cutthroat trout from Garrison Dam NFH are stocked in the Missouri River under the authority of the FWCA, as part of the mitigation activities for this dam. Chinook salmon and lake trout are stocked in Lake Sakakawea. Smallmouth bass are stocked in Lake Audubon. Walleye are stocked in Riverdale Spillway Lake and Lake Sakakawea. Yellow perch from Valley City NFH are stocked in Lake Audubon. Stocking activities are managed through the Fisheries Management Plan for the Missouri River System, the Fisheries Management Plan for Lake Audubon, and the Fisheries Management Plan for Riverdale Spillway Lake developed by the NDGFD. The Service did not receive any funds to offset the costs of the ten programs to mitigate for Garrison Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	5,284,393	-	0%	\$171,290	\$454,321	\$625,611
2000	3,012,348	-	0%	\$168,333	\$327,293	\$495,626

Gavins Point Dam

Gavins Point Dam was constructed in 1957 under the authority of the Flood Control Act of 1944 and P.L. 78-534 as part of the Pick-Sloan, Missouri River Basin Program. The COE is the agency responsible for this development. Black crappie and white crappie from Gavins Point NFH are stocked in Lewis and Clark Lake under the authority of the FWA and the FWCA, as part of the mitigation activities for this dam. Walleye are stocked in Lake Yankton. Rainbow trout are stocked from Calamus SFH (NE), Rock Creek SFH (NE), Cleghorn SFH (SD), and McNenny SFH (SD) with fish reared from eggs supplied by Ennis NFH. Stocking activities are managed through the Lewis and Clark Lake Fishery Management Plan and the Lake Yankton Fishery Management Plan developed by the South Dakota Game, Fish, and Parks Department and the Nebraska Game and Parks Commission. The Service did not receive any funds to offset the costs of the seven programs to mitigate for Gavins Point Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	846,933	0%	\$12,591	\$14,374	\$26,965
2000	57,764	814,272	0%	\$107,480	\$121,757	\$229,237

Homme Dam

Homme Dam was constructed in 1950 under the authority of the Flood Control for the Red River of the North, Flood Control Act of 1944, P.L. 78-534. The COE is the agency responsible for this development. Walleye from Garrison Dam NFH, and largemouth bass and northern pike from Valley City NFH are stocked in Homme Dam under the authority of the FWCA, as part of the mitigation activities for this dam. Stocking activities are managed through the Stocking Guidelines for Small Lakes and Reservoirs developed by the NDGFD. The Service did not receive any funds to offset the costs of the three programs to mitigate for Homme Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	30,000	-	0%	\$1,834	\$5,046	\$6,880
2000	20,000	-	0%	\$183	\$356	\$539

Pipestem Dam

Pipestem Dam was constructed in 1967 under the authority of the Flood Control Act of 1965, 79-Stat. 1073 as part of the Pick-Sloan, Missouri River Basin Program. The COE is the agency responsible for this development. Walleye from Garrison Dam NFH are stocked in Pipestem Reservoir under the authority of the FWCA, as part of the mitigation activities for this dam. Stocking activities are managed through the Stocking Guidelines for Mid-sized Reservoirs developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Pipestem Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	44,000	-	0%	\$481	\$1,259	\$1,740
2000	44,000	-	0%	\$403	\$783	\$1,186

Two hundred forty-three mitigation programs conducted by the Service involved mitigating for COE projects. For FY 2001, the total associated costs for all mitigation programs conducted by the Service for COE dams totaled \$9.4 M. The COE reimbursed the Service nearly \$3 M, resulting in over \$6.4 M needed for all fisheries programs to be considered fully reimbursed. The total associated costs for all mitigation programs conducted by the Service in FY 2000 totaled over \$9.3 M. The Service was reimbursed approximately \$2.8 M by the COE. An additional \$6.6 M was needed for all fisheries mitigation programs conducted in FY 2000 to be considered fully reimbursed.

Tennessee Valley Authority

The TVA was authorized by the Tennessee Valley Authority Act of 1933. TVA is a Federal corporation and the Nation's largest public power company. Goals of the regional development agency include: supply low-cost, reliable power, support a thriving river system, and stimulate sustainable economic development in the public interest. TVA has been involved in the construction of approximately 49 dams in its 41,000 square mile watershed. These dams were constructed for the generation of hydroelectric power, the maintenance of municipal and industrial water supplies, flood control, and the promotion of navigable waterways.

