

Activity: Fisheries and Aquatic Resource Conservation – Current Structure

	2009 Actual	2009 Recovery Act	2010 Enacted	2011			Change from 2010 (+/-)
				DOI-wide Changes &Transfers (+/-)	Program Changes (+/-)	Budget Request	
National Fish Hatchery Operations (\$000)	48,649		54,370	-653	-3,410	50,307	-4,063
FTE	386		397	-	0	397	0
Maintenance and Equipment (\$000)	19,048	33,535	18,350	-136	0	18,214	-136
FTE	90	-	90	-	0	90	0
Aquatic Habitat and Species Conservation (\$000)	55,411	4,780	61,440	-513	+750	61,677	+237
FTE	279	-	287	-	+5	292	+5
Aquatic Invasive Species (\$000)	5,352		8,244	-54	-1,855	6,335	-1,909
FTE	26		26	-	+1	27	+1
Marine Mammals (\$000)	3,371		5,810	-46	+180	5,944	+134
FTE	18		23	-	0	23	0
Total, Fisheries and Aquatic Resource Conservation (\$000)	131,831	38,315	148,214	-1,402	-4,335	142,477	-5,737
FTE	799	-	823	-	+6	829	+6

Proposed Budget Structure Change:

In response to a recommendation in the Senate Report 111-38 accompanying the 2010 Appropriations Act, the Service proposes to reduce the number of subactivities in Fisheries and Aquatic Resource Conservation to better reflect inherent similarities within the Program.

The Fisheries and Aquatic Resources Conservation Activity currently consists of five subactivities:

- National Fish Hatchery Operations
- Maintenance and Equipment
- Aquatic Habitat and Species Conservation
- Aquatic Invasive Species
- Marine Mammals

The Service proposes to integrate both the Aquatic Invasive Species and the Marine Mammals subactivities into the Aquatic Habitat and Species Conservation subactivity, resulting in three subactivities:

- National Fish Hatchery Operations
- Maintenance and Equipment
- Aquatic Habitat and Species Conservation

This proposal to streamline the Fisheries and Aquatic Resources Conservation budget in 2011 will help simplify the budget structure and improve performance integration. The work conducted under the

Aquatic Invasive Species and Marine Mammals subactivities is defined in a similar way to that of Aquatic Habitat and Species Conservation, and includes habitat assessment and restoration and population assessment and cooperative management.

Fisheries & Aquatic Resource Conservation		Current Subactivities					2010 Enacted Total Proposed Structure	2011 Request, Total Proposed Structure	Change from 2010 (+/-)
		National Fish Hatchery Operations	Maintenance and Equipment	Aquatic Habitat and Species Conservation	Aquatic Invasive Species	Marine Mammals			
Proposed Subactivities	National Fish Hatchery System Operations	54,370	-	-	-	-	54,370	50,307	-4,063
	Maintenance & Equipment		18,350	-	-	-	18,350	18,214	-136
	Aquatic Habitat & Species Conservation	-	-	61,440	8,244	5,810	75,494	73,956	-1,538
Total, Current Structure		54,370	18,350	61,440	8,244	5,810	148,214	142,477	-5,737

Activity: Fisheries and Aquatic Resource Conservation – Proposed Structure

	2009 Actual	2009 Recovery Act	2010 Enacted	2011			Change from 2010 (+/-)
				DOI-wide Changes & Transfers (+/-)	Program Changes (+/-)	Budget Request	
National Fish Hatchery Operations (\$000)	48,649		54,370	-653	-3,410	50,307	-4,063
FTE	386		397	-	0	397	0
Maintenance and Equipment (\$000)	19,048	33,535	18,350	-136	0	18,214	-136
FTE	90	-	90	-	0	90	0
Aquatic Habitat and Species Conservation (\$000)	64,134	4,780	75,494	-613	-925	73,956	-1, 538
FTE	323	-	336	-	+6	342	+6
Total, Fisheries and Aquatic Resource Conservation (\$000)	131,831	38,315	148,214	-1,402	-4,335	142,477	-5,737
FTE	799	-	823	-	+6	829	+6

Program Overview

America’s fish and aquatic resources are among the world’s richest, and provide substantial social, economic, and ecological benefits to the Nation. Many aquatic resources are declining at alarming rates despite conservation efforts by the Service and its partners. Almost 400 aquatic species require and receive special protection in some part of their natural or historic range. The reasons for these declines are linked largely to habitat loss and the impacts of harmful non-native species. Factors such as stream fragmentation have played a major role in the nationwide decline of fish and mussel populations. The introduction and spread of invasive species have significantly impacted the health of the Nation’s native species and ecosystems, and are considered to be second only to direct habitat destruction as a cause of declining biodiversity. Threats to America’s aquatic resources posed by climate change include sea-level rise, altered hydrology, reduced freshwater inflow to estuaries, altered water temperatures, erosion, and habitat loss. Climate change has the potential to influence coastal and riverine ecosystems throughout the U.S., in addition to changing the abundance and distribution of fish, wildlife, and plants in response to changing conditions. Fish health issues such as viral hemorrhagic septicemia virus (VHS) threaten recreational and commercial fisheries, while chytrid fungus disease in amphibians poses serious threats to America’s rich amphibian diversity. The Fisheries Program is uniquely positioned to implement watershed-level aquatic habitat conservation across the American landscape in order to address these issues.

The mission of the Service’s Fisheries and Aquatic Resource Conservation (Fisheries) Program is to work with partners to restore and maintain fish and other aquatic resources at self-sustaining levels, and to support federal mitigation programs for the benefit of the American public. Since 1871, the Fisheries Program has played a vital role in conserving America’s fisheries. It is a key partner with States, Tribes, other federal agencies, and private interests in a larger effort to recover and conserve fish and other aquatic resources and to make these available for recreational activities. Using the best available science, the Program works across geographic and political borders to help craft partnerships and solutions to conserve, restore, and enhance the Nation’s natural resources for the benefit of the American people.

Approximately 800 employees are located nationwide in 70 National Fish Hatcheries, 65 Fish and Wildlife Conservation Offices (including the Alaska Conservation Genetics Laboratory), one Historic

National Fish Hatchery, nine Fish Health Centers, seven Fish Technology Centers, the Aquatic Animal Drug Approval Partnership, and the Aquatic Invasive Species and Marine Mammals programs. Our employees provide a network unique in its geographic range, array of technical and managerial capabilities, and ability to work across political and program boundaries.

In the past ten years, the Fisheries Program has made significant progress in improving its ability to address challenges by refining the Program's purpose, restructuring, completing a strategic plan, and devising a system to report results and show accountability. In 2005, the Fisheries Program underwent a rigorous, independent review by the Sport Fishing and Boating Partnership Council. The Council found that the Program was "Effective" in delivering its mission. In 2006, the Fisheries Program underwent a government-wide program review (Program Assessment Rating Tool (PART)) and earned a rating of "Effective," the highest possible rating. The Fisheries Program implemented a number of recommendations from these reviews and continues to improve its management, accountability, and mission delivery.

In 2009, each Service Region developed five-year strategic plans for their Fisheries Programs, resulting in a 2009-2013 National Fisheries Program Strategic Plan that remains consistent with the ten-year draft *Fisheries Program Vision for the Future* and uses the cooperative, science-based framework of Strategic Habitat Conservation. Regional plans contain ambitious, achievable, and measurable region-specific goals and commitments stepped down from national priorities. The goals and performance targets identified stem from the first National Fisheries Program Strategic Plan, and are intended to improve program management and budget and performance integration. The planning goals and targets were developed in close coordination with federal and State agencies, Tribes, and other partners. These coordinated efforts ensure that Service conservation and management activities also complement State Wildlife Action Plans, the National Fish Habitat Action Plan, and other conservation efforts and agreements. The Fisheries Program has six focus areas, each with associated goals, strategies, and performance targets, all of which are detailed in the 2009-2013 National Fisheries Program Strategic Plan:

- Partnerships and accountability
- Aquatic species conservation and management
- Public use
- Cooperation with Native Americans
- Leadership in science and technology
- Workforce management

The Fisheries Program is a key player in the recovery of threatened and endangered aquatic species. For example, in coordination with the Endangered Species Program, the Fisheries Program provides population and habitat assessment and monitoring activities, captive propagation/stocking, applied research, and refugia for 57 threatened and endangered species to meet specific tasks prescribed in Recovery Plans. These long-term coordinated efforts have resulted in many successes, including the downlisting of the Gila trout in 2007 and the imminent delisting of the Apache trout. However, it is reasonable to assume that additional populations or species will become imperiled in the face of climate change and other emerging challenges. The Fisheries Program will continue to pursue collaborative opportunities and improved strategies to use its entire suite of tools to protect our fragile aquatic resources.

Fisheries Friends Groups play a critical role in connecting the public with the Service by coordinating volunteers and businesses at the community level in support of facility operations, special events such as National Fishing and Boating Week, and outdoor classrooms for youth. In 2008, volunteers contributed over 130,000 hours of labor. In 2005, 11 formal Fisheries Friends Groups were associated with 16

facilities. In 2008, this number grew to 27 groups associated with 35 Fisheries facilities. In September 2008, these groups organized the National Fisheries Friends Partnership (NFFP) under the authority of the National Fish Hatchery System Volunteer Act of 2006 (Act). In January 2009, The NFFP elected a board of directors from among existing Friends Groups and held its first meeting in conjunction with the Fisheries Friends Group National Meeting in March 2009.

The Fisheries Program fully supports the Secretary's initiative to create a 21st Century Youth Conservation Corps (YCC) initiative by emphasizing new and creative ways to get the Nation's youth out into nature, specifically underrepresented groups such as those in urban environments, minorities, and women. The Fisheries Program has long been engaged in community level, recreationally-oriented activities that provide hands-on learning experiences for youths that foster an early appreciation for nature, and in many cases, changes lives in the process. Several former Fisheries YCC participants are now employed in vital positions within in the Fisheries Program. Through a nationwide network of facilities, the Fisheries Program reaches over 100,000 youths annually through a variety of outdoor events that include fishing derbies, celebrations of Earth Day, National Fishing and Boating Week, and National Hunting and Fishing Day. The Service's SCEP/STEP program, rural and Tribal YCC programs, and the Biologist-in-Training Program complement these early learning experiences to mold future conservation stewards and advance youth into careers in conservation and natural resources management.

In the face of impacts such as habitat loss and fragmentation, introduction of aquatic invasive species, a changing climate, and other developing conservation challenges, the Service's highest priority science needs are accurate biological inventory, assessment, science-based modeling, and conservation strategies. Working with partners, the Fisheries Program will collect, analyze, and disseminate aquatic population and habitat information, design and implement monitoring programs to evaluate the effectiveness of our conservation activities, conduct applied research to better predict population responses to climate change and proposed management actions, and enhance an already strong scientific capacity to better understand the relationship between fish and wildlife populations, habitats, and people. These activities will help the Fisheries Program better understand and address landscape-level issues that threaten the sustainability of the Nation's aquatic resources. Adhering to the Strategic Habitat Conservation framework, the Fisheries Program will work to ameliorate these issues by restoring the connectivity of the Nation's waterways, preventing new infestations of aquatic invasive species, and improving the adaptability and resilience of species and their habitats held in trust by the Service.

Use of Cost and Performance Information

- The Fisheries Program tracks costs through Activity Based Costing, links costs to performance, and uses the information for program management. For example, the program used ABC data to prioritize critical success factors in the initial stages of formulating the 2011 budget.
- The Fisheries Program uses the Fisheries Information System (FIS) and the Fish Passage Decision Support System databases to track priority needs, outcomes, performance, and cost drivers (e.g. populations, fish barriers). In 2006, FIS was integrated into the Service's Environmental Conservation Online System (ECOS) to provide a central data access point, to increase reporting efficiency by sharing data with other FWS databases, and to expand the use of spatial analysis tools. In 2009, a new on-line version of the Fish Distribution Module of FIS was launched to track the distribution of fish and other organisms produced at National Fish Hatcheries to locations in the wild and to other facilities. The new database will use internet-based mapping tools to accurately delineate and track fish distribution. FIS is working towards additional enhancement to further link information between ECOS databases, expanding consistency & communication between programs, and enhancing potential management applications.
- The Marine Mammal Program seeks efficiencies by implementing manatee, sea otter, walrus, and polar bear population surveys in partnership with the U.S. Geological Survey/Biological Resources Discipline and conducting assessments of subsistence harvest levels for sea otters, walruses, and polar bears in Alaska. This information is used to make key cost projections for long-term population status and trends monitoring, and to effectively focus limited fiscal resources on securing vital scientific information to guide resource management of trust species. With this approach, the Service has identified 4 of 10 marine mammal stocks that are being managed at self-sustaining levels. In addition, the partnership effort has enhanced the Service's understanding of population trends for the remaining 6 stocks.
- The National Fish Hatchery System uses asset information in Service Asset and Maintenance Management System (SAMMS), fish distribution data in FIS, and energy information from the Service's energy database to track the status of its critical water supplies, assess the success of restoration, recovery, and mitigation programs, and target the most probable energy efficiencies. The NFHS's aging stations' water supplies are in poor and occasionally failing condition, while species reared have increased by 60 percent in the last decade. In addition, hatcheries use three times the energy of non-hatchery Service field stations. With recent increase in energy costs, the NFHS faces many opportunities and challenges and relies on several information systems to balance needs and expectations.
- In 2006, the NFHS, FWMA, and AIS programs were assessed using a government-wide program assessment rating tool. The Fisheries Program received a rating of Effective, the highest rating possible. The Program has implemented various recommendations from the assessment, and continues to improve program management and enhance all aspects of cost and performance integration.

Activity: Fisheries and Aquatic Resource Conservation
Subactivity: National Fish Hatchery System Operations

	2009 Actual	2010 Enacted	2011			Change from 2010 (+/-)
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National Fish Hatchery Operations (\$000)	48,649	54,370	-653	-3,410	50,307	-4,063
FTE	386	397	-	0	397	0

Summary of 2011 Program Changes for National Fish Hatchery System Operations

Request Component	(\$000)	FTE
• Treasured Landscapes - Bay Delta Ecosystem	+740	+6
• General Program Activities	-500	-2
• Great Lakes Mass Marking	-1,000	-2
• Scientific Review of Hatcheries in California	-2,150	0
• Freshwater Mussel Recovery	-500	-2
TOTAL Program Changes	-3,410	0

Justification of Program Changes for the National Fish Hatchery System

The 2011 budget request for the National Fish Hatchery System is \$50,307,000 and 397 FTE, a net program change of -\$3,410,000 and 0 FTE from the 2010 Enacted.

Treasured Landscapes - Bay Delta Ecosystem (+\$740,000/+6 FTE)

Many native aquatic species in the Bay Delta are in trouble. As part of our first Landscape Conservation Cooperative in Region 8, the Service will lead a new era of collaboration with partners to address the issues affecting this treasured and vital ecosystem. Funding is essential for the Service to lead coordination and implement studies to address the impacts of climate change on imperiled delta aquatic species and lead efforts to restore habitat

Conservation hatchery operations are needed to restore wild populations of imperiled delta species. Funding is needed for the Service to play a major role in restoring delta smelt populations to prevent extinction. The Service will lead delta smelt restoration propagation. Funding is needed to ensure captive populations maintain critical genetic diversity and maintain populations as a precaution against catastrophic failure at hatchery facilities. The Service will implement two health evaluations on captive populations of delta smelt. The Service is also a leader in conservation of salmonids and has mandated responsibility to evaluate the effect of hatchery salmon releases on wild salmon and ensure the health of smelt and salmon.

General Program Activities (-\$500,000/-2 FTE)

The Service proposes to eliminate unrequested funding provided for general operations of the National Fish Hatchery System in 2010. The savings are being used to fund other priorities elsewhere in the President’s Budget. NFHS funding of high-priority tasks, such as reintroduction of trust species into restored habitats, establishment and maintenance of refugia, enhancement or development of propagation and population monitoring techniques, and genetics work critical to the recovery of these species, will continue at the request level. All NFHS efforts are directed at meeting the Fisheries Program’s long-term outcome measures related to self-sustaining populations.

Great Lakes Mass Marking (-\$1,000,000/-2 FTE)

In 2010, Congress provided unrequested funding of \$1 million for mass marking of fisheries in the Great Lakes. The Service proposes to eliminate this unrequested funding and use the savings to fund other priorities. Tagging equipment has been purchased and tagging protocols established, and high priority populations will be tagged in high priority areas of the Great Lakes with existing funding. Remaining funds will be focused on Fisheries Program core priority activities of propagating healthy and genetically-appropriate aquatic animals and plants to help re-establish wild populations without compromising overall performance.

Scientific Review of Hatcheries in California (-\$2,150,000/+0 FTE)

In 2010, Congress provided funding for the review of the Klamath, North Coast, and Central Valley Hatchery Operations in California. Using the 2010 funds, the Service plans to complete the review which will provide recommendations on marking hatchery fish. Since this review will be completed, the Service is not requesting these funds for 2011. Lessons learned from this and similar reviews that occurred in the Pacific Northwest will be applied to other National Fish Hatcheries. Any remaining funds will be focused on Fisheries Program core priority activities of propagating healthy and genetically-appropriate aquatic animals and plants to help re-establish wild populations.

Freshwater Mussel Recovery (-\$500,000/-2 FTE)

In the 2009 Omnibus Bill, Congress provided funding to assist the Service in freshwater mussel recovery, which included work at the White Sulphur Springs National Fish Hatchery (WV). The White Sulphur Springs Hatchery is a national leader in developing freshwater mussel propagation and culture technology for endangered species restoration efforts and is internationally recognized for its expertise in propagation and recovery of freshwater mussels. Additionally, at the Genoa National Fish Hatchery (WI), over 5.6 million juvenile mussels of 9 species, including 4.2 million federally endangered Higgins-eye and Winged Mapleleaf mussels have been stocked in native habitats. The initial success of these stockings has been evident through the recovery of over 32,000 sub-adult and adult Higgins-eye mussels of multiple year classes from cage culture production sites in the Mississippi River and the discovery of free living individuals at host fish release sites in Wisconsin and Iowa. Based on this success, the Service plans to wind down this effort and so is not requesting these funds in 2011. Remaining Program funds will be focused on Fisheries Program core priority activities of propagating healthy and genetically-appropriate aquatic animals and plants to help re-establish wild populations without compromising overall performance.

Program Performance Change Table - Hatcheries

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
Sustain Biological Communities								
CSF 5.3 Percent of tasks implemented, as prescribed in management plans	46% (1,588 of 3,429)	76% (2,379 of 3,130)	74% (2,866 of 3,894)	66% (2,581 of 3,906)	66% (2,581 of 3,906)	66% (2,586 of 3,906)	0% (5 of 3,906)	
CSF Total Actual/Projected Expenditures(\$000)	\$61,976	\$64,703	\$62,947	\$57,991	\$57,991	\$59,440	\$1,449	
CSF Program Total Actual/Projected Expenditures(\$000)	\$36,006	\$39,168	\$40,012	\$40,932	\$40,932	\$11,797	\$265	

Program Performance Change Table - Hatcheries

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
Actual/Projected Cost Per Tasks (whole dollars)	\$39,028	\$27,198	\$21,963	\$22,469	\$22,469	\$22,985	\$517	
5.3.1.3 % of tasks implemented, as prescribed in management plans - NFHS	69% (709 of 1,029)	40% (1,251 of 3,130)	34% (1,339 of 3,894)	32% (1,237 of 3,906)	32% (1,237 of 3,906)	32% (1,239 of 3,906)	0% (2 of 3,906)	
Comments:	Hatcheries will implement +2 additional fishery management plans tasks with the additional +\$740K for Bay Delta Ecosystem.							
5.3.1.4 # of tasks implemented, as prescribed in management plans - NFHS	709	1,251	1,339	1,237	1,237	1,239	2	
Comments:	Hatcheries will implement +2 additional fishery management plans tasks with the additional +\$740K for Bay Delta Ecosystem.							
5.3.1.5 Total # of tasks, as prescribed in management plans - NFHS	1,029	3,130	3,894	3,906	3,906	3,906	0	
Comments:	Hatcheries will implement +2 additional fishery management plans tasks with the additional +\$740K for Bay Delta Ecosystem.							
5.3.7 # of applied aquatic science and technologic tools developed through publications	402	394	311	282	282	286	4	
Comments:	Hatcheries will develop +4 additional applied science & technologic tools with the additional +\$740K for Bay Delta Ecosystem.							
CSF 7.21 Percent of populations of aquatic threatened and endangered species (T&E) that are self-sustaining in the wild	10% (61 of 595)	12% (70 of 585)	11% (70 of 639)	9% (66 of 701)	9% (66 of 701)	9% (66 of 701)	0	
7.21.5.3 % of tasks implemented as prescribed in Recovery Plans - NFHS	52% (190 of 368)	40% (416 of 1,050)	0% (445 of 1,286)	27% (381 of 1,404)	27% (381 of 1,404)	27% (383 of 1,404)	0% (2 of 1,404)	
Comments:	Hatcheries will implement +2 additional Recovery Plans tasks with the additional +740K for Bay Delta Ecosystem.							
7.21.5.4 # of Recovery Plan tasks implemented by the Fisheries Program - NFHS	190	416	445	381	381	383	2	
Comments:	Hatcheries will implement +2 additional Recovery Plans tasks with the additional +740K for Bay Delta Ecosystem.							

Program Performance Change Table - Hatcheries

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
7.21.5.5 # of tasks for which the Fisheries Program has a statutory or programmatic responsibility and that are prescribed in Recovery Plans - NFHS	368	1,050	1,286	1,404	1,404	1,404	0	
Comments:	Hatcheries will implement +2 additional Recovery Plans tasks with the additional +740K for Bay Delta Ecosystem.							
Improve Recreational Opportunities for America								
CSF 15.4 Percent of mitigation tasks implemented as prescribed in approved management plans	73% (30 of 41)	64% (49 of 77)	76% (56 of 74)	92% (70 of 76)	92% (70 of 76)	95% (72 of 76)	3% (2 of 76)	
CSF Total Actual/Projected Expenditures(\$000)	\$23,147	\$23,184	\$24,029	\$30,727	\$30,727	\$32,332	\$1,605	
CSF Program Total Actual/Projected Expenditures(\$000)	\$19,766	\$20,032	\$20,795	\$21,274	\$21,274	\$21,763	\$489	
Actual/Projected Cost Per Tasks (whole dollars)	\$771,573	\$473,139	\$429,086	\$438,955	\$438,955	\$449,051	\$10,096	
15.4.1.3 % of mitigation tasks implemented as prescribed in approved management plans - NFHS	73% (30 of 41)	55% (42 of 77)	61% (45 of 74)	58% (44 of 76)	58% (44 of 76)	61% (46 of 76)	3% (2 of 76)	
Comments:	Hatcheries will implement +2 additional mitigation plans tasks with the additional +\$740K in Bay Delta Ecosystem.							
15.4.1.4 # of mitigation tasks implemented as prescribed in approved management plans - NFHS	30	42	45	44	44	46	2	
Comments:	Hatcheries will implement +2 additional mitigation plans tasks with the additional +\$740K in Bay Delta Ecosystem.							
15.4.1.5 total # of mitigation tasks - NFHS	41	77	74	76	76	76	0	
Comments:	Hatcheries will implement +2 additional mitigation plans tasks with the additional +\$740K in Bay Delta Ecosystem.							
15.4.8 # of aquatic outreach and education activities and/or events	unk	2,020	4,207	1,640	1,640	1,641	1	
Comments:	Hatcheries will conduct +1 additional aquatic outreach and education activity and/or event with the additional +\$740K for Bay Delta Ecosystem.							

Note: 2011 Base Budget is equal to 2010 Plan (enacted level) plus fixed cost (absorbed).

Program Overview

The National Fish Hatchery System (NFHS) consists of 70 National Fish Hatcheries (NFHs), 9 Fish Health Centers (FHCs), 7 Fish Technology Centers (FTCs), one Historic National Fish Hatchery (HNFH), and the Aquatic Animal Drug Approval Partnership (AADAP) Program. These facilities and their highly-trained personnel provide a network unique in national conservation efforts because of the suite of capabilities available. These include propagation of healthy and genetically-appropriate aquatic animals and plants to help re-establish wild populations, leadership in applied research, fish health diagnostics and assessment, and the development of new animal drugs. Working closely with State, Tribal, and nongovernmental organizations, the NFHS also provides recreational opportunities and conservation and economic benefits for local communities.

To fulfill its long-term commitments, the NFHS worked with external partners to establish five-year (2004 - 2008) targets for each performance measure outlined in the National Fisheries Program Strategic Plan. In 2009, the NFHS worked with the other Fisheries Program entities and its partners to draft the 2009 - 2013 Fisheries Strategic Plan. Focus areas such as aquatic species conservation and management, aquatic habitat conservation and management, partnerships and accountability, leadership in science and technology, public use, cooperation with Native Americans, and workforce management remain consistent with the first 5-year plan. Performance targets are set for each performance area and include imperiled species recovery and development of the Service's Aquatic Animal Drug and Chemical Use Policy.

Aquatic Species Conservation and Management

The Service's NFHS is a key contributor to the recovery of ESA-listed aquatic species and the restoration of aquatic species whose populations are declining. The enormity of the challenge, and the significance of the NFHS's participation in aquatic species conservation, is indicated by the 132 species propagated in 2008, a 60 percent increase over the 81 reared eight years earlier. Non-fish species programs increased from seven in 1998 to 37 in 2008, a five-fold increase. The NFHS's Fish Health and Fish Technology Centers provide the scientific foundation for many recovery programs. The AADAP Program works with many partners in both the public and private sectors to dramatically reduce the cost of FDA approval of drugs and chemotherapeutants necessary to manage and safeguard critical aquatic stocks and support private aquaculture. The NFHS's recovery and restoration activities are coordinated with State, federal, Tribal, and private sector partners as prescribed by Recovery Plans and multi-entity fishery management plans.

Recovery of Species Listed Under the ESA – The NFHS contributes to the recovery of threatened and endangered aquatic species and populations through applied research, captive propagation and refugia, and development of innovative assessment techniques. Genetic tools are used to identify populations, determine recovery goals, guide captive propagation programs, and assess population recovery. Captive propagation techniques, including unique nutritional requirements of listed species, are developed, refined, and implemented. Studies in applied physiology and ecology help address problems related to survival in the wild, such as the impacts of temperature and other factors on reproduction. Other studies help establish basic life history parameters. The development of non-lethal marking and tagging techniques assists in evaluation of propagation programs and enhance adaptive management. Modeling techniques are developed to help link restoration actions to population goals. Hatcheries continue to provide refugia for populations impacted by wildfire, drought, or other environmental conditions. Climate change will likely impact a number of native aquatic species, and as the nation's only fish hatchery system, the NFHS is uniquely and geographically positioned to help address issues that arise as a result of these impacts. .

Restoration of Depleted, Non-Listed Species - The NFHS also conserves non-listed species and enhances recreational opportunities through production and stocking of healthy, genetically- appropriate

animals to maintain or re-establish wild populations; by providing technical support in areas such as biometrics, nutrition, physiology, and conservation genetics; by supporting fish health, disease diagnostics, treatment, and management; and support for habitat restoration.

Aquatic Habitat Conservation and Management

The NFHS's contribution to habitat conservation is multi-faceted. Monitoring is crucial to our understanding of vulnerable locations and populations, the distribution of emerging aquatic pathogens, and climate-related change. One such program is the National Wild Fish Health Survey (NWFHS), a successful partnership between the Service, States, Tribes, and NGOs. Enhanced monitoring associated with the NWFHS will improve the Service's and its partners' predictions and help direct future species recovery and restoration efforts. Other projects provide "explorer" or research fish to study habitat preferences, population dynamics and interactions, or other requirements of imperiled species. The NFHS also develops innovative technologies to meet EPA and FDA water effluent standards. These activities provide some of the scientific basis for recovery and restoration programs inherent in the National Fish Habitat Action Plan.

The NFHS also supports other Service program priorities. Water sources and the associated riparian habitats found on NFHSs attract many different bird species and provide critical stopovers on annual migrations. Stations in proximity to the US/Mexico border are especially important, as they are positioned in a major migratory bird flyway. Several ponds at the Williams Creek NFHS (AZ) are regularly enhanced to attract waterfowl and other species. Local communities also realize the potential NFHS contributions to bird conservation. For example, local Audubon Society members have erected several covered observation stations around the 2-acre wildlife pond at Uvalde NFHS (TX). The wildlife area and other Uvalde NFHS ponds are maintained by hatchery staff and provide resting and foraging opportunities to countless migratory birds.

Leadership in Science and Technology

Science and Technology - The Service's FTCs, FHCs, and the Aquatic Animal Drug Approval Program provide national scientific and technical leadership to solve on-the-ground fishery management problems that are critical to many restoration and recovery programs. Areas addressed involve genetic analyses, nutrition, ecological physiology, reproductive biology, population dynamics and modeling, cryopreservation, biometrics, culture technologies, disease diagnostics, aquatic health management, invasive species studies, and availability of new aquatic animal drugs.

Fish Technology Centers are positioned to address an array of research topics related to global climate change. For example, scientists at Bozeman FTC in Montana are studying the physiological impacts of temperature-induced stress on reproduction and survival of the endangered pallid sturgeon. Scientists at San Marcos FTC in Texas provide management guidance on the effects of reduced stream flow on endangered species and study invasive species pathways and impacts on native fish populations. Abernathy FTC in Washington State is refining methods in remote monitoring technology to track changes in seasonal movement of fish, to identify micro-habitat use, and to monitor population abundance. In addition, FTC geneticists characterize genetic diversity as a basis for management actions. For example, information regarding reduced diversity in threatened bull trout populations, fragmented by dams, will be used to guide conservation and management decisions for bull trout within Mount Rainier National Park (WA).

In additional efforts to conserve genetic diversity, Fish Technology Centers continue to develop and refine technology associated with cryopreservation, or freezing, of reproductive cells (gametes) to assist in restoration and recovery efforts. Efficiencies associated with cryopreservation include reduced space and costs associated with housing live broodstock and substantially fewer constraints associated with

obtaining genetically representative specimens at spawning time. In addition, cryopreservation provides a safeguard for preserving genetic diversity. In 2007, the Fisheries Program established a Memorandum of Understanding (MOU) with the Department of Agriculture that enables the NFHS to transfer cryopreserved gametes for secure archiving within USDA's National Germplasm Repository in Ft. Collins, CO. Under this agreement, representative gametes from fish and other aquatic organisms, collected or held by the NFHS, may be transferred to the National Germplasm Repository for long-term storage or until needed for restoration and recovery.

Aquatic Animal Health - Increasingly, the Service's Fish Health Centers play national and international leadership roles with partners such as the American Fisheries Society's Fish Health Section, the National Oceanic and Atmospheric Administration, the Department of Agriculture's Animal and Plant Health Inspection Service, and the State Department, to address potentially catastrophic aquatic animal diseases such as VHS. The NFHS's aquatic animal health program is delivered through: 1) the National Aquatic Animal Health Plan (NAAHP) and the Service's Aquatic Animal Health Policy, 2) the National Wild Fish Health Survey (NWFHS), and 3) general aquatic animal health support activities for Service and non-Service facilities (e.g., hatchery inspections, diagnostics of fish and other aquatic organisms including mollusks and amphibians). As the effects of climate change impact the landscape and our Nation's aquatic species, the potential for introduction or spread of dangerous aquatic pathogens will increase. The Service's aquatic animal health biologists are on the front lines of monitoring and detecting these pathogens and providing time-sensitive information for fisheries managers to make informed decisions.