The Service operates six facilities that are involved in mitigation programs for TVA water resource development projects. These hatcheries are: Chattahoochee Forest NFH, GA; Dale Hollow NFH, TN; Ennis NFH, MT; Erwin NFH, TN; Saratoga NFH, WY; and White Sulphur Springs NFH, WV.

No authorization has been identified that would prohibit the TVA or the project's beneficiaries from reimbursing the Service its full costs for fisheries mitigation programs. However, specific legislation would resolve any ambiguities about responsibility and mechanisms for conducting such programs and would facilitate reimbursement.

The State of Tennessee provided the Service approximately \$15,500 in both FY 2000 and FY 2001 to offset the costs of mitigation programs conducted at Dale Hollow NFH.

Fish and Wildlife Service Region 4

Appalachia Dam

Appalachia Dam, located on North Carolina's Hiwassee River, was completed in 1943 by the TVA to provide flood control and hydroelectric power. Although the dam is located in North Carolina, the tailwater (i.e., Hiwassee River) flows through portions of east Tennessee. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Hiwassee River and the associated hypolimnetic discharges from Appalachia Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking the Appalachia tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Appalachia Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in

Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the five programs to mitigate for Appalachia Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	114,023	405,485	0%	\$76,070	\$99,508	\$175,578
2000	91,212	360,227	0%	\$72,049	\$97,957	\$170,006

Blue Ridge Dam

The Blue Ridge Reservoir project, located in Fannin County, Georgia, was purchased by the TVA from the Tennessee Electric Power Company in 1939 and operated to provide flood control and hydroelectric power. Establishing authority for the impoundment is the Tennessee Valley Authority Act of 1935. Prior to the construction of the Blue Ridge Lake, the affected rivers were typical coolwater streams. The principal fish species caught by fishermen were smallmouth and largemouth bass. Impacts of the reservoir were conducted by the State of Georgia. Assessments determined that the reservoirs were different ecologically from the original rivers and that downstream fishing losses had occurred. The extent of those losses was such that reservoir fishery benefits would be offset by downstream losses as the tailwaters created by the impoundment would be too cold to support warmwater fish, but would support coolwater and coldwater species. In addition, the assessment determined that the tailwaters would not be conducive to natural reproduction by coolwater and coldwater species and therefore these species could not be managed on a self-sustaining basis. To mitigate the loss of warmwater fisheries in the tailwater, rainbow trout are stocked into the 24-kilometer tailwater which extends to the Georgia-Tennessee state line. The Chattahoochee Forest NFH has a long-standing commitment with the State of Georgia which was formalized by a Memorandum of Understanding in 1998.

On May 23, 1980, a cooperative agreement between the Service's Southeast Regional Director and the State of Georgia was signed. The document, Region 4 - State/Federal Fish Stocking Cooperative Agreement, directs that "The Service and State may exchange manpower, equipment, and facilities, as mutually agreed to accomplish the objectives as set forth in this agreement" and to "provide a comparable stocking schedule from hatcheries into waters that are a Service identified Federal responsibility." The 1998 MOU solidifies this agreement by stating that "the Service will produce rainbow trout at Chattahoochee Forest NFH to meet Federal mitigation requirements in tailwaters of Lake Lanier, Lake Hartwell and Blue Ridge Lake."

Dale Hollow NFH supplies rainbow trout fingerlings to Chattahoochee Forest NFH, GA and Lake Burton SFH, GA for grow-out and subsequent distribution into Lake Blue Ridge in order to mitigate for the warm/cool water fisheries lost due to the construction of Blue Ridge Dam. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and White Sulphur Springs NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the nine programs to mitigate for Blue Ridge Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	26,986	97,675	0%	\$21,761	\$17,361	\$39,122
2000	29,515	145,829	0%	\$34,484	\$38,301	\$72,785

Cherokee Dam

Construction of Cherokee Dam, located on the Holston River in east Tennessee, was completed in 1941 by the TVA to provide flood control and hydroelectric power. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Holston River and the associated hypolimnetic discharges from Cherokee Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking the Cherokee tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Cherokee Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." The Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did receive partial funds from the State of Tennessee to offset the costs of the five programs to mitigate for Cherokee Dam. However, no funds were obtained from the TVA.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	33,303	106,201	4%	\$20,173	\$27,196	\$47,369
2000	10,110	32,018	4%	\$7,853	\$10,229	\$18,082

Fort Patrick Henry Dam

Fort Patrick Henry Dam, located on the South Fork of the Holston River in east Tennessee, was completed in 1953 by the TVA to provide flood control and hydroelectric power. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the South Fork of the Holston River and the associated hypolimnetic discharges from Fort Patrick Henry Dam have severely depressed the natural reproduction of indigenous riverine fish species. Dale Hollow NFH supplies rainbow trout and brown trout for stocking Fort Patrick Henry Reservoir and the Fort Patrick Henry tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Fort Patrick Henry Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, Ennis NFH, Erwin NFH, and Saratoga NFH supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did receive partial funds from the State of Tennessee to offset the costs of the eight programs to mitigate for Fort Patrick Henry Dam. However, no funds were obtained from the TVA.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	24,589	94,578	3%	\$16,002	\$20,662	\$36,664
2000	21,255	90,514	4%	\$16,120	\$21,669	\$37,789

Normandy Dam

Located on the Duck River in south-central Tennessee, Normandy Dam was completed in 1976 by the TVA to provide flood control and hydroelectric power. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Duck River

and the associated hypolimnetic discharges from Normandy Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout for stocking the Normandy tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Normandy Dam. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, Ennis NFH and Erwin NFH supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of this mitigation program. The Service did not receive any funds to offset the cost of the three programs to mitigate for Normandy Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	38,675	135,692	0%	\$28,671	\$37,587	\$66,258
2000	41,993	160,090	0%	\$34,143	\$46,234	\$80,377

Norris Dam

Construction of Norris Dam, located on the Clinch River in east Tennessee, was completed in 1936 by the TVA to provide flood control and hydroelectric power. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Clinch River and the associated hypolimnetic discharges from Norris Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking the Norris tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Norris Dam. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, four broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, White Sulphur Springs NFH and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the seven programs to mitigate for Norris Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	180,054	1,205,509	0%	\$57,192	\$59,009	\$116,201
2000	170,522	1,189,195	0%	\$60,001	\$64,338	\$124,339

South Holston Dam

Authorized by the Tennessee Valley Authority Act of 1933, the South Holston Dam, located on the South Fork of the Holston River in east Tennessee, was completed in 1950 by the TVA to provide flood control and hydroelectric power. The impoundment of the South Fork of the Holston River and the associated hypolimnetic discharges from South Holston Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking South Holston Reservoir and the South Holston tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of South Holston Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the seven programs to mitigate for South Holston Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	102,144	373,778	0%	\$65,653	\$85,807	\$151,460
2000	86,550	310,193	0%	\$66,344	\$90,287	\$156,631

Tellico Dam

Tellico Dam was completed in 1979 by the TVA to provide flood control and hydroelectric power. Located on the Little Tennessee River in east Tennessee, the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Little Tennessee River and

the associated hypolimnetic discharges from Tellico Dam have severely depressed the natural reproduction of indigenous riverine fish species. Dale Hollow NFH supplies rainbow trout and brown trout for stocking Tellico Reservoir and its tributaries (i.e., Tellico River and Citico Creek) in order to mitigate for the warm/cool water fishery lost due to the construction of Tellico Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Three broodstock hatcheries (Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did receive partial funds from the State of Tennessee to offset the costs of the seven programs to mitigate for Tellico Dam. However, no funds were obtained from the TVA.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	179,716	137,908	6%	\$69,439	\$88,075	\$157,514
2000	138,397	480,269	6%	\$64,734	\$86,155	\$150,889

Tims Ford Dam

Tims Ford Dam is located on the Elk River in south-central Tennessee. Construction of this TVA dam was completed in 1970 as authorized by the Tennessee Valley Authority Act of 1933 to provide flood control and hydroelectric power. The impoundment of the Elk River and the associated hypolimnetic discharges from Tims Ford Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking the Tims Ford tailwater in order to mitigate for the warm/cool water fishery lost due to the construction of Tims Ford Dam. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the five programs to mitigate for Tims Ford Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	34,085	137,908	0%	\$25,424	\$33,285	\$58,709
2000	29,764	112,080	0%	\$21,893	\$29,955	\$51,848