The Aquatic Animal Drug Approval Partnership (AADAP) Program in Bozeman, MT is a partner-based national program established by the NFHS in 2004 that provides multi-agency coordination to obtain FDA approval for new aquatic animal drugs and therapeutants. The AADAP Program also leads a coordinated effort to generate critical research data and manage all other aspects of requisite data submissions to FDA in support of these new drug approvals, as well as administer the Service's highly successful National Investigational New Animal Drug (INAD) Program whereby other federal, State, Tribal, and private aquaculture programs throughout the U.S. are allowed to use certain needed drugs under limited experimental conditions. The U.S. aquaculture industry, which includes both public sector and private sector programs, has been severely hampered for many years by the paucity of FDA-approved drugs needed to combat diseases in aquatic species and facilitate the efficient management and production of healthy animals. In the public sector, these drugs are critical to the restoration, recovery, and management of aquatic species (including many threatened or endangered species), mitigation of federal water projects via fish-plantings, and recreational fisheries enhancement through stocking. In the private aquaculture sector, a lack of FDA-approved drugs has reduced production efficiencies, and perhaps even more importantly, America's ability to compete with foreign producers that have access to a much broader spectrum of drugs.¹ This partnership allows the otherwise prohibitive cost of the applied research and development needed for FDA-approval to be shared by the States, Tribes, private aquaculture community, pharmaceutical sponsors, and other partners, thereby enabling the submission of consolidated data packages to FDA. Recent new FDA-approvals for the use of Aquaflo[®] (florfenicol), Terramycin[®] 200 for Fish (oxytetracycline), and 35% PEROX-AID[®] (hydrogen peroxide) highlight the success of these partnership efforts.

¹ A.C. von Eschenbach, Report to Congress, Food and Drug Administration Amendments Act of 2007. *Enhanced Aquaculture and Seafood Inspection*. 2008. 20 pp.

Public Use

Recreation – The NFHS works State, Tribal, nongovernmental organizations, and other partners, operating under approved fishery management plans, to restore depleted populations of native game fish and enhance fishing opportunities for the nation’s 58 million recreational anglers.

A recent report² on the economic benefits accrued as a result of NFHS production of rainbow trout sheds light on the impacts of the NFHS on local economies. According to the report, \$5.4 million expended by NFHS field stations to grow and stock rainbow trout provided a total economic output of \$325 million. These NFHS activities account for over 3,500 jobs and \$173 million in angling-related sales. Overall, each taxpayer dollar budgeted for NFHS rainbow trout production generates approximately \$32 in retail sales and \$37 in net economic value.

Education – National Fish Hatcheries are integral parts of the communities in which they are located and NFHS personnel help instill the Nation’s conservation ethic in our youth. National Fish Hatcheries are education centers that provide hands-on experience and opportunities for discovery. For example, fourteen NFHS and six Fish and Wildlife Conservation Offices in the Southeast Region offer the Biologist-in-Training Program, which is designed to guide students through a fun, hands-on exploration of aquatic habitats. In 2010, over 100,000 children nationwide will participate in a wide range of educational conservation activities provided by NFHS personnel.

To address the mandates specified in the National Fish Hatchery System Volunteer Act of 2006, the NFHS has helped create outdoor classrooms at several facilities. Outdoor Discovery Zone Guidelines were developed and distributed to assist Project Leaders with ideas for hands-on activities for youth that promote understanding and conservation of fish and aquatic resources. For example, two pilot projects completed visitor enhancements in 2009 at Genoa NFH (WI) and at White Sulphur Springs NFH (WV). Two others at Uvalde NFH (TX) and at Inks Dam NFH (TX) initiated outdoor discovery zones that included building renovations and trail developments. These projects seek to improve scientific literacy in conjunction with both formal and informal education programs in addition to promoting conservation of aquatic species and cultural resources of the hatcheries.



Mitigation – When federal locks and dams were constructed, Congress and the federal government committed to mitigate impacts on recreational, commercial, and Tribal fisheries. Consistent with the Fisheries Program *Strategic Plan* and *Vision for the Future*, the Service helps mitigate the adverse effects of federal water development projects while focusing on native fish recovery and restoration. The Service is working to recover costs from responsible agencies. National Fish Hatchery System and Department personnel worked with the U.S. Army Corps of Engineers (Corps) in 2008 to reach an agreement for full reimbursement from Corps projects. The Service is optimistic that the partnership between the Service, the Corps, and affected States and Tribes will allow the government to efficiently meet its mitigation responsibilities for federal water development projects and continue to provide approximately \$300 million in total economic benefits to local, Tribal, and State economies. In its 2010 Appropriation, the Corps was provided with \$4.5 million to reimburse the Service for mitigation activities related to Corps water projects. These funds will be used to implement high priority Fisheries Program activities. Fisheries Program and Corps personnel are working to develop a Memorandum of Understanding to solidify this relationship between the two agencies, for the benefit of the local communities whose economies are linked to Service mitigation actions.

² U.S. Fish and Wildlife Service. 2006. Economic Effects of Rainbow Trout Production by the National Fish Hatchery System. 34 pp.

2011 Program Performance

In 2011, the NFHS will continue its multi-faceted efforts to accelerate recovery of listed fish and other native aquatic species. Working with State, Tribal, federal, non-governmental, and internal partners (in particular, the Endangered Species Program and Fish and Wildlife Conservation Offices), the NFHS will implement recovery activities that include propagation and stocking of healthy, genetically-sound fish, and providing refugia to populations in distress – tasks prescribed in recovery and fishery management plans. The NFHS will continue to complete recovery and restoration plan tasks, including: 1) improving culture, spawning, and rearing methods; 2) enhancing “wild” attributes to maximize survival of broodstock and progeny; 3) minimizing contaminant risks to human health and successful propagation; 4) developing data required for new animal drug approvals; 5) obtaining information on biological threats to native populations; and 6) propagating genetically fit native aquatic species for reintroduction into restored habitats. High-priority projects include the production and release of native trout, other finfish, and imperiled and declining native amphibian and freshwater mussel species.

The NFHS will continue its work on tasks prescribed in recovery plans to accelerate the recovery of federally-listed fish species. The NFHS will continue its vital role in maintaining the number of threatened and endangered populations that are self-sustaining in the wild, in addition to performing refugia tasks and applied science and technology tasks prescribed in fishery management plans. The NFHS will work diligently with its partners to provide leadership in such areas as field sampling, water testing, laboratory work, and collaborative development of management strategies to address aquatic pathogens.

Other planned program activities include:

Recovery of Species Listed Under the ESA - National Fish Hatchery System personnel will actively participate on the 5-Year Review Team for the threatened Apache trout, an important step in the process to remove that species from the Endangered Species List. Work will continue on the only captive population of endangered relict darter at Wolf Creek NFH (KY); propagation and stocking of the endangered Higgins’ eye pearly mussel at Genoa NFH (WI); propagation and stocking of the endangered pallid-sturgeon at Neosho NFH (MO) and Natchitoches NFH (LA); captive propagation and stocking of the threatened Lahontan cutthroat trout at Lahontan NFH (NV); and, cutting-edge work on the endangered Texas wild rice and the Texas blind salamander at San Marcos NFH and Technology Center (TX). Drought, which may become more severe with global climate change and increasing demands on water from the Edwards Aquifer, has decreased water flow into the San Marcos River, water that both the Texas wild rice and blind salamander depend on for survival. Our San Marcos facility will maintain Texas wild rice plants and blind salamanders in refugia to provide a backup source of these species if needed and, through research, provide insight into their biology and life history requirements. San Marcos’ current research on the Texas blind salamander focuses on predator recognition, which may be important for successful reintroduction. At the Bozeman Fish Technology Center (MT), endangered pallid sturgeon studies will continue to focus on reproduction and growth and the impact of factors such as temperature at various life stages. These studies are directly applicable to sturgeon survival and recruitment, recovery efforts of this species in the Missouri River basin, and the ability of managers to predict and address impacts of climate change.

Restoration of Depleted, but Non-Listed Species - National Fish Hatchery System efforts have helped preclude additional ESA listings of species such as Atlantic sturgeon and American shad. Close coordination with State and Tribal partners will continue on such projects as propagation and stocking of Chinook, coho, and steelhead at Makah NFH and Quinault NFH (WA); striped bass at Orangeburg NFH (SC); lake trout at Iron River NFH (WI); and paddlefish at Garrison Dam NFH (ND).

Science and Technology - The NFHS' Fish Health Centers will continue to provide diagnostic support to our NFHS as well as to State and Tribal hatcheries, and work with the USDA and Great Lakes partners on pathogen issues. In addition, FHC personnel will be working closely with USDA-APHIS and other federal, State, and Tribal partners to implement the National Aquatic Animal Health Plan. Fish Technology Centers will continue to provide fishery managers with science support through development of new concepts and techniques to solve specific problems in aquatic restoration and recovery activities. In particular, FTCs will focus on aquatic resources issues related to climate change, such as effects of water temperature and other factors on species reproduction, growth, and survival. FTCs will expand efforts to characterize genetic diversity as a basis for management decisions, and work to develop models that predict the population response of various management actions, such as habitat restoration to assist NFHS with improved water conservation and treatment technologies.

The Aquatic Animal Drug Approval Partnership (AADAP) will enhance its liaison with the FDA, private drug companies, and public/private partners to facilitate cost-effective aquatic animal drug approvals.

Recreation - The NFHS will continue its long-term efforts with the States and Tribes to propagate and stock fish to ensure recreational opportunities. In addition, the NFHS will continue to enhance the experiences for the thousands of visitors to its stations.

Education - The NFHS considers conservation education to be a core value. No greater legacy can be left to future generations than instilling a sense of conservation ethics in our children. In 2010, more than 100,000 youths will interact with NFHS personnel at fishing derbies, hatchery tours, and other educational activities. NFHS field stations will continue to be used as "outdoor classrooms" and NFHS personnel will share their varied expertise with an anticipated 2 million visitors. The NFHS will work closely with the National Fisheries Friends Partnership Board to implement the National Fish Hatchery System Volunteer Act of 2006.

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
CSF 5.1 Percent of fish species of management concern that are managed to self-sustaining levels, in cooperation with affected States and others, as defined in approved management documents (GPRA)	40% (70 of 174)	42% (63 of 150)	29% (48 of 164)	15% (22 of 146)	30% (17 of 146)	8% (17 of 211)	8% (17 of 211)	8% (17 of 211)	0	8% (17 of 211)
CSF Total Actual/Projected Expenditures (\$000)	\$26,286	\$26,775	\$32,281	n/a	\$35,697	\$36,518	\$36,518	\$37,357	\$840	\$38,217
CSF Program Total Actual/Projected Expenditures (\$000)	\$1,099	\$561	\$569	n/a	\$932	\$954	\$954	\$975	\$22	\$998
Actual/Projected Cost Per Species (whole dollars)	\$375,515	\$425,000	\$672,514	n/a	\$2,099,797	\$2,148,092	\$2,148,092	\$2,197,498	\$49,406	\$2,248,041

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
5.1.2.3 % of populations of native aquatic non-T&E species that are self-sustaining in the wild, as prescribed in management plans - NFHS	n/a	n/a	0% (7 of 1,472)	0% (7 of 1,569)	1% (10 of 1,569)	1% (11 of 1,565)	1% (11 of 1,565)	1% (11 of 1,565)	0	1% (11 of 1,565)
5.1.2.4 # of populations of native aquatic non-T&E and non-candidate species that are self-sustaining in the wild, as prescribed in management plans - NFHS	n/a	n/a	7	7	10	11	11	11	0	11
5.1.2.5 Total # of native aquatic non-T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - NFHS	n/a	n/a	1,472	1,569	1,569	1,565	1,565	1,565	0	1,565
CSF 5.2 Percent of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known	31% (473 of 1,515)	34% (540 of 1,589)	40% (592 of 1,472)	37% (580 of 1,569)	34% (526 of 1,569)	33% (513 of 1,565)	33% (513 of 1,565)	33% (513 of 1,565)	0	33% (513 of 1,565)
CSF Total Actual/Projected Expenditures (\$000)	\$21,280	\$18,753	\$21,790	n/a	\$20,686	\$20,639	\$20,639	\$21,114	\$475	\$21,599
CSF Program Total Actual/Projected Expenditures (\$000)	\$3,436	\$3,839	\$4,703	n/a	\$4,788	\$4,898	\$4,898	\$5,011	\$113	\$5,126
Actual/Projected Cost Per Populations (whole dollars)	\$44,989	\$34,729	\$36,807	n/a	\$39,328	\$40,232	\$40,232	\$41,158	\$925	\$42,104

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
5.2.1.3 % of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - NFHS	n/a	n/a	2% (24 of 1,472)	2% (24 of 1,569)	1% (20 of 1,569)	1% (20 of 1,565)	1% (20 of 1,565)	1% (20 of 1,565)	0	1% (20 of 1,565)
5.2.1.4 # of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - NFHS	n/a	n/a	24	24	20	20	20	20	0	20
5.2.1.5 Total # of native aquatic non-T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - NFHS	n/a	n/a	1,472	1,569	1,569	1,565	1,565	1,565	0	1,565
5.2.2.3 % of populations of native aquatic non T&E species with approved management plans - NFHS	n/a	n/a	3% (48 of 1,472)	3% (48 of 1,569)	3% (51 of 1,569)	3% (51 of 1,565)	3% (51 of 1,565)	3% (51 of 1,565)	0	3% (51 of 1,565)
5.2.2.4 # of native aquatic non T&E and non-candidate populations with approved management plans - NFHS	n/a	n/a	48	48	51	51	51	51	0	51
5.2.2.5 Total # of native aquatic non T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - NFHS	n/a	n/a	1,472	1,569	1,569	1,565	1,565	1,565	0	1,565

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
CSF 5.3 Percent of tasks implemented, as prescribed in management plans	n/a	n/a	76% (2,379 of 3,130)	63% (2,471 of 3,894)	74% (2,866 of 3,894)	66% (2,581 of 3,906)	66% (2,581 of 3,906)	66% (2,586 of 3,906)	0.0 (5 of 3,906)	66% (2,586 of 3,906)
CSF Total Actual/Projected Expenditures (\$000)	n/a	n/a	\$64,703	n/a	n/a	\$57,991	\$57,991	\$59,440	\$1,449	\$0
CSF Program Total Actual/Projected Expenditures (\$000)	n/a	n/a	\$39,168	n/a	n/a	\$40,932	\$40,932	\$11,797	\$265	\$12,068
Actual/Projected Cost Per Tasks (whole dollars)	n/a	n/a	\$27,198	n/a	n/a	\$22,469	\$22,469	\$22,985	\$517	\$23,514
5.3.1.3 % of tasks implemented, as prescribed in management plans - NFHS	n/a	n/a	40% (1,251 of 3,130)	29% (1,142 of 3,894)	34% (1,339 of 3,894)	32% (1,237 of 3,906)	32% (1,237 of 3,906)	32% (1,239 of 3,906)	0.0 (2 of 3,906)	32% (1,239 of 3,906)
5.3.1.4 # of tasks implemented, as prescribed in management plans - NFHS	n/a	n/a	1,251	1,142	1,339	1,237	1,237	1,239	2	1,239
5.3.1.5 Total # of tasks, as prescribed in management plans - NFHS	n/a	n/a	3,130	3,894	3,894	3,906	3,906	3,906	0	3,906
CSF 5.5 Conservation and Biological Research Facilities Improvement: Overall condition of NFHS buildings and structures (as measured by the FCI) that are mission critical and mission dependent (as measured by the API) with emphasis on improving the condition of assets with critical health and safety needs (GPRA)	0.096 (101,665,544 of 1,059,605,059)	0.118 (120,270,843 of 1,015,999,141)	0.114 (120,198,951 of 1,057,209,131)	0.119 (129,476,777 of 1,087,233,873)	0.106 (115,472,369 of 1,087,233,873)	0.098 (128,244,148 of 1,305,484,969)	0.098 (128,244,148 of 1,305,484,969)	0.098 (128,244,148 of 1,305,484,969)	0	0.098 (128,244,148 of 1,305,484,969)
5.5.1 The condition of NFHS mission critical water management assets, as measured by the DOI FCI, is x. (GPRA)	0.096 (101,665,544 of 1,059,605,059)	0.118 (120,270,843 of 1,015,999,141)	0.114 (120,198,951 of 1,057,209,131)	0.119 (129,476,777 of 1,087,233,873)	0.106 (115,472,369 of 1,087,233,873)	0.098 (128,244,148 of 1,305,484,969)	0.098 (128,244,148 of 1,305,484,969)	0.098 (128,244,148 of 1,305,484,969)	0	0.098 (128,244,148 of 1,305,484,969)

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
5.5.1.1 Total NFHS deferred maintenance needs (\$) for MCWM assets (GPRA)	101,665,544	120,270,843	120,198,951	129,476,777	115,472,369	128,244,148	128,244,148	128,244,148	0	128,244,148
5.5.1.2 Total NFHS replacement value (\$) for MCWM assets (GPRA)	1,059,605,059	1,015,999,141	1,057,209,131	1,087,233,873	1,087,233,873	1,305,484,969	1,305,484,969	1,305,484,969	0	1,305,484,969
CSF 7.21 Percent of populations of aquatic threatened and endangered species (T&E) that are self-sustaining in the wild	13% (55 of 435)	10% (61 of 595)	12% (70 of 585)	9% (60 of 639)	11% (70 of 639)	9% (66 of 701)	9% (66 of 701)	9% (66 of 701)	0	9% (66 of 701)
7.21.1.3 % of populations of aquatic threatened and endangered species (T&E) that are self-sustaining in the wild - NFHS	13% (55 of 435)	10% (61 of 595)	4% (22 of 585)	3% (21 of 639)	3% (22 of 639)	3% (21 of 701)	3% (21 of 701)	3% (21 of 701)	0	3% (21 of 701)
7.21.1.4 # of aquatic T&E species populations that are self-sustaining, as prescribed in Recovery Plans - NFHS	55	61	22	21	22	21	21	21	0	21
7.21.1.5 # of aquatic T&E species populations for which the Fisheries Program has a statutory responsibility - NFHS	435	595	585	639	639	701	701	701	0	701
7.21.2.3 % of populations of aquatic threatened and endangered species (T&E) with known biological status that are self-sustaining in the wild - NFHS	n/a	n/a	5% (22 of 484)	4% (21 of 520)	4% (22 of 520)	7% (21 of 309)	7% (21 of 309)	7% (21 of 309)	0	7% (21 of 309)
7.21.2.4 # of populations of aquatic threatened and endangered species (T&E) with known biological status that are self-sustaining in the wild, as prescribed in Recovery Plans - NFHS	n/a	n/a	22	21	22	21	21	21	0	21

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
7.21.2.5 # of aquatic T&E species populations for which the Fisheries Program has a statutory or programmatic responsibility, and for which biological status is known - NFHS	n/a	n/a	484	520	520	309	309	309	0	309
7.21.3.3 % of aquatic T&E populations managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - NFHS	n/a	n/a	12% (68 of 585)	10% (67 of 639)	5% (29 of 639)	4% (28 of 701)	4% (28 of 701)	4% (28 of 701)	0	4% (28 of 701)
7.21.3.4 # of aquatic T&E populations for which current biological status and trend is known, due in whole or in part to Fisheries Program involvement - NFHS	n/a	n/a	68	67	29	28	28	28	0	28
7.21.3.5 # of aquatic T&E populations where the Fisheries Program has a statutory or programmatic responsibility - NFHS	n/a	n/a	585	639	639	701	701	701	0	701
7.21.4.3 % of aquatic T&E populations managed or influenced by the Fisheries Program with approved Recovery plans - NFHS	n/a	n/a	23% (137 of 585)	21% (135 of 639)	22% (138 of 639)	12% (85 of 701)	12% (85 of 701)	12% (85 of 701)	0	12% (85 of 701)
7.21.4.4 # of aquatic T&E populations with Recovery Plans, due in whole or in part to Fisheries Program involvement - NFHS	n/a	n/a	137	135	138	85	85	85	0	85

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
7.21.4.5 # of aquatic T&E populations where the Fisheries Program has a statutory or programmatic responsibility - NFHS	n/a	n/a	585	639	639	701	701	701	0	701
7.21.5.3 % of tasks implemented as prescribed in Recovery Plans - NFHS	n/a	52% (190 of 368)	40% (416 of 1,050)	30% (390 of 1,286)	0% (445 of 1,286)	27% (381 of 1,404)	27% (381 of 1,404)	27% (383 of 1,404)	0.0 (2 of 1,404)	27% (383 of 1,404)
7.21.5.4 # of Recovery Plan tasks implemented by the Fisheries Program - NFHS	n/a	190	416	390	445	381	381	383	2	383
7.21.5.5 # of tasks for which the Fisheries Program has a statutory or programmatic responsibility and that are prescribed in Recovery Plans - NFHS	n/a	368	1,050	1,286	1,286	1,404	1,404	1,404	0	1,404
CSF 12.2 Number of aquatic invasive species populations controlled/managed - annual	n/a	14	11	11	11	11	11	11	0	11
CSF Total Actual/Projected Expenditures (\$000)	n/a	\$16,276	\$18,098	n/a	\$19,435	\$19,882	\$19,882	\$20,340	\$457	\$20,807
CSF Program Total Actual/Projected Expenditures (\$000)	n/a	\$521	\$169	n/a	\$560	\$572	\$572	\$586	\$13	\$599
Actual/Projected Cost Per Populations (whole dollars)	n/a	\$1,162,537	\$1,645,257	n/a	\$1,766,840	\$1,807,477	\$1,807,477	\$1,849,049	\$41,572	\$1,891,577
Improve Recreational Opportunities for America										
CSF 15.4 Percent of mitigation tasks implemented as prescribed in approved management plans	n/a	73% (30 of 41)	64% (49 of 77)	86% (64 of 74)	76% (56 of 74)	92% (70 of 76)	92% (70 of 76)	95% (72 of 76)	3% (3 of 76)	95% (72 of 76)
CSF Total Actual/Projected Expenditures (\$000)	n/a	\$23,147	\$23,184	n/a	\$24,029	\$30,727	\$30,727	\$32,332	\$1,605	\$0
CSF Program Total Actual/Projected Expenditures (\$000)	n/a	\$19,766	\$20,032	n/a	\$20,795	\$21,274	\$712	\$728	\$16	\$745

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Actual/Projected Cost Per Tasks (whole dollars)	n/a	\$771,573	\$473,139	n/a	\$429,086	\$438,955	\$438,955	\$449,051	\$10,096	\$459,380
15.4.1.3 % of mitigation tasks implemented as prescribed in approved management plans - NFHS	n/a	73% (30 of 41)	55% (42 of 77)	57% (42 of 74)	61% (45 of 74)	58% (44 of 76)	58% (44 of 76)	61% (46 of 76)	3% (2 of 76)	61% (46 of 76)
15.4.1.4 # of mitigation tasks implemented as prescribed in approved management plans - NFHS	n/a	30	42	42	45	44	44	46	2	46
15.4.1.5 total # of mitigation tasks - NFHS	n/a	41	77	74	74	76	76	76	0	76
15.4.6.3 % of fish populations at levels sufficient to provide quality recreational fishing opportunities - NFHS	n/a	n/a	4% (48 of 1,191)	5% (52 of 1,108)	3% (32 of 1,108)	3% (37 of 1,340)	3% (37 of 1,340)	3% (37 of 1,340)	0	3% (37 of 1,340)
15.4.6.4 # of fish populations for which the Fisheries Program has a defined statutory or programmatic responsibility, that currently provide recreational fishing opportunities - NFHS	n/a	n/a	48	52	32	37	37	37	0	37
15.4.6.5 Total # fish populations, representing recreational fish species for which the Fisheries Program has a defined statutory or programmatic responsibility, that potentially provide recreational fishing opportunities - NFHS	n/a	n/a	1,191	1,108	1,108	1,340	1,340	1,340	0	1,340
15.4.11 Pounds per dollar (lbs./\$) of healthy rainbow trout produced for recreation	0.33	0.33	0.2964	0.35	0.255	0.33	0.33	n/a	n/a	n/a

Program Performance Overview Table - National Fish Hatchery System

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
CSF 15.8 Percent of adult Americans participating in wildlife-associated recreation	n/a	n/a	38% (385 of 1,000)	38% (385 of 1,000)	8,746,500 (87,465,000 of 1,000)	38% (87,465,000 of 229,245,000)	38% (87,465,000 of 229,245,000)	38% (87,465,000 of 229,245,000)	0	38% (87,465,000 of 229,245,000)
CSF Total Actual/Projected Expenditures (\$000)	n/a	n/a	\$71,172	n/a	\$64,685	\$66,173	\$66,173	\$67,695	\$1,522	\$69,252
CSF Program Total Actual/Projected Expenditures (\$000)	n/a	n/a	\$7,834	n/a	\$7,879	\$8,060	\$8,060	\$8,245	\$185	\$8,435
15.8.10 # of waters where recreational fishing opportunities are provided - NFHS (GPRA)	n/a	221	230	221	230	230	230	230	0	230
CSF 18.1 Percent of planned tasks implemented for Tribal fish and wildlife conservation as prescribed by Tribal plans or agreements	79% (61 of 77)	79% (79 of 100)	87% (123 of 142)	43% (230 of 538)	65% (351 of 538)	46% (281 of 608)	46% (281 of 608)	46% (281 of 608)	0	46% (281 of 608)
CSF Total Actual/Projected Expenditures (\$000)	\$4,834	\$6,170	\$6,109	n/a	\$8,047	\$6,591	\$6,591	\$6,742	\$152	\$6,897
CSF Program Total Actual/Projected Expenditures (\$000)	\$1,562	\$3,286	\$2,389	n/a	\$3,255	\$3,330	\$3,330	\$3,406	\$77	\$3,484
Actual/Projected Cost Per tasks (whole dollars)	\$79,241	\$78,103	\$49,670	n/a	\$22,927	\$23,455	\$23,455	\$23,994	\$539	\$24,546
Advance Modernization of America										
CSF 52.1 Number of volunteer hours per year supporting FWS mission activities (GPRA)	2,164,648	2,328,109	2,229,555	2,038,775	2,214,648	2,040,259	2,040,259	1,501,633	(-538,626)	1,501,633

Note: 2011 Base Budget is equal to 2010 Plan (enacted level) plus fixed cost (absorbed).

Activity: Fisheries and Aquatic Resource Conservation
Subactivity: Maintenance and Equipment

	2009 Actual	2009 Recovery Act	2010 Enacted	2011			Change from 2010 (+/-)
				DOI-wide Changes &Transfers (+/-)	Program Changes (+/-)	Budget Request	
National Fish Hatchery Maintenance and Equipment (\$000)	17,654	33,535	17,818	-132	0	17,686	-132
FTE	90	-	90	-	0	90	0
FWCO Maintenance and Equipment (\$000)	1,394	-	532	-4	0	528	-4
FTE	0	-	0	-	0	0	0
Total, Maintenance and Equipment (\$000)	19,048	33,535	18,350	-136	0	18,214	-136
FTE	90	-	90	-	0	90	0

Justification of Program Changes for Maintenance and Equipment

The 2011 budget request for Maintenance and Equipment is \$18,214,000 and 90 FTE, a program change of \$0 and 0 FTE from the 2010 Enacted.

Program Overview

The Fisheries Program has developed an Asset Management Plan that guides program management of its substantial and essential real and personal property inventories, including the systematic and objective tracking, evaluation, reporting of asset condition, and the prioritization of their management. Using the Service Asset and Maintenance Management System (SAMMS), an integrated web-based information system, the Fisheries Program standardizes asset management, corroborates deferred maintenance needs with objective condition assessment data, identifies short- and long-term maintenance needs, and initiates analyses of annual operating and maintenance expenditures. Comprehensive, proactive asset management is essential to sustaining captive aquatic populations necessary to meet recovery, restoration, and mitigation objectives and Tribal trust responsibilities identified in Recovery Plans and Fishery Management Plans.

National Fish Hatchery System Maintenance and Equipment

The ability of the National Fish Hatchery System to accomplish its mission is largely determined by the condition of key assets associated with water delivery, aquatic species culture, and effluent management. These assets include those that directly deliver and treat the water delivered to and discharged from the station, and regulate the actual rearing or holding environment of fish and other aquatic species. Three-fourths of the NFHS’s \$1.63 billion of real property assets are mission-critical. The NFHS has embraced the Office of the Inspector General’s recommendations on facilities maintenance, as well as Department asset management initiatives, and has developed asset performance measures and a sound strategy for ensuring its crucial assets are kept fully functional. The Departmental standard is that mission critical assets be maintained in “good” condition. With a current facility condition index (FCI, or the repairs as a fraction of the assets’ replacement value) for its critical assets of 9.11 percent (“fair” condition by DOI standards), the NFHS will work to minimize fish losses associated with water supply failures, especially those involving threatened or endangered species.

The NFHS uses the Service’s Asset Management Plan and Regional Asset Business Plans to manage its assets, address key repair needs, and dispose of assets that are low in priority or excess to the government’s needs. A rigorous Condition Assessment process ensures that the NFHS’s repair needs are

objectively determined. With a primary goal of ensuring that the NFHS's critical assets are in fully operational condition, attention to both annual maintenance (regular servicing of water supply components), and deferred maintenance (outstanding repair needs of these vital assets) is necessary.

Climate change and increasing energy cost concerns have arisen over the past several years, prompting the Service to track energy use by station and to some extent by asset, and providing the impetus for honest and thorough consideration of what these data indicate.

- The NFHS's real property assets constitute 7.6 percent of all Service assets by replacement value, yet account for 31 percent of all Service energy use.
- The average NFHS field station uses 2.3 billion BTUs annually, over 3 times the 0.7 billion BTU average used by non-NFHS field stations.
- Sixteen of the NFHS's 82 field stations account for 60 percent of all NFHS energy use.

NFHS staff is working on development of energy performance measures reasonably reflective of both energy use by station or program and of actual energy reduction opportunities. NFHS field stations have multiple and significant potential for energy reductions through building renovations, use of newly developed technologies, and emplacement of renewable energy systems. As examples, variable frequency drive water pumps offer electrical use reductions of 50 percent when pump speeds are dropped by only 20 percent, while micro-hydro turbines emplaced in water lines at certain fish hatcheries could provide all the electricity some stations need. Further analysis of the NFHS's greatest energy using stations, along with the metering to provide asset electrical use, also promise significant efficiencies that could help these energy intensive programs reduce their carbon footprints.

The NFHS has 147 Deferred Maintenance (DM) projects worth \$25,330,000, 9 capital improvement projects worth \$5,309,000, and 5 energy retrofit/renewable energy projects worth \$636,000 that will be funded through the American Recovery and Reinvestment Act. These projects, selected from the 2010-2014 NFHS Deferred Maintenance Plan, are being funded over 2009 and 2010 and will chiefly target the NFHS's mission critical assets - its water supplies, rearing units, and water treatment systems. Completion of these additional projects not only will employ hundreds of local contractors and workers, but will help keep the repair need (as a fraction of the assets' replacement value) of the NFHS's critical assets under 10 percent, indicating fair condition, through the end of 2010. The long-term goal is to get these critical assets into good condition with a repair need under 5%, as water supply failures continue to impact significant fish production programs at several stations.