Watauga Dam

In 1948, Watauga Dam, located on the Watauga River in east Tennessee, was completed by the TVA to provide flood control and hydroelectric power. Construction of the dam was authorized by the Tennessee Valley Authority Act of 1933. The impoundment of the Watauga River and the associated hypolimnetic discharges from Watauga Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and lake trout for stocking Watauga Reservoir in order to mitigate for the warm/cool water fishery lost due to the construction of Watauga Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, Ennis NFH, Erwin NFH, and one state hatchery participating in the National Broodstock Program (i.e., Story SFH, WY), supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did not receive any funds to offset the costs of the seven programs to mitigate for Watauga Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	141,234	152,536	0%	\$39,034	\$51,133	\$90,167
2000	135,736	145,990	0%	\$44,834	\$60,886	\$105,720

Wilbur Dam

Completed in 1912, the Wilbur Dam is located on the Watauga River in east Tennessee and provides flood control and hydroelectric power. The TVA assumed ownership of the dam under the authority of the Tennessee Valley Authority Act of 1933 from the Watauga Power Company. The impoundment of the Watauga River and the associated hypolimnetic discharges from Wilbur

Dam have severely depressed the natural reproduction of indigenous riverine fish species. If not for the stocking of trout, many miles of river would fail to provide even a marginal sport fishery. Dale Hollow NFH supplies rainbow trout and brown trout for stocking Wilbur Reservoir in order to mitigate for the warm/cool water fishery lost due to the construction of Wilbur Dam. These fish are transported to the stocking site(s) by the TWRA under a contract between the TWRA and Service whereby the TWRA provides partial monetary reimbursement and/or in-kind services (i.e., assistance with fish distribution) in return for the additional hatchery production which took place at Dale Hollow NFH since the hatchery expansion of 1994. The expansion, which increased the hatchery production capability from 200,000 pounds per year to 300,000 pounds per year, was funded entirely by the TWRA. The fishery is managed by the TWRA under the fishery component of the TWRA's "Strategic Wildlife Resources Management Plan." Dale Hollow NFH provides 65% of the trout stocked in Tennessee, resulting in a total economic effect of \$57 million. Construction of the hatchery, which became operational in 1966, was authorized by the FWCA of 1934 and FWA. Additionally, three broodstock hatcheries (i.e., Ennis NFH, Erwin NFH, and Saratoga NFH) supply Dale Hollow NFH with disease-free, genetically distinct, eyed eggs in support of these mitigation programs. The Service did receive partial funds from the State of Tennessee to offset the costs of the eight programs to mitigate for Wilbur Dam. However, no funds were obtained from the TVA.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	69,728	258,489	3%	\$44,373	\$57,426	\$101,799
2000	87,350	399,679	5%	\$49,576	\$66,964	\$116,540

Seventy-one mitigation programs conducted by the Service involved mitigating for TVA projects. For both FY 2001 and FY 2000, the total associated costs for all mitigation programs conducted by the Service for TVA dams totaled over \$1 M. The TVA did not reimburse the Service for any of these programs. All costs for these programs needed to be recovered in order for these programs to be considered fully reimbursed.

National Marine Fisheries Service

In 1938, Congress passed the Mitchell Act (16 U.S.C. 755) to help remedy the decline of salmon fisheries, particularly from the negative effects from the construction of Bonneville Dam on the Columbia River near Portland, Oregon. In 1946, the Mitchell Act was amended by Congress to authorize the transfer of funds to the states for specific projects to develop salmon resources (i.e., hatcheries). In 1947, the Columbia River Fisheries Development Program was formed to plan and coordinate the use of Mitchell Act funds. This program was administered by the Service until transferred to the NMFS during President Nixon's 1970 reorganization. In 1956, Congress expanded the Mitchell Act to include the preservation of fisheries resources above McNary Dam.

In 1993, Mitchell Act funded 23 hatcheries and two large rearing ponds in the Columbia River Basin. In total, these hatcheries produced over 110 million fish per year.

Fisheries mitigation programs conducted by Carson NFH, Eagle Creek NFH, Little White Salmon NFH, Spring Creek NFH, and Willard NFH are partially reimbursed by NMFS. The annual operation costs for these fisheries mitigation programs reimbursed by NMFS. However, maintenance costs at these facilities are funded by the Service.