The NFHS Maintenance Budget has three components: 1) Annual Maintenance, 2) Deferred Maintenance, and 3) Equipment Repair and Replacement.

Annual Maintenance - Properly managed, annual preventive maintenance is the most logical and cost-effective way to address emerging maintenance issues as they occur. NFHS annual maintenance funds pay salaries of maintenance employees, ensure timely upkeep of hatchery real property and equipment, purchase maintenance-related supplies (e.g., lumber, pipe, paint, tools, filters), and replace small equipment (generally less than \$5,000). Current annual maintenance funding will allow priority preventive maintenance needs to be addressed. Similarly, critical water assets such as wells and pumps require regular care to ensure dependable operation. Existing funding will be used to service such components at appropriate intervals, reducing the likelihood of pump failure and increasing the life expectancy of pump motors and shafts. Through use of SAMMS and condition assessments, the NFHS can plan recurring maintenance to enable more proactive asset management, reduce maintenance needs from becoming more costly deferred maintenance deficiencies, and foster successful operations and mission delivery.

Deferred Maintenance – Three-fourths of the NFHS’s \$1.63 billion in assets are mission-critical water management assets, and they are currently in fair condition, based on the 9.11 percent repair need for action identified above. Ensuring these properties are fully functional is key to the NFHS’s ability to conserve significant fish and other aquatic species, especially in the face of climate change. Deferred maintenance projects, directed at the repair, rehabilitation, or replacement of constructed assets, target assets used for restoration, recovery, and recreation. The NFHS focuses on high-priority mission-critical water management projects and human health and safety projects, in order to maintain current efficiencies (including reduced losses) in fish production and attention to safety issues. The NFHS currently has \$152 million in deferred maintenance needs identified.

The National Fish Hatchery System has developed a 5-Year Deferred Maintenance/Construction Plan, which provides the projects of greatest need in priority order with focus first on critical health and safety and critical resource protection. The NFHS has undertaken an intense effort originating in the field to develop this list. Limited modifications to the list will occur as it is annually reviewed and updated, with the addition of a new fifth year, and submission to the Congress.

Equipment: Routine Maintenance, Repair, and Replacement – NFHS equipment is essential to hatchery operations and consists of over \$35 million worth of machinery (fish pumps, tractors, loaders, backhoes, riding mowers), fish transports (trucks, tanks, oxygen containment), standard vehicles (pickups, sedans, vans), and tools (table saws, welders, and hand-held power tools). With proper operation by trained and qualified operators, and with scheduled maintenance completed and documented in a timely manner, equipment will remain safe, operating condition for the foreseeable future. Proper maintenance of equipment includes both short- and long-term storage.

The NFHS equipment funds pay for maintenance, repair, and replacement of equipment. Replacement generally targets items with a value between \$5,000 and \$30,000, and includes passenger vehicles. More expensive equipment is identified for purchase in the Five-Year Deferred Maintenance Plan. To minimize the need to purchase expensive specialized equipment, the NFHS works closely with the National Wildlife Refuge System to accomplish certain projects. In the event of scheduling conflicts, specialized equipment is leased from the private sector and Refuge-based equipment operators are loaned to hatcheries for the duration of the project, saving the Service considerable funds.

Fish and Wildlife Conservation Office Maintenance and Equipment - Fish and Wildlife Conservation Office maintenance and equipment funds are for the purchase and upkeep of over \$21 million in assets such as boats, vehicles, and sampling equipment. This equipment is essential for inventory and monitoring of native species, and critical to the Fisheries Program’s mission to restore native aquatic populations to self-sustaining levels. Fisheries offices use SAMMS to provide a comprehensive understanding of preventive maintenance needs and accomplishments. SAMMS also identifies mobile equipment replacement needs such that on-the-ground habitat monitoring and assessment can be conducted safely and efficiently.

2011 Program Performance

The requested funding will enable the NFHS to continue to work on its repair needs involving mission critical water management assets by implementing the following highly-ranked projects from the 2011-2015 NFHS Deferred Maintenance Plan:

- Removal of asbestos from the old hatchery building at Jackson NFH (WY) prior to the demolition of the building. Seismic issues require the replacement of the current building, which is still being used for production of the listed Snake River cutthroat trout, a species close to being down-listed.

- Replacement of a water supply flume at Williams Creek NFH (AZ) with a closed pipeline, which will both improve staff and visitor safety as well as improve the water supply reliability for the threatened Apache trout reared on station.
- Replacement of a water supply line at Orangeburg NFH (SC) established in 1912 and important to the restoration of native striped bass populations. The aged pipeline has had periodic breaks, threatening the success of an important economic and natural resource program for the Southeastern United States.
- Rehabilitation of a major fish rearing pond at Genoa NFH (WI), a pond that has not been renovated since the hatchery's construction in the 1930s. Pond reshaping and sediment removal will enable the station to more effectively produce valuable fish species supporting Tribal/Refuge fisheries and host fish required for endangered mussel propagation and restoration.

Presently, several States continue to permit fish culture operations at NFHS facilities only because pollution abatement projects are on schedule in the maintenance or capital improvement plans. Any deviations from those schedules could lead to a reduction of production for Atlantic salmon and other imperiled species. All the critical maintenance issues that directly deal with human health and safety, water delivery, water treatment (both influent and effluent), fish culture, and efficient discharge are high priorities for the NFHS. Water supply line failures have caused fish losses or seriously impacted production programs, such as the recent water line ruptures at Alchesay NFH (AZ), requiring the early release of most fish and seriously impacting local Tribal economies that rely on these production programs. A dedicated NFHS workforce continues to maximize production of a large variety of aquatic species for restoration, recovery, and mitigation. Rehabilitating or replacing critical assets is necessary to meet program goals and the expectations of the Service's many partners and stakeholders in aquatic resource conservation.

Addressing critical maintenance needs will help the NFHS meet Facility Condition Index performance targets. Furthermore, the continuance of a dedicated approach to conducting condition assessments has directly contributed to increasing the credibility of NFHS repair needs identified for essential assets.

In 2011, the NFHS is committed to:

- Continuing the second 5-year cycle of assessments by completing Condition Assessments at approximately 20 hatcheries. Efforts will continue to improve the assessment program by implementing knowledge gained in the first 5-year cycle, using SAMMS to improve the efficiency of the data storage and retrieval system, and increasing the reliability of data used to effectively and efficiently meet DOI and NFHS maintenance goals and objectives.
- Implementing an Asset Management Plan and Asset Business Plan that outlines proactive strategies to maintain assets for their efficient, safe use. Critical water management assets in poor or marginal condition will continue to be the primary focus of NFHS asset management efforts, while energy use reduction will target the NFHS's greatest users and those improvements with the shortest payback periods. Additionally, Asset Business Plans developed by each Program at the Regional level will continue to be implemented, ensuring essential Service uniformity in managing its crucial assets.

Activity: Fisheries and Aquatic Resource Conservation
Subactivity: Aquatic Habitat and Species Conservation

	2009 Actual	2009 Recovery Act	2010 Enacted	2011			Change from 2010 (+/-)
				DOI-wide Changes &Transfers (+/-)	Program Changes (+/-)	Budget Request	
Habitat Assessment and Restoration (\$000)	22,923	4,780	27,061	-198	+1,740	28,603	+1,542
FTE	72	-	76	-	+5	81	+5
Population Assessment and Cooperative Management (\$000)	32,488		34,379	-315	-990	33,074	-1,305
FTE	207		211	-	0	211	0
Aquatic Invasive Species (\$000)	5,352		8,244	-54	-1,855	6,335	-1,909
FTE	26		26	-	+1	27	+1
Marine Mammals (\$000)	3,371		5,810	-46	+180	5,944	+134
FTE	18		23	-	0	23	0
Total, Aquatic Habitat and Species Conservation (\$000)	64,134	4,780	75,494	-613	-925	73,956	-1,538
FTE	323	-	336	-	+6	342	+6

Summary of 2011 Program Changes for Aquatic Habitat and Species Conservation

Request Component	(\$000)	FTE
Treasured Landscapes - Chesapeake Bay:		
• Habitat Assessment and Restoration	+1,430	+3
• Aquatic Invasive Species	+145	+1
Treasured Landscapes - Bay Delta Ecosystem:		
• Habitat Assessment and Restoration	+310	+2
• Population Management and Cooperative Management	+310	+2
Other Program Changes:		
• Marine Mammals – Polar Bear	+380	0
• Aquatic Invasive Species Control and Management – Lake Tahoe	-2,000	0
• West Virginia Fisheries Resource Office	-1,300	-2
• Marine Mammals - Sea Otter and Stellar Sea Lion Conservation in Alaska	-200	0
TOTAL Program Changes	-925	+6

Justification of 2011 Program Changes

The 2011 budget request for Aquatic Habitat and Species Conservation is \$73,956,000 and 342 FTE, a net program change of -\$925,000 and +6 FTE from 2010 Enacted.

Treasured Landscapes – Chesapeake Bay

Habitat Assessment and Restoration (+\$1,430,000/+3 FTE)

The Chesapeake Bay is one of America's most treasured landscapes, and the largest estuary in the United States. The Bay and its tributaries support more than 2,700 plant and animal species, including nationally notable trust fish and wildlife resources. The Bay's watershed encompasses parts of six States and the District of Columbia, and contributes more than \$1 trillion in economic and environmental benefits to the Nation. Despite significant efforts by federal, State, and local governments over many years, water pollution and habitat degradation continue to threaten the environmental health of the Bay ecosystem upon which fish, wildlife, and people depend.

The President has called for renewed shared leadership action to control pollution, protect and restore habitat, improve natural resource management, and accelerate water quality and ecosystem health improvements. This initiative will help ensure that the Service will be able to effectively meet its responsibilities pursuant to Executive Order 13508, to fulfill our Chesapeake Bay partnership obligations to protect and conserve priority species, and manage and restore habitat on and off Service lands for those species and to improve overall ecosystem health. Funding will be leveraged with existing National Fish Habitat partnerships within the watershed, National Fish Passage and National Wild Fish Health Survey programs, and with local communities and conservation organizations. As a result, the Service and Chesapeake Bay stakeholders will intensify work to protect and restore habitat, fish passage, and dam removals/culvert replacements to restore stream connectivity, improve freshwater and estuarine habitat, and open access to high quality spawning and rearing habitat in targeted areas within the watershed. A portion of the funding will provide for general administrative support. General administrative functions provide the governance, infrastructure support, communications and data transfer capability that permit the Service's field mission to be realized.

The Service will assess 5 populations, remove or bypass 2 barriers, conduct 4 habitat assessments, reopen 2 river miles, and conduct 2 applied science and technology tasks.

Aquatic Invasive Species (+\$145,000/+1 FTE)

Invasive species are second only to habitat loss affecting priority species nationwide. In the Chesapeake Bay watershed, there are approximately 200 invasive species (plants, fish, animals, bacteria, and protozoa) impacting priority Service trust species and their habitats. In 2001, the Chesapeake Bay Program designated 46 of these species as high priority species. Of those 46, the top 6 species determined to pose the greatest threat to the Bay Region's ecosystem are aquatic invasive species (AIS) and include zebra mussel, mute swan, nutria, *Phragmites*, purple loosestrife, and water chestnut. This additional funding will be used for increased monitoring, evaluation and law enforcement efforts needed to prevent both intentional and unintentional introductions of aquatic invasive species. Once detected, rapid response teams will be initiated to eradicate new infestations of invasive species before they can become established. For species where eradication is not an option, methods to control and manage the species to prevent further spread will be explored along with education and outreach efforts to help the public take ownership of the problem to prevent the spread of AIS.

The Service will establish and maintain 2 aquatic invasive partnerships, will conduct 1 survey for baseline/trend information for aquatic invasive species, and 1 survey for early detection and rapid response for aquatic invasive species.

*Treasured Landscapes – Bay Delta Ecosystem***Habitat Assessment and Restoration (+\$310,000/+2 FTE)**

The Service is a leader in collaboration with others to coordinate and implement habitat restoration work in the Bay Delta and upstream to help restore delta smelt and wild salmon populations. Funding is needed for the Service to lead, in collaboration with our partners, implementation of our Landscape Conservation Cooperative concepts to address how climate change, invasive species, contaminants and other stressors could be preventing recovery of delta smelt and other native fish. The Service will complete habitat assessments, remove or bypass barriers, reopen miles of stream and restore fish passage, restore stream/shoreline habitat, and survey for early detection and rapid response for aquatic invasive species.

Population Assessment and Cooperative Management (+\$310,000/+2 FTE)

Funding is essential for the Service to lead, in collaboration with our partners, efforts to improve knowledge of delta smelt and other imperiled fish life histories. This research is vital to understanding how climate change, invasive species, contaminants and other stressors prevent recovery of imperiled species. The Service will develop applied aquatic science and technological tools. The Service will lead annual population assessments of delta smelt throughout its entire range, and monitor and study delta smelt spawning strategies. Research will also focus on the critical need for population genetics studies. This information is critical for the successful science and out-come driven implementation of the LCC approach.

*Other Program Changes***Marine Mammals - Polar Bear (+\$380,000/+0 FTE)**

The increase will address urgent needs to conserve and manage polar bears. Sea ice retreat is exceeding projections, and conflicts between people and polar bears are increasing as bears spend more time on land. In Alaska, coastal villages are strapped to deal with greater numbers of bears on land in the late summer and fall. Villages across the North Slope are at the leading edge of climate change impacts to wildlife, habitats, and the subsistence culture. They require assistance from the Service, but the Service's ability to address this emerging issue is limited because we do not have a staff presence on the North Slope. The increase will enable the Service to modestly increase our presence on the North Slope to provide village support and bolster polar bear conservation action in a rapidly changing Arctic.

Aquatic Invasive Species Control Quagga and Zebra Mussels (-\$2,000,000/+0 FTE)

The Service proposes to eliminate unrequested funding provided in 2010 to control quagga and zebra mussels, specifically in Lake Tahoe. The savings are being used to fund other priorities in the President's 2011 budget request. Protocols and decontamination washing stations will be established and will be operational in 2010 but will no longer be funded by the Service in 2011. However, the Service will continue core priority activities such as education of the public on their involvement to keep invasive species from spreading and implementation of State invasive species management plans.

West Virginia Fisheries Resource Office (-\$1,300,000/-2 FTE)

The Service proposes to eliminate unrequested funding provided to establish a West Virginia Fisheries Resource Office to focus on aquatic species restoration and management in the Appalachian Highlands. Because of higher priorities within this program and within the Service, this office will not be funded in 2011.

Marine Mammals-Sea Otter and Seller Sea Lion Conservation in Alaska (-\$200,000/+0 FTE)

Funding is eliminated for this earmark, which was a pass through to an Alaska Native Organization in 2010. Cooperative Agreements with Alaska Native Organizations (ANOs) under section 119 of the

Marine Mammal Protection Act are a priority for the Service and this dedicated funding supported specific agreements for sea otters, walruses, and polar bears. The Service continues to evaluate the most effective and fair means to distribute these limited funds through cooperative agreements with ANOs.

Program Performance Change Table - Management Assistance

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
Sustain Biological Communities								
CSF 5.1 Percent of fish species of management concern that are managed to self-sustaining levels, in cooperation with affected States and others, as defined in approved management documents (GPRA)	42% (63 of 150)	29% (48 of 164)	30% (17 of 146)	8% (17 of 211)	8% (17 of 211)	8% (17 of 211)	0	
CSF Total Actual/Projected Expenditures(\$000)	\$26,775	\$32,281	\$35,697	\$36,518	\$36,518	\$37,357	\$840	
CSF Program Total Actual/Projected Expenditures(\$000)	\$21,573	\$23,195	\$25,202	\$25,782	\$25,782	\$26,375	\$593	
Actual/Projected Cost Per Species (whole dollars)	\$425,000	\$672,514	\$2,099,797	\$2,148,092	\$2,148,092	\$2,197,498	\$49,406	
5.1.3 # of habitat assessments completed	2,182	1,262	1,971	946	946	955	9	
Comments:	An additional +5 habitat assessments completed for Bay Delta Ecosystem and an additional +4 habitat assessments completed for Chesapeake Bay.							
5.1.11 # of fish passage barriers removed or bypassed	73	96	160	107	107	111	4	
Comments:	An additional +2 fish passage barriers removed or bypassed for Bay Delta Ecosystem and +2 fish passage barriers removed or bypassed for Chesapeake Bay.							
5.1.12 # of miles reopened to fish passage - FWMA	1,023	732	1,220	870	870	880	10	
Comments:	An additional +8.8 miles reopened for fish passage for Bay Delta Ecosystem and +2 miles reopened for Chesapeake Bay.							
5.1.13 # of acres reopened to fish passage - FWMA	1,232	29,345	25,277	3,649	3,649	5,198	1,549	
Comments:	An additional +1549 acres reopened to fish passage for Bay Delta Ecosystem.							

Program Performance Change Table - Management Assistance

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
CSF 5.2 Percent of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known	34% (540 of 1,589)	40% (592 of 1,472)	34% (526 of 1,569)	33% (513 of 1,565)	33% (513 of 1,565)	33% (513 of 1,565)	0	
CSF Total Actual/Projected Expenditures(\$000)	\$18,753	\$21,790	\$20,686	\$20,639	\$20,639	\$21,114	\$475	
CSF Program Total Actual/Projected Expenditures(\$000)	\$11,020	\$11,415	\$10,388	\$10,627	\$10,627	\$10,871	\$244	
Actual/Projected Cost Per Populations (whole dollars)	\$34,729	\$36,807	\$39,328	\$40,232	\$40,232	\$41,158	\$925	
5.2.4 # assessments completed	991	3,933	2,807	1,737	1,737	1,747	10	
Comments:	An additional +5 population assessments completed for Bay Delta Ecosystem and +5 population assessments completed for Chesapeake Bay.							
CSF 5.3 Percent of tasks implemented, as prescribed in management plans	46% (1,588 of 3,429)	76% (2,379 of 3,130)	74% (2,866 of 3,894)	66% (2,581 of 3,906)	66% (2,581 of 3,906)	66% (2,586 of 3,906)	0% (5 of 3,906)	
CSF Total Actual/Projected Expenditures(\$000)	\$61,976	\$64,703	\$62,947	\$57,991	\$57,991	\$59,440	\$1,449	
CSF Program Total Actual/Projected Expenditures(\$000)	\$12,268	\$12,672	\$11,272	\$11,532	\$11,532	\$11,797	\$265	
Actual/Projected Cost Per Tasks (whole dollars)	\$39,028	\$27,198	\$21,963	\$22,469	\$22,469	\$22,985	\$517	
5.3.1.6 % of tasks implemented, as prescribed in management plans - FWMA	37% (879 of 2,400)	47% (1,481 of 3,130)	39% (1,527 of 3,894)	33% (1,344 of 4,085)	33% (1,344 of 4,085)	33% (1,347 of 4,085)	0% (3 of 4,085)	
Comments:	An additional +1 tasks implemented for FMPs for Bay Delta Ecosystem and +2 tasks implemented for FMPs for Chesapeake Bay.							
5.3.1.7 # of tasks implemented, as prescribed in management plans - FWMA	879	1,481	1,527	1,344	1,344	1,347	3	
Comments:	An additional +1 tasks implemented for FMPs for Bay Delta Ecosystem and +2 tasks implemented for FMPs for Chesapeake Bay.							

Program Performance Change Table - Management Assistance

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
5.3.1.8 Total # of tasks, as prescribed in management plans - FWMA	2,400	3,130	3,894	4,085	4,085	4,085	0	
CSF 12.2 Number of aquatic invasive species populations controlled/managed - annual	14	11	11	11	11	11	0	
CSF Total Actual/Projected Expenditures(\$000)	\$16,276	\$18,098	\$19,435	\$19,882	\$19,882	\$20,340	\$457	
CSF Program Total Actual/Projected Expenditures(\$000)	\$11,865	\$3,161	\$1,642	\$1,679	\$1,679	\$1,718	\$39	
Actual/Projected Cost Per Populations (whole dollars)	\$1,162,537	\$1,645,257	\$1,766,840	\$1,807,477	\$1,807,477	\$1,849,049	\$41,572	
12.2.6 # of activities conducted to support the management/control of aquatic invasive species - FWMA	150	1,670	303	152	152	153	1	
Comments:	An additional +1 activity conducted to support the management/control of AIS for Bay Delta Ecosystem.							
12.2.11 # of surveys conducted for baseline/trend information for aquatic invasive species	420	405	682	204	204	206	2	
Comments:	An additional +1 survey conducted for baseline/trend information for AIS for Bay Delta Ecosystem and +1 survey conducted for baseline/trend information for AIS for Chesapeake Bay.							
12.2.12 # of surveys conducted for early detection and rapid response for aquatic invasive species	496	541	638	345	345	347	2	
Comments:	An additional +1 survey conducted for early detection & rapid response for AIS for Bay Delta Ecosystem and +1 survey conducted for early detection & rapid response for AIS for Chesapeake Bay.							
12.2.13 # of state/interstate management plans supported to prevent and control aquatic invasive species (annually)	23	51	87	40	40	41	1	
Comments:	An additional +1 state/interstate management plan supported for Bay Delta Ecosystem.							

Program Performance Change Table - Management Assistance

Performance Goal	2007 Actual	2008 Actual	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Program Change Accruing in Out-years
12.2.14 # of partnerships established and maintained for invasive species tasks	283	883	523	360	360	362	2	
Comments:	An additional +2 invasive species partnerships established and maintained for Chesapeake Bay.							
Improve Recreational Opportunities for America								
CSF 15.4 Percent of mitigation tasks implemented as prescribed in approved management plans	73% (30 of 41)	64% (49 of 77)	76% (56 of 74)	92% (70 of 76)	92% (70 of 76)	95% (72 of 76)	3% (2 of 76)	
CSF Total Actual/Projected Expenditures(\$000)	\$23,147	\$23,184	\$24,029	\$30,727	\$30,727	\$32,332	\$1,605	
CSF Program Total Actual/Projected Expenditures(\$000)	\$621	\$833	\$696	\$712	\$712	\$728	\$16	
Actual/Projected Cost Per Tasks (whole dollars)	\$771,573	\$473,139	\$429,086	\$438,955	\$438,955	\$449,051	\$10,096	
15.4.9 # of aquatic outreach and education activities and/or events	849	565	1,026	472	472	473	1	
Comments:	An additional +1 aquatic outreach and education activity/event conducted for Bay Delta Ecosystem.							

Note: 2011 Base Budget is equal to 2010 Plan (enacted level) plus fixed cost (absorbed).

Program Overview

One of the unique features of the Fisheries Program is its capacity to monitor and assess aquatic populations and their habitats, a critical need when making informed resource management decisions. A 2008 report by a U.S. Geological Survey-led team examined the status of North America's freshwater fishes and documented a substantial decline among 700 fishes.³ Sea-level rise, temperature elevations, and precipitation changes resulting from climate change are devastating the nation's fisheries. The Service's ability to respond to these impacts is hampered by a severe lack of basic population-level data. Monitoring and assessment of aquatic animal populations and their habitats are important components of the Service's draft Climate Change Strategic Plan and Action Plan. Monitoring and assessment carried out by the 65 Fish and Wildlife Conservation Offices (FWCOs) are critical to the Service's success in addressing climate change impacts to Service trust resources. Continued vigilance in monitoring and assessment is necessary in order to: 1) understand and address climate change impacts to fisheries; 2) identify sensitive aquatic ecosystems, key processes, and critical information gaps; 3) understand current condition (including information about the existing stresses) to establish baselines for trend analyses; and

³ Jelks, H.L., S.J. Walsh, N.M. Burkhead, S. Contreras-Balderas, E. Díaz-Pardo, D.A. Hendrickson, J. Lyons, N.E. Mandrak, F. McCormick, J.S. Nelson, S.P. Platania, B.A. Porter, C.B. Renaud, J. J. Schmitter-Soto, E.B. Taylor, and M.L. Warren, Jr. 2008. Conservation status of imperiled North American freshwater and diadromous fishes. *Fisheries* 33(8):372-407.

4) implement management plans and actions, including projects funded through the National Fish Habitat Action Plan and the National Fish Passage Program. These data will provide the Service and its partners with information necessary to respond to climate change impacts strategically, scientifically, and successfully.

Habitat Assessment and Restoration Program Overview

Fish and Wildlife Conservation Office biologists work closely with federal, State, Tribal, and NGO partners to manage habitats important to native federal trust populations at national, regional, and local scales. Core activities in this area are: assessment of a habitat's ability to support healthy and self-sustaining aquatic populations, identification of important fish habitat needs, removal or bypass of artificial barriers to fish passage, installation of fish screens, in-stream and riparian habitat enhancement projects, monitoring and evaluation of projects, and mitigation of impacts of climate change on aquatic species and habitat. The two major focus areas of the Habitat Assessment and Restoration Program are:

National Fish Habitat Action Plan: The Service is a partner with States, Tribes, and other stakeholders in implementing the National Fish Habitat Action Plan (NFHAP). The NFHAP is a non-regulatory and voluntary program that fosters locally-driven and scientifically-based partnerships to protect, restore, and enhance aquatic habitats and reverse the decline of fish and aquatic species. The NFHAP's mission and goals are realized through the efforts of its Fish Habitat Partnerships, which are formed around geographic areas, keystone species, or system types as a way to focus fish habitat activities and consolidate conservation efforts and funding. Service funds provided to NFHAP projects may be leveraged as much as 3 to 1 with partner funding.



In addition to providing leadership at the regional and national level, the Service also provides technical assistance and expertise to NFHAP partners. For example, the Service uses the Fish Passage Decision Support System (FPDSS) to assist Fish Habitat Partnerships by providing critical data and analytical tools to support strategic planning.

National Fish Passage Program: The Nation's streams and rivers are impeded to aquatic species passage by more than 2.5 million dams and millions more poorly-designed culverts and in-stream structures. These impediments contribute to the depletion of native aquatic species of which many are listed as threatened or endangered. The National Fish Passage Program (NFPP) is a voluntary, non-regulatory partnership that works with local communities and partner agencies to restore access to vital spawning and rearing habitat for aquatic species. It is a collaborative approach that exemplifies the spirit of cooperative conservation. Since its inception in 1999, the Program has collaborated with more than 700 diverse partners including private landowners and Tribes to remove or bypass 749 barriers, and has restored access to over 11,249 miles of river and 80,556 acres of wetlands for fish spawning and growth.

Over the past ten years, more than 85 fish species, many under federal and State protection, have benefited from the NFPP. Most recently, the removal of several culverts restored connectivity in Mill Creek (FL), which helped to create a self-sustaining population of the federally-endangered Okaloosa darter, significantly contributing to the recovery of the species. Currently, the darter is being considered for delisting due to significant conservation gains made possible by the NFPP.

The NFPP restores depleted fish and aquatic species to self-sustaining levels through the use of innovative tools and strategic applications such as the FPDSS. The FPDSS uses structured decision making to identify the best opportunities for successful population restoration through barrier removal. FPDSS features the most comprehensive inventory of fish passage barriers in the country, yet the effort to

expand the inventory of barriers continues as data needs have significantly increased. The system has become a significant tool for determining optimal strategies for mitigating the impacts of climate change through habitat connectivity.

The NFPP supports the only system of comprehensive fish passage engineering and technical assistance capacity in the country. The Service fish passage engineers and technical specialists funded by the NFPP ensure that fish passage projects are implemented efficiently and in a manner that most likely guarantees conservation success. Their services are in demand by many programs within the Service and by countless partners.

2011 Program Performance – Habitat Assessment and Restoration

In 2011, the FWCOs will continue their comprehensive efforts through the National Fish Habitat Action Plan and National Fish Passage Program to assess the condition of aquatic habitats and populations, restore physical condition and fish passage, reverse declines in populations of federal trust aquatic species, manage subsistence fisheries in Alaska, provide technical assistance to Native Americans, and cooperatively develop and implement plans to restore and recover of the Nation's fisheries. The FWCOs will use the Fisheries Operational Needs System and the FPDSS to strategically prioritize work activities.

FWCO biologists will continue to identify and target priority areas which provide the best opportunities to restore connectivity to fish habitat and increase fish species' resiliency to climate change.

Population Assessment and Cooperative Management Program Overview

Many FWCO activities focus on populations, primarily the inventory, monitoring, management, restoration and maintenance of healthy diverse aquatic species populations. This information forms the critical building blocks of accurate Recovery and Fisheries Management Plans, as well as the baseline data essential for managers to make informed decisions. The development and implementation of fisheries management plans for federal trust species are a core activity of FWCO biologists. Some of the more prominent species include American shad, Atlantic sturgeon, and striped bass as well as depleted or listed populations of native species such as brook trout, Pecos bluntnose shiner, and Atlantic salmon.

The Fisheries Program focuses resources on high-priority watersheds determined by the Service in conjunction with its partners. FWCOs evaluate the causes of species decline, determine the limiting factors for aquatic populations, and implement actions to restore those populations. They work on a landscape scale across jurisdictional boundaries with State and federal agencies, and Tribal Nations to restore fish and other aquatic populations to self-sustaining levels and to preclude ESA listing.

FWCOs provide leadership in conservation planning and design as well as technical assistance to partners and other Service programs. For example, they conduct population surveys on National Wildlife Refuges to help develop Refuge Comprehensive Conservation Plans. They support the Endangered Species Program by leading recovery teams and status assessments. They review development projects for potential impacts to fisheries resources. Through coordinated planning and post-stocking evaluation, FWCOs work with the National Fish Hatchery System to implement effective restoration and recovery programs for native fish and mussels. FWCOs monitor captive propagation programs, work with stakeholders to develop management and restoration plans that define the appropriate use of hatchery fish, and measure progress toward meeting plan objectives.

Fish and Wildlife Conservation Offices are a focal element of the critical infrastructure in the fight against the spread of aquatic nuisance species. These offices work closely with the Aquatic Invasive Species program to reclaim habitats overrun with non-native species and to suppress invasive species, such as sea lamprey in the Great Lakes.

Alaska Subsistence Management Program: More than 135,000 people in over 270 communities in rural Alaska are entitled to subsistence fish, hunt, and trap on federal lands. Across Alaska, the average subsistence harvest is approximately 375 pounds of food per person, or 50 million pounds of food per year. Replacing subsistence harvested foods with store-bought foods would cost \$270 million.⁴ The Alaska Fisheries Subsistence Management Program provides a direct benefit to rural subsistence users on more than 237 million acres of federal lands, encompassing 66% of Alaska's lands and 52% of Alaska's rivers and lakes.

The Service is the lead federal agency in administering the program for the Department of the Interior and the Department of Agriculture. Since 1999, the Service's Office of Subsistence Management has implemented an annual regulatory program and a fisheries monitoring program, supported ten Regional Advisory Councils, and provided administrative and technical support to five federal agencies and the Federal Subsistence Board. The Subsistence Management Program operates with strong stakeholder participation by rural residents and the State of Alaska.

2011 Program Performance

Information for Restoring America's Fisheries: FWCO field staff will continue efforts to restore populations of commercially and recreationally valuable species of native fish. Of the 1,531 fish populations for which the Service has management authority, 80% lack some key scientific assessment data. Over 400 of these fish populations are classified as threatened or endangered, 474 as depleted (including candidate species and those proposed for listing under the Endangered Species Act), and 325 are of unknown status. Information on population trends shows that 17% are declining and 25% are stable or increasing, but trends are unknown for 58% of fish populations. The Service will meet this information need by using the scientific monitoring, assessment, and evaluation expertise of the FWCOs. For 2011, the Service will bolster its efforts in close coordination with other Service programs.