Fish and Wildlife Service Region 1

Bonneville Dam

Bonneville Dam was initially constructed by the COE from 1933 to 1938 by the WPA under a Presidential Order initiated in 1933. Subsequent recognition of the project by Congress occurred in 1935 with the Bonneville Project Act 16 U.S.C 832 being passed in 1937. The Mitchell Act, as amended (60 Stat. 932, 08/08/1946); the Flood Control Act of 1950 - House Document 531; the Northwest Power Act - December 1979; the Salmon and Steelhead Conservation and Enhancement Act of 1980; and, the Columbia River Juvenile Program - 1988 enable the Service to undertake activities to mitigate for this project. The Reorganization Plan No. 4 of 1970 (84 Stat. 2090) shifted administration of the Act from the Department of the Interior to the Department of Commerce. The Service operates four NFHs that contribute production programs that are funded by the NMFS to assist in mitigating the impacts that Bonneville Dam has on anadromous fish species in the Columbia River Basin. Carson NFH releases spring chinook salmon. Eagle Creek NFH releases coho salmon and winter steelhead. Spring Creek NFH releases fall chinook salmon. Little White Salmon NFH releases spring and fall chinook salmon. And, Willard NFH releases coho salmon. Mitigation programs at these NFHs are conducted through the Columbia River Fish Management Plan, which was developed in conjunction with the States of Washington, Oregon, and Idaho, the NMFS, The Confederated Tribes of the Umatilla Indian Reservation, The Confederated Tribes of the Warm Springs Reservation of Oregon, The Confederated Tribes and Bands of the Yakama Indian Nation, the Shoshone-Bannock Tribe, and the Nez Perce Tribe.

The total associated costs of these fifteen programs are not fully reimbursed by the NMFS. Under an agreement between the Service and NMFS, the Service is responsible for funding deferred maintenance costs associated with Mitchell Act funded programs at these NFHs. During FY 2000 and FY 2001, the Service also provided minimal funding to these stations, but has been reducing those funds each year. In FY 2002, the Service will not provide resource management funding to these stations.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	17,112,099	2,447,200	67%	\$3,420,246	\$1,727,837	\$5,148,083
2000	18,786,327	2,727,543	64%	\$2,954,340	\$1,711,332	\$4,665,672

For FY 2001, the total associated costs for all Service mitigation programs funded by NMFS under the Mitchell Act totaled \$5.1 M. The NMFS reimbursed the Service nearly \$3.5 M, resulting in nearly \$1.7 M needed for all fisheries programs to be considered fully reimbursed. The total associated costs for all mitigation programs conducted by the Service in FY 2000 totaled nearly \$4.7 M. The Service was reimbursed \$3 M by the NMFS. An additional \$1.7 M was needed for all fisheries mitigation programs conducted in FY 2000 to be considered fully reimbursed. Generally, the unmet reimbursement costs for Mitchell Act mitigation programs are associated with facility maintenance.

Bonneville Power Administration

The Bonneville Power Administration (BPA) is a Federal agency, under the Department of Energy, headquartered in Portland, Oregon, who provides about half the electricity used in the Northwest (Washington, Oregon, Idaho and western Montana) and operates over three-fourths of the regions' high-voltage transmission. Congress and the Roosevelt Administration created BPA in 1937, just before completion of Bonneville and Grand Coulee Dams in 1938 and 1941. Today, BPA markets the power generated at 30 Federal dams, one non-Federal nuclear plant, and some non-Federal power plants, such as wind projects. BPA also has the responsibility to fund measures that will protect and enhance fish and wildlife populations affected by hydropower development via the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (16 U.S.C. 839-839h). They have the authority to assess the benefactors of hydropower projects to cover these costs. The BPA partially reimburses the Service for the associated costs of conducting mitigation programs. Annual, cyclical, and deferred maintenance, equipment replacement, as well as construction costs for these programs are funded by the Service.

Fisheries mitigation programs conducted by Creston NFH are fully reimbursed by BPA.

Fish and Wildlife Service Region 1

Lower Snake River Dams

The Lower Snake River dams (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite) were built by the COE between 1961 and 1975 under P.L. 14, 79th Congress, 1945. The Lower Snake River Compensation Plan hatchery program was authorized in 1976 by P.L. 94-587 and consists of hatcheries, ponds, traps, fish health, and evaluation facilities in Idaho, Oregon and Washington. This program is conducted through the operations of 27 fish hatcheries, 2 of which are Federally operated (Dworshak NFH and Hagerman NFH). The remaining hatcheries are operated by State agencies and Tribal governments. The program's goals are to release sufficient juvenile salmon and steelhead to return 18,300 fall chinook, 58,700 spring/summer chinook, and 55,100 steelhead adults to the Snake River and to compensate for 67,500 resident trout angler-days by releasing 86,000 pounds of trout. Because all anadromous fish impacts are related to the construction and operation of power generation facilities, their costs are fully reimbursed by BPA (the agency who markets the Federally-produced power from the LSR dams).