Working with Tribes: FWCO field staff will continue working with Tribes to assess and manage their fish and wildlife resources on Tribal lands. Service fisheries biologists develop management plans, restore native fish and fish habitats, and evaluate results of fish and wildlife management actions. In 2011, these efforts include implementing the 2000 Consent Decree to manage fish stocks in the Great Lakes with five Chippewa/Ottawa Tribes and the State of Michigan, working with the White Mountain Apache Tribe to delist Apache trout, and working with Tribes to evaluate big game herds such as deer, elk, and pronghorn antelope on Tribal lands in Wyoming and Montana. The Service will encourage Tribal youth to explore careers in the fisheries conservation field, through expanding its Youth Conservation Corps programs (YCC), in order to promote the growth of conservation expertise within Tribal communities and to increase ethnic and cultural diversity within the fisheries management profession.

Aquatic Invasive Species Program Overview

The introduction and establishment of invasive species have significantly impacted the health of our native species and ecosystems, and is considered to be second only to direct habitat destruction in the U.S. as the cause of declining biodiversity. Nearly half of the imperiled species in the United States are threatened by non-indigenous invasive species,⁵ and it has been estimated that the economic and ecologic impacts total more than \$120 billion per year.⁶

⁴ Fall, J. A., D. Caylor, M. Turek, C. Brown, J. Magdanz, T. Krauthoefer, J. Heltzel, and D. Koster. 2007. Alaska Subsistence Salmon Fisheries 2005 Annual Report. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 318, Juneau, Alaska.

⁵ Wilcove, D.S., Rothstein, D., Bubow, J., Phillips, A., Losos, E., 1998. Quantifying threats to imperiled species in the United States. *Bioscience* 48(8): 607-615.

⁶ Pimentel, D., Lach, L., Zuniga, R., Morrison, D., 2005. Environmental and economic costs associated with introduced non-native species in the U.S. Manuscript, 1 -28. Update on the environmental and economic costs associated with alien-invasive species in the U.S. *Ecological Economics* 52:273-288.

Aquatic invasive species (AIS) are especially troublesome as they are not readily detected, their pathways are not always obvious, their impacts to native species and habitats are sometimes difficult to determine, and they are difficult to eradicate once they become established. AIS impacts are particularly acute because they remain persistent and spread widely even after the source is abated or pathways are interrupted. Even in the Great Lakes, where invasive mussels have been present since the 1980s, new problems and impacts caused by AIS continue to be identified. Recent University of Michigan studies, for example, reveal changes due to invasive mussels at every level of the Great Lakes ecosystem.⁷ It is prudent to expect that climate change will provide AIS with new vectors to spread. Without prevention and management, AIS populations will continue to grow and expand, with damages accelerating over time.

The Service's AIS Program contributes to the conservation of trust species and their habitats by preventing the introduction and spread of AIS, monitoring habitats to determine the distribution of invasive species, rapidly responding to new invasions, and controlling established invaders. For instance, the AIS Program helped develop the Hazard Analysis & Critical Control Point Planning (HACCP) manual for natural resource pathways and the HACCP American Society for Testing and Materials (ASTM) international standard. The program provides HACCP training at the National Conservation Training Center, at other Service facilities, and for partners throughout the U.S. This training is used at Service facilities such as hatcheries, where HACCP protocols are implemented to help prevent the spread of AIS during the propagation and release of target aquatic species, and is being incorporated by States in their general environmental permitting processes to manage invasive species.

The AIS Program also supports the Injurious Wildlife Provisions of the Lacey Act through an ongoing process of evaluating species and possibly listing them as injurious through the rulemaking process. Injurious wildlife are species that are injurious or potentially injurious to the interests of human beings, agriculture, horticulture, forestry, wildlife, or wildlife resources of the United States. An injurious wildlife listing prohibits the species from being imported or transported across State lines without a permit. Currently, numerous species of fishes and snakes are being evaluated.

The interaction of climate change and invasive species adds another level of complexity. Climate change creates new pathways of spread (such as new Arctic shipping lanes), compromises the capacity of native organisms to compete with existing invaders (e.g., native salmon preyed upon by introduced bass and walleye), and shifts distributions and behavioral timing of invasive species (e.g., invasive plants that start to grow earlier than native plants). With its nationwide distributed network of AIS expertise and close links to State AIS managers, the AIS Program is uniquely positioned to focus and leverage its efforts with those of many external partners to address the complex challenges that climate change is creating for AIS management.

The AIS program is composed of three elements: State Plans/National Invasive Species Act of 1996 (NISA) Implementation, Prevention, and Control and Management.

State Plans/NISA Implementation

The AIS Program implements the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) (as amended by NISA), a landmark law that created the Aquatic Nuisance Species Task Force (ANSTF) and gave the Service several critical national leadership roles, including: co-chairing and administering the ANSTF, supporting the six ANSTF Regional Panels, providing grants for State/Interstate/Tribal ANS Management Plans (State Plans), and implementing a national AIS program of prevention and control activities through the Fisheries and Aquatic Resource Conservation Program in the Service Regions.

⁷ Erickson, J. 2009. Great Lakes: 'Amazing Change'. Michigan Today, 7/21/2009. <http://michigantoday.umich.edu/2009/07/story.php?id=7510&tr=y&aid=5077806>

Prevention

The old proverb “an ounce of prevention is worth a pound of cure” resonates particularly well when addressing invasive species. The single most cost-effective strategy to protect the nation’s wildlife and their habitats from invasive species is to prevent both new introductions as well as the spread of those already established; this is the primary focus of the Service’s AIS Program. Control is costly and the conservation community has limited tools for long-term management of AIS once they become established. The Service has a broad array of programs that complement the efforts of other federal agencies and support our ability to prevent introductions and contain invasive species problems.



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Control/Management

For AIS that have already become established, there are often opportunities to prevent further spread or lessen their impacts through various control and management techniques. These measures are best accomplished using an integrated pest management approach. In some cases, containment of damage can buy time while new control methods are developed that offer hope for eradication, as recently experienced with the chronic invasion by (*Spartina spp*) in Washington State. Because AIS do not always behave as they do in their native habitats, research is often needed before effective control and management measures can be implemented. Although prevention remains a priority, the AIS Program also focuses on control and management to meet its objectives for protection of native fish and wildlife resources and their associated recreational and economic benefits. In conjunction with the ANSTF and multiple State, industry, and federal partners, the Service will continue to lead the development and implementation of plans to control and manage established AIS. The Service currently leads the implementation by providing staffing and funding support to the Asian carp, ruffe, brown tree snake, *Caulerpa* (a seaweed), and mitten crabs national species management plans, and has leveraged these efforts by actively involving communities, expertise, skills, and resources of the people within the local area to manage these invasive species.

2011 Program Performance

In 2011, as described below, the Service, building on previous accomplishments in 2009 and 2010, plans to 1) work with additional State and Tribal partners to implement new State/Interstate ANS management plans, 2) engage in new activities that prevent the introduction and spread of AIS, and 3) continue collaborative efforts to control and manage existing populations.

The Service works with State, interstate, and tribal partners to implement ANSTF-approved ANS management plans. In 2011, the Service will work with additional States to facilitate the development of new ANS plans or the revision of existing ones. There are currently 36 ANSTF-approved State plans (33 State and 3 interstate), up from 10 in 2001 and 19 in 2006, showing significant progress in developing a comprehensive national approach to managing the nation’s AIS problem. A key premise under NISA is that the States must be a strong partner in implementing a national AIS Program. Based on the strategies and tasks outlined in State plans, activities which may be funded in 2011 include:

- Preventing the spread of existing AIS and the introduction of new AIS into a State, such as zebra and quagga mussels;
- Working on projects collaboratively with neighbor States to manage AIS issues on shared water bodies;
- Developing localized outreach efforts that address each State’s unique AIS educational needs;
- Developing and implementing programs to ensure the early detection of AIS, monitor existing AIS populations and establish procedures to allow for rapid response; and
- Increasing research on baseline biology, threshold survivability, innovative detection technologies, and alternative control technologies.

- Rapidly responding to incipient populations of AIS and preventing further spread, such as Asian carp in the Chicago Sanitary Shipping Canal.

In 2008 and 2009, the Service continued to implement activities to prevent the introduction, spread, and establishment of AIS. These activities included implementing HACCP plans in all Service Regions to identify potential points of species introduction and define actions that reduce the risk of spreading invasive species through specific pathways, conducting surveys for early detection of AIS in conjunction with routine field work, and completing regionally significant rapid response planning exercises to prepare for and build capacity regionally to respond to the next invader. The Service also led the implementation of “Stop Aquatic Hitchhikers!” and “Habitattitude™”—two social marketing campaigns designed to unify government and interested parties to speak with one voice and to empower target audiences to become part of the solution by promoting their prevention behaviors. In 2011, the Service, through the Strategic Habitat Conservation lens, will use the Fisheries Operations Needs System (FONS) to strategically prioritize work activities that prevent the introduction, spread, and establishment of aquatic invasive species. Activities that may be funded in 2011 include:

- Conducting prevention activities specifically related to AIS and climate change;
- Conducting AIS activities in Landscape Conservation Cooperatives as part of the Service’s Strategic Habitat Conservation efforts;
- Expanding the activities of the well-known 100th Meridian Initiative to further address the western mussel invasion (see below) as well as focusing on preventing the westward spread of other AIS;
- Decreasing the risk of new introductions of AIS through additional HACCP plans at Service field stations and by State and tribal partners;
- Continuing current and initiating new detection and monitoring surveys to identify new introductions or range expansions of AIS such as round gobies, zebra mussels, snakeheads, and Asian carp;
- Continuing to expand our rapid response capabilities through the development of rapid response plans and by conducting rapid response exercises to test the effectiveness of the process and coordination of all partners involved;
- Implementing on a National level the “Stop Aquatic Hitchhikers!™” and “Habitattitude™” conservation marketing campaigns, expanding the number of campaign partners, and taking the campaigns down to the community level to help embed the prevention behaviors into the social fabric of communities;
- Finalizing at least one rule through the Service’s implementation of the Lacey Act’s Injurious Wildlife provision by conducting biological evaluations, risk assessments, and rule making through the Administrative Procedures Act; and
- Expanding the focus of Fish and Wildlife Conservation Offices (FWCOs) to include AIS issues as they seek to attenuate the effects of climate by supporting stream corridor connectivity.

The recent arrival of quagga and then zebra mussels to the West illustrates the need for the AIS Program to grow. Now present in Arizona, California, Colorado, Nevada, Texas, and Utah, these invasive mussels bring their effects into a geographical area already challenged with water-related problems. The ANSTF recently tasked the Western Regional Panel (WRP)—which includes 19 western States, federal agencies, Provinces, tribes, academia, and many other stakeholders—with drafting an action plan to highlight the actions necessary to minimize the ecological and economic impacts of these invasive shellfish. As a result of this effort, in November 2009, the ANSTF conditionally approved the Quagga-Zebra Mussel Action Plan for Western U.S. Waters (QZAP). 2010 funding for QZAP targets high-priority actions such as establishment of inspection and decontamination stations and support of state plan activities that focus on prevention, containment, and control of these mussels. Actions identified in the QZAP, and initiated

in 2010, are expected to continue in 2011 primarily by the States, Service, and other members of the WRP, and through the 100th Meridian Initiative. These activities would include:

- Developing consistent and reliable inspection and decontamination protocols for equipment and boats;
- Implementing inspections and decontamination of watercraft and equipment;
- Developing a standardized model and strategy for risk assessment of water bodies;
- Developing best management practices for early detection and monitoring and expand early detection and monitoring programs to as many western jurisdictions as possible;
- Creating a consistent outreach message to use throughout the West; and
- Conducting research on best management practices for water managers to prevent and minimize larvae movement and settlement within water delivery systems and other water infrastructure.

The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, (as amended by NISA) specifies that the ANSTF, through the AIS Program implemented by the Fish and Wildlife Service, may develop cooperative efforts “to control established aquatic nuisance species to minimize the risk of harm to the environment and the public health and welfare.” There are currently seven approved national control plans for: Asian carp, brown tree snake, *Caulerpa*, mitten crab, European green crab, New Zealand mudsnail, and ruffe. Each plan includes an implementation section that describes prioritized tasks and their associated costs and staffing requirements. In 2011, the Service will work to continue collaborative and innovative efforts with States and other ANSTF members to implement priority prevention, control, and research actions identified in these plans to control and manage these invaders. One example of this is the Service’s efforts to lead the Asian Carp Working Group, which developed a national management and control plan for four carp species. That plan was approved by the ANSTF in November 2007. Examples of actions within the Asian carp management plan that could be implemented in 2011 include:

Containment of Asian carps

- Enhancing monitoring efforts for Asian carps immediately below the electrical barrier system in the Chicago Sanitary and Ship Canal, to protect the multi-billion dollar commercial and recreational fisheries in the Great Lakes;
- Enhancing monitoring efforts for Asian carps above that electrical barrier system;
- Helping lead the development of and later implement a rapid response plan designed to eradicate Asian carps if collected above the electrical barrier system; and
- Supporting testing of effective, efficient, and environmentally sound approaches to contain Asian carps in rivers, while allowing native, migratory fishes to pass.

Control of Asian carps

- Continuing to support development and testing of effective, efficient, and environmentally sound technologies to either control or eradicate Asian carps;
- Supporting Illinois Department of Natural Resources’ efforts if they implement the Asian Carp Reduction Pilot Program, which is authorized under Illinois HB872 and has passed both the Illinois House of Representatives and Senate (and is awaiting signature by the Governor); and
- Developing and validating mathematical models that predict where Asian carps will establish self-sustaining populations, and in what habitats aggregations of these species provide opportunities for agencies to conduct control programs.

Marine Mammals Program Overview

Marine mammals are a resource of great aesthetic, economic, cultural, and recreational significance. These prominent species occupy the upper trophic levels of the world's oceans and coastal waters, and provide valuable insight into the health and vitality of these global ecosystems.

The United States provides leadership in the protection and conservation of the marine environment and marine mammals through research and management programs that have been active for decades. One of the most important statutory authorities for conserving and managing marine mammals is the Marine Mammal Protection Act (MMPA). The MMPA assigns the Department of the Interior responsibility for the conservation and management of polar bears, walruses, sea and marine otters, three species of manatees, and dugongs. This responsibility has been delegated to the Service. Under the MMPA, marine mammal populations, and the health and stability of marine ecosystems upon which they depend, are required to be maintained at, or returned to, healthy levels. The Service's Marine Mammal Program acts to manage and conserve polar bears, Pacific walruses, northern sea otters in Alaska, northern sea otters in Washington State, southern sea otters in California, and West Indian manatees in Florida and Puerto Rico, as well as support recovery of the federally listed polar bear, southwest Alaska distinct population segment of the northern sea otter, southern sea otter, and the West Indian manatee in Florida and Puerto Rico.

The Service recognizes that meeting our mandate for the conservation of marine mammal species requires communication and cooperation with other federal agencies (including the National Marine Fisheries Service, the Marine Mammal Commission, and the U.S. Geological Survey), State governments, Alaska Native Organizations (ANOs), scientists from numerous institutions and organizations, industry groups, non-governmental organizations, and others. Through active collaboration and coordination, we are able to enhance the effectiveness of the implementation of the MMPA and achieve its goal of Optimum Sustainable Population for marine mammal stocks.