The total associated costs of these two programs are almost fully reimbursed by the BPA. Resident fish impacts are partially power-related, 16.8 percent of their costs are supported with Service resource management funds. This resident fish mitigation program is not conducted at either of the two Federally operated hatcheries. Nevertheless, the Service should re-negotiate their Memorandum of Agreement with BPA to ensure all direct and indirect costs associated with the compensation plan are fully reimbursed.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	13,152,291	-	99.7%	\$7,855,642	\$5,400,000	\$13,255,642
2000	13,541,638	-	99.6%	\$6,764,761	\$5,400,000	\$12,164,761

Fish and Wildlife Service Region 6

Hungry Horse Dam

The Hungry Horse Dam was built in 1952 through P.L. 329-58. The BPA is the responsible agency for this water development. Creston NFH (MT) distributed bull trout, cutthroat trout, and rainbow trout to mitigate the impacts of Hungry Horse Dam on the Flathead River System (MT). The Pacific Northwest Electrical Power Planning and Conservation Act of 1980 enables the Service to undertake activities to mitigate for this project. The twenty mitigation programs associated with mitigating the lost trout fisheries and related angler use days are conducted through the Hungry Horse Dam Fisheries Mitigation Implementation Plan, which is developed in conjunction with the State of Montana, BPA, and the Service. Creston NFH was fully reimbursed for all associated costs to mitigate for the project by BPA.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs ¹	Annual Maintenance Costs ¹	Total Associated Costs
2001	114,598	39,837	100%			\$160,003
2000	93,309	84,545	100%			\$181,008

¹ Annual operation and maintenance costs associated with this dam are not provided as all associated costs are recovered by the Service.

The Service conducted twenty-two mitigation programs associated with BPA projects. For FY 2001, the total associated costs for all Service mitigation programs funded by BPA under the Pacific Northwest Power Planning and Conservation Act totaled \$13.4 M. The BPA reimbursed the Service nearly \$13.4 M, resulting in nearly \$0.04 M needed for all fisheries programs to be considered fully reimbursed. The total associated costs for all mitigation programs conducted by the Service in FY 2000 totaled over \$12.3 M. The Service was reimbursed nearly \$12.3 M by

the BPA. An additional \$0.05 M was needed for all fisheries mitigation programs conducted in FY 2000 to be considered fully reimbursed.

Bureau of Indian Affairs

The BIA is responsible for numerous significant and high hazard potential dams located on tribal lands within the U.S. Various federal agencies work to ensure the safety of these dams, with the Bureau of Indian Affairs Safety of Dams Program taking a lead role. The BIA's Safety of Dams Program mainly is concerned with significant or high hazard potential dams. The Indian Dams Safety Act of 1994 established a separate funding authority for the BIA Safety of Dams Program. The act also provides funds for minor repairs and annual maintenance on reservation dams.

Fisheries developed on reservation lands may contribute significantly to the economic vitality of the Tribe. In other cases fishing provides recreation and a source of protein for anglers.

Fish and Wildlife Service Region 1

Weber Dam

Weber Dam and Reservoir were authorized under the National Industrial Recovery Act of the early 1930s, constructed by the BOR in 1937 and operated and maintained by the BIA to provide irrigation water for the Walker River Paiute Indian Reservation. The Dam, located 16 miles upriver from Walker Lake, prevents migration of threatened Lahontan cutthroat trout to spawning habitat found in the upper river. The Service operates the Lahontan NFH and Northern Nevada Fishery Resource Office to mitigate for loss of the fishery in Walker Lake. The Walker Lake cutthroat population is no longer self-sustaining and is maintained entirely by hatchery production. No funds were received from BOR or the BIA to offset the cost of this program.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	93,252	-	0%	\$702,053	\$212,142	\$914,195
2000	134,697	-	0%	\$677,409	\$211,843	\$889,251

Fish and Wildlife Service Region 6

Wild Horse Dam

Wild Horse Dam was constructed in 1969 by the BOR as a component in the Duck Valley Irrigation System. The dam is owned and operated by the BIA, which has responsibility for it and its effects. Ennis NFH provided rainbow trout eggs to Gallagher SFH (NV) which subsequently stocked Wild Horse Reservoir, under terms of an agreement with BIA and the Duck Valley Indian Reservation. Ennis NFH is not reimbursed for costs associated with the production of these eggs.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	-	102,894	0%	\$1,560	\$2,035	\$3,595

For both FY 2001 and FY 2000, the total associated costs for all mitigation programs conducted by the Service for BIA dams totaled \$0.9 M. The BIA did not reimburse the Service for these two mitigation programs. All costs for these programs needed to be recovered in order for these programs to be considered fully reimbursed.

U.S. Department of Agriculture

The Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566 gave the USDA the authority to develop dams on limited sized watersheds for flood control and recreation. Valley City NFH, produced several species of fish to mitigate the impacts of these dams in North Dakota. No fisheries mitigation programs conducted for USDA projects were reimbursed in FY 2000 none were conducted in 2001.

No authorization has been identified that would prohibit the USDA or the project's beneficiaries from reimbursing the Service its full costs associated with providing these fish to mitigate the adverse impacts dams associated with the USDA. The Service is currently authorized to enter into fund transfer agreements with other Federal agencies through the Economy Act and FWCA. Nonetheless, specific legislation would resolve any ambiguities about responsibility and mechanisms for conducting such programs and would facilitate reimbursement for new mitigation programs.

Fish and Wildlife Service Region 6

Carlson-Tande Dam

Carlson-Tande Dam was constructed in 1967 under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Carlson-Tande Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Carlson-Tande Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	1,000	-	0%	\$77	\$302	\$379

Fordville Dam

Fordville Dam was constructed in 1978 under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Fordville Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Fordville Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	20,000	-	0%	\$1,544	\$6,068	\$7,612

Larimore Dam

Larimore Dam was constructed in 1967 under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Larimore Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Larimore Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	6,000	-	0%	\$464	\$1,821	\$2,285

Matejcek Dam

Matejcek Dam was constructed in 1996 under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Matejcek Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a fisheries management plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Matejcek Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	14,000	-	0%	\$1,056	\$4,151	\$5,207

Renwick Dam

Renwick Dam was constructed in 1962 under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Renwick Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Renwick Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	4,000	-	0%	\$309	\$1,213	\$1,522

Whitman Dam

Whitman Dam constructed in the 1960's under the authority of the Watershed Protection and Flood Prevention Act of 1954, P.L. 68-566. The USDA is the agency responsible for this development. Northern pike from Valley City NFH are stocked in Whitman Reservoir under the authority of the FWCA as part of the mitigation activities for this dam. Stocking activities are conducted in accordance with the an MOU and a Fisheries Management Plan developed by the NDGFD. The Service did not receive any funds to offset the costs of the one program to mitigate for Whitman Dam.

Fiscal Year	Number of Fish	Number of Eggs	Percentage Reimbursed	Annual Operation Costs	Annual Maintenance Costs	Total Associated Costs
2001	-	-	0%	-	-	-
2000	10,000	-	0%	\$772	\$3,034	\$3,806

For FY 2000, the total associated costs for the six mitigation programs conducted by the Service for USDA dams totaled \$0.02 M. The USDA did not reimburse the Service for any of these programs. All costs for these programs needed to be recovered in order for these programs to be considered fully reimbursed. No fisheries mitigation programs were conducted by the Service in FY 20001 for USDA dams.

Recent Directives and Recommendations for
Fisheries Mitigation Programs

Office of Management and Budget

Passback of the Department of Interior FY 2003 Budget

“FWS is also requested to prepare a report by July 1, 2002, that identifies all hatchery programs providing mitigation services for Federal water resource development projects, the legal authorities for the FWS to conduct the mitigation work, associated costs, and relevant agencies responsible for such projects. The report should also provide recommendations and suggested legislative fixes to facilitate full cost recovery of these services as recommended by GAO and Congress in the FY 2002 Interior Appropriations Conference Report.”

Interior Appropriations Committees

FY 2002 Interior Appropriations Conference Report.

“Work by the Service to mitigate the adverse effects of water resource development projects conducted by other Federal Agencies should be performed on a cost reimbursable basis and the Service should receive full and fair compensation for such work.”

FY 2001 House Committee on Appropriations Report 106-664

“The Service should perform a thorough review of, and develop a long-term strategy for, the fisheries program in coordination with the National Fish and Wildlife Foundation and other outside independent groups. The Committee believes strongly that the focus of the program should be habitat based rather than hatchery based and that mitigation work at hatcheries should be performed on a cost-reimbursable basis. This direction was provided in last year’s report and the Committee urges the Service to expedite the review and planning process and institute much needed reforms.”

General Accounting Office

NATIONAL FISH HATCHERIES: Authority Needed to Better Align Operations With Priorities; June 2000 (GAO/RCED-00-151); pp 16-17.

“Recommendations to the Congress: To assist the Service in accommodating the variety of laws that it implements in its management of the hatchery programs, we recommend that the Congress provide direction on which programs it wants hatcheries to emphasize. Furthermore, to allow the Service to more efficiently and effectively align its operations with congressionally directed priorities, we recommend that the Congress authorize the Service to open, close, change, move, and consolidate hatcheries.”

“To provide an additional source of funding for hatchery operations that mitigate the impacts of Federal water development projects that benefit third parties, such as water users or electric power recipients, we recommend that the Congress provide the Service with clear authority to seek reimbursement from Federal water development agencies and/or project beneficiaries for all hatchery operation and maintenance expenses associated with such projects.”

Sport Fishing and Boating Partnership Council

Saving A System In Peril: A Special Report on the National Fish Hatchery System; September 2000; pp 20-21.

Recommendation 9. “Legislation is necessary to clarify various existing legislative mandates and FWS policies regarding mitigation. New legislation must articulate clearly the role of the NFHS in mitigating Federal water and other development projects and how these mitigation activities are to be funded. Costs for the entire range of activities associated with hatchery production and stocking for mitigation must be fully reimbursed by the party or parties responsible for the development project. However, until this legislation is enacted, the FWS must continue to fund the current mitigation responsibilities of the NFHS.”

Recommendation 10. “Until legislation is enacted to require reimbursement, current funding for NFHS mitigation operations must be maintained and must not be redirected for any other purpose.”

A Partnership Agenda for Fisheries Conservation: A Special Report by the Sport Fishing and Boating Partnership Council; January 2002; p 18.

Recommendation 11. “The Secretary of the Interior and the FWS Director must work with Congress to clarify federal agency responsibilities for mitigation.”

Recommendation 12. “The Secretary of the Interior and the FWS Director must aggressively seek to recover costs of mitigation from sponsors of federal water projects. Costs for the entire range of activities associated with hatchery production and stocking for mitigation must be fully reimbursed by the party or parties responsible for the development project.”

APPENDIX II

List of National Fish Hatcheries and Fisheries Facilities and Location by State
(for Congressional District List please see Alphabetical List of Authorities by Hatchery
Notebook)

Carson NFH, Washington	Mammoth Spring NFH, Arkansas
Chattahoochee Forest NFH, Georgia	Marble Bluff Fish Research and Control Station, Nevada
Creston NFH, Montana	Neosho NFH, Missouri
Dale Hollow NFH, Tennessee	Norfork NFH, Arkansas
Dworshak NFH, Idaho	Saratoga NFH, Wyoming
Eagle Creek NFH, Oregon	Tehama-Colusa Fish Facility, California
Ennis NFH, Montana	Valley City NFH, North Dakota
Entiat NFH, Washington	White Sulphur Springs NFH, West Virginia
Erwin NFH, Tennessee	Willard NFH, Washington
Garrison Dam NFH, North Dakota	Willow Beach NFH, Arizona
Gavins Point NFH, South Dakota	Winthrop NFH, Washington
Greers Ferry NFH, Arkansas	Wolf Creek NFH, Kentucky
Hagerman NFH, Idaho	
Hotchkiss NFH, Colorado	
Inks Dam NFH, Texas	
Jackson NFH, Wyoming	
Jones Hole NFH, Utah	
Lahontan NFH, Nevada	
Leadville NFH, Colorado	
Leavenworth NFH, Washington	
Little White Salmon NFH, Washington	
Livingston Stone NFH, California	
Lower Snake River Compensation Plan Office, Idaho	

List of Species Raised by National Fish Hatcheries for Mitigation Programs:

Black crappie
Brook trout
Brown trout
Bull trout
Channel catfish
Chinook salmon
Coho salmon
Cui-ui
Cutthroat trout
Lake trout
Largemouth bass
Northern pike
Rainbow trout
Smallmouth bass
Steelhead
Walleye
White crappie
Yellow perch