To carry out its responsibilities, the Service:

- Prepares, reviews, and revises species management plans and stock assessments;
- Conducts and supports a variety of biological investigations, scientific research, and studies with management applications;
- Assesses population health, status, and trends;
- Provides support for rescue and rehabilitation of stranded marine mammals;
- Develops and implements management plans and habitat conservation strategies;
- Promulgates and implements incidental take regulation and authorizations;
- Conducts harvest monitoring projects for Alaska species;
- Implements the Marking, Tagging, and Reporting Program for polar bears, walruses, and northern sea otters harvested by Alaska Natives;
- Implements the 1973 International Agreement on the Conservation of Polar Bears between the U.S., Canada, Russia, Norway, and Denmark (for Greenland); and,
- Develops and supports U.S. bi-lateral and multi-lateral efforts and agreements for the conservation and management of marine mammal species.

The Marine Mammal program is comprised of two elements: Stock Assessment/Conservation Management, and Cooperative Agreements.

Stock Assessment/Conservation Management

The majority of the Service's marine mammal funding is provided for stock assessment, conservation, and management activities. In 2010, funding was directed to support these activities for all 10 marine mammal stocks under the management jurisdiction of the Service. These funds are primarily used by the Service to monitor and assess population status and health of marine mammals. In Alaska, the program

also uses some of these funds to address monitoring and recording of harvest information, cooperative activities with Alaska Natives, and development of international agreements for marine mammal populations shared with Canada and Russia. A small balance of program funds is used for national coordination and guidance in the Washington Office. Much of the Service's priority work is accomplished through partnerships with other federal, State, Tribal, and private agencies. Additional conservation work on listed marine mammal stocks is pursued with Ecological Services funding, primarily through endangered species recovery efforts.

Cooperative Agreements

Section 119 of the MMPA authorizes the Service to enter into cooperative agreements with Alaska Native Organizations to conserve marine mammals and provide for co-management of subsistence use by Alaska Natives. The purpose of the agreements is to develop capability in the Alaska Native community to actively manage subsistence harvest, and collect information on subsistence harvest patterns and harvested species of marine mammals. Efforts pursued under this program element enhance communications with Alaska Native communities and allow the initiation of projects with the potential to gather information critical for developing long-term conservation strategies and to significantly increase our collective understanding of marine mammals. The Service works with ANOs to assess subsistence harvest, determine sustainability of harvests, and gather biological information from harvested animals.

2011 Program Performance

In 2011, the Marine Mammal Program will continue to monitor marine mammal populations under the management jurisdiction of the Service. We will seek collaborative opportunities with partners and stakeholders to conduct surveys and track status and trends of the marine mammal managed by the Service. The Service will maintain current stock assessment reports through reviews and updates required under the MMPA for all 10 marine mammal stocks. The Marine Mammal Program will further enhance its capability to address an increase in workload and management challenges associated with the effects of climate change and other actions. Workload increases include additional incidental take authorizations, population surveys, stock assessment reporting, stranding response, partnerships, and litigation support specific to the MMPA. In 2011, as described below, the Service plans to build upon 2009 accomplishments and those that are anticipated in 2010.

Stock Assessment/Conservation Management for Sea Otters, Polar Bears, and Walruses in Alaska: In Alaska, the Service will continue to monitor populations of northern sea otters, Pacific walruses, and polar bears. The 2011 funding will allow surveys and population assessments to continue for northern sea otters in Alaska. Survey efforts for polar bears will be increased on the North Slope of Alaska and Canada and in the south Beaufort Sea to determine distribution and abundance, document changing habitat use, and evaluate how sea ice reduction and other factors such as prey availability affect the status and trends of polar bear populations. These data will also fuel a new and robust population demographics and harvest model that will enable resource managers to better understand risks and consequences of various Alaska Native subsistence harvest options on polar bear populations. The Service will continue collaborative efforts with Russian colleagues to analyze the range-wide survey data collected on Pacific walrus and will also collaborate with USGS and private industry to track walrus movements in the Chukchi Sea. The Service will work with our partners to address the increased number of walrus haulouts that are forming in previously unused and unprotected coastal areas. The Service will also work to address urgent needs regarding increasing presence of polar bears on land, and the potential for human/bear interactions, due to sea ice retreat. With these efforts, the Service will be in a better position to deliver conservation results for all three species as climate change continues to unfold.

Managing Marine Mammal Incidental Take: The Service promulgated comprehensive regulations under the MMPA to authorize incidental taking of polar bear and Pacific walrus in the course of oil and gas industry (Industry) operations in the Beaufort (August 2006) and Chukchi (June 2006) Seas and

adjacent coasts of Alaska. The regulations ensure that the total anticipated taking will have a negligible impact on the species and will not have an immitigable adverse impact on the availability of such species for Alaska Native subsistence purposes. In 2011, at the requested funding level, the Service will continue to implement these regulations through the issuance of annual Letters of Authorization (LOAs) to numerous Industry operators. The LOAs describe permissible methods of take, measures to ensure the least practicable impact on the species and subsistence, and requirements for monitoring and reporting.

The Service will also augment its efforts working with industry to minimize potential impacts of expanding offshore and terrestrial oil and gas activities on polar bear and walrus populations by providing technical assistance and incidental take authorizations pursuant to the MMPA. In addition to meeting demands for environmental reviews and federal approvals for exploration and development, this support will extend to planning for conflict avoidance.

Polar Bear Bilateral Agreement: On October 16, 2000, U.S. and Russia signed a bilateral agreement for the Conservation and Management of the Alaska–Chukotka Polar Bear population. In 2007, Congress enacted legislation to implement this treaty intended to address concerns regarding illegal and unquantified harvest of bears in Russia as well as unrestricted harvest in Alaska. In 2011, the Service will continue efforts on the bilateral planning initiatives with Russia for the shared Chukchi Sea polar bear population. The 2011 funds will enable the Service to plan vital resource management efforts with Alaska Native partners, Government of the Russian Federation, and Chukotka (Russia) representatives as called for in bilateral agreement and to effectively participate on a joint committee to uphold and implement the United States obligations pursuant to this agreement. This effort will bolster scientific data, conservation planning, and collaborative adaptive management for polar bear.

Cooperative Agreements: In 2011, the Service will continue cooperative agreements with the Alaska Nanuq Commission, the Eskimo Walrus Commission, and a coalition of Native marine mammal commissions interested in sea otters, for monitoring and management of polar bears, Pacific walruses, and northern sea otters, respectively, through base funds. These cooperative agreements pertain to harvest monitoring, traditional knowledge surveys, and biological monitoring and sampling. Collaborative effort on these issues provides the Service with important information on the health and status of populations of marine mammals subject to Alaska Native subsistence harvest. Furthermore, the Service works with ANOs to develop and implement voluntary marine mammal harvest guidelines. Both the Service and ANOs recognize the importance of maintaining sustainable marine mammal populations to meet Alaska Native subsistence, cultural, and economic needs. Because the MMPA does not provide a mechanism for regulating subsistence harvest of marine mammals unless a stock becomes depleted, the Service and ANOs strive to ensure harvests are conducted in a biologically sound manner. The Service will continue working with its ANO partners and others to incorporate enforceable harvest management mechanisms in the reauthorization of the MMPA.

Status and Trends of Marine Mammal Populations for Sea Otters in California and Washington State: The Service will continue to support the management and conservation of sea otters in California and Washington. Service efforts for both populations involve preparation of stock assessment reports, periodic population surveys, recovery and disease monitoring of stranded animals, and monitoring of the populations' overall health, size, and interactions with human activities within the sea otters' ranges.

Stock Assessment/Conservation Management for Manatees in Florida and Puerto Rico: In 2011, the Service will continue to support management and conservation of manatees in Florida and Puerto Rico. Funding in this area complements efforts funded through Endangered Species accounts. The Service will work with partners to monitor the status and trends of these species and explore and implement conservation actions with partners, such as addressing potential loss of warm water areas and water craft collisions. The Service will enhance research efforts on the status and trends of the species, e.g., a threats

analysis and efforts to better define optimum sustainable population. This would enhance the Service's efforts to conserve manatees, both in Florida and in Puerto Rico, and expand upon the use of the management tools provided under the MMPA.

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
CSF 5.1 Percent of fish species of management concern that are managed to self-sustaining levels, in cooperation with affected States and others, as defined in approved management documents (GPRA)	40% (70 of 174)	42% (63 of 150)	29% (48 of 164)	15% (22 of 146)	30% (17 of 146)	8% (17 of 211)	8% (17 of 211)	8% (17 of 211)	0	8% (17 of 211)
CSF Total Actual/Projected Expenditures(\$000)	\$26,286	\$26,775	\$32,281	n/a	\$35,697	\$36,518	\$36,518	\$37,357	\$840	\$38,217
CSF Program Total Actual/Projected Expenditures(\$000)	\$18,788	\$21,573	\$23,195	n/a	\$25,202	\$25,782	\$25,782	\$26,375	\$593	\$26,982
Actual/Projected Cost Per Species (whole dollars)	\$375,515	\$425,000	\$672,514	n/a	\$2,099,797	\$2,148,092	\$2,148,092	\$2,197,498	\$49,406	\$2,248,041
5.1.2.6 % of populations of native aquatic non-T&E species that are self-sustaining in the wild, as prescribed in management plans - FWMA	16% (224 of 1,411)	25% (347 of 1,414)	28% (414 of 1,472)	26% (409 of 1,569)	27% (424 of 1,569)	25% (422 of 1,708)	25% (422 of 1,708)	25% (422 of 1,708)	0	25% (422 of 1,708)
5.1.2.7 # of populations of native aquatic non-T&E and non-candidate species that are self-sustaining in the wild, as prescribed in management plans - FWMA	224	347	414	409	424	422	422	422	0	422
5.1.2.8 Total # of native aquatic non-T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - FWMA	1,411	1,414	1,472	1,569	1,569	1,708	1,708	1,708	0	1,708
CSF 5.2 Percent of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known	31% (473 of 1,515)	34% (540 of 1,589)	40% (592 of 1,472)	37% (580 of 1,569)	34% (526 of 1,569)	33% (513 of 1,565)	33% (513 of 1,565)	33% (513 of 1,565)	0	33% (513 of 1,565)

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
CSF Total Actual/Projected Expenditures(\$000)	\$21,280	\$18,753	\$21,790	n/a	\$20,686	\$20,639	\$20,639	\$21,114	\$475	\$21,599
CSF Program Total Actual/Projected Expenditures(\$000)	\$12,161	\$11,020	\$11,415	n/a	\$10,388	\$10,627	\$10,627	\$10,871	\$244	\$11,121
Actual/Projected Cost Per Populations (whole dollars)	\$44,989	\$34,729	\$36,807	n/a	\$39,328	\$40,232	\$40,232	\$41,158	\$925	\$42,104
5.2.1.6 % of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - FWMA	31% (473 of 1,515)	34% (540 of 1,589)	39% (568 of 1,472)	35% (556 of 1,569)	32% (506 of 1,569)	29% (493 of 1,708)	29% (493 of 1,708)	29% (493 of 1,708)	0	29% (493 of 1,708)
5.2.1.7 # of populations of native aquatic non-T&E species managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - FWMA	473	540	568	556	506	493	493	493	0	493
5.2.1.8 Total # of native aquatic non-T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - FWMA	1,515	1,589	1,472	1,569	1,569	1,708	1,708	1,708	0	1,708
5.2.2.6 % of populations of native aquatic non T&E species with approved management plans - FWMA	163% (777 of 477)	58% (821 of 1,426)	55% (816 of 1,472)	51% (793 of 1,569)	52% (813 of 1,569)	48% (815 of 1,708)	48% (815 of 1,708)	48% (815 of 1,708)	0	48% (815 of 1,708)
5.2.2.7 # of native aquatic non T&E and non-candidate populations with approved management plans -FWMA	777	821	816	793	813	815	815	815	0	815
5.2.2.8 Total # of native aquatic non T&E and non-candidate populations for which the Fisheries Program has a statutory or programmatic responsibility - FWMA	477	1,426	1,472	1,569	1,569	1,708	1,708	1,708	0	1,708
CSF 5.3 Percent of tasks implemented, as prescribed in management plans	n/a	46% (1,588 of 3,429)	76% (2,379 of 3,130)	63% (2,471 of 3,894)	74% (2,866 of 3,894)	66% (2,581 of 3,906)	66% (2,581 of 3,906)	66% (2,586 of 3,906)	0% (5 of 3,906)	66% (2,586 of 3,906)
CSF Total Actual/Projected Expenditures(\$000)	n/a	\$61,976	\$64,703	n/a	\$62,947	\$57,991	\$57,991	\$59,440	\$1,449	\$0

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
CSF Program Total Actual/Projected Expenditures(\$000)	n/a	\$12,268	\$12,672	n/a	\$11,272	\$11,532	\$11,532	\$11,797	\$265	\$12,068
Actual/Projected Cost Per Tasks (whole dollars)	n/a	\$39,028	\$27,198	n/a	\$21,963	\$22,469	\$22,469	\$22,985	\$517	\$23,514
5.3.1.6 % of tasks implemented, as prescribed in management plans - FWMA	n/a	37% (879 of 2,400)	47% (1,481 of 3,130)	34% (1,329 of 3,894)	39% (1,527 of 3,894)	33% (1,344 of 4,085)	33% (1,344 of 4,085)	33% (1,347 of 4,085)	0% (3 of 4,085)	33% (1,347 of 4,085)
5.3.1.7 # of tasks implemented, as prescribed in management plans - FWMA	n/a	879	1,481	1,329	1,527	1,344	1,344	1,347	3	1,347
5.3.1.8 Total # of tasks, as prescribed in management plans - FWMA	n/a	2,400	3,130	3,894	3,894	4,085	4,085	4,085	0	4,085
CSF 7.21 Percent of populations of aquatic threatened and endangered species (T&E) that are self-sustaining in the wild	13% (55 of 435)	10% (61 of 595)	12% (70 of 585)	9% (60 of 639)	11% (70 of 639)	9% (66 of 701)	9% (66 of 701)	9% (66 of 701)	0	9% (66 of 701)
7.21.1.6 % of populations of aquatic threatened and endangered species (T&E) that are self-sustaining in the wild	n/a	n/a	8% (48 of 585)	6% (39 of 639)	8% (48 of 639)	6% (45 of 701)	6% (45 of 701)	6% (45 of 701)	0	6% (45 of 701)
7.21.1.7 # of aquatic T&E species populations that are self-sustaining, as prescribed in Recovery Plans - FWMA	n/a	n/a	48	39	48	45	45	45	0	45
7.21.1.8 # aquatic T&E species populations for which the Fisheries Program has a statutory responsibility - FWMA	n/a	n/a	585	639	639	701	701	701	0	701
7.21.2.6 % of populations of aquatic threatened and endangered species (T&E) with known biological status that are self-sustaining in the wild - FWMA	n/a	n/a	10% (48 of 484)	8% (41 of 520)	9% (48 of 520)	15% (47 of 309)	15% (47 of 309)	15% (47 of 309)	0	15% (47 of 309)
7.21.2.7 # of populations of aquatic threatened and endangered species (T&E) with known biological status that are self-sustaining in the wild, as prescribed in Recovery Plans - FWMA	n/a	n/a	48	41	48	47	47	47	0	47
7.21.2.8 # aquatic T&E species populations for which the Fisheries Program has a statutory or programmatic responsibility, and for which biological status is known - FWMA	n/a	n/a	484	520	520	309	309	309	0	309

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
7.21.3.6 % of aquatic T&E populations managed or influenced by the Fisheries Program for which current status (e.g., quantity and quality) and trend is known - FWMA	51% (300 of 592)	50% (296 of 589)	45% (265 of 585)	41% (260 of 639)	26% (165 of 639)	25% (175 of 701)	25% (175 of 701)	25% (175 of 701)	0	25% (175 of 701)
7.21.3.7 # of aquatic T&E populations for which current biological status and trend is known, due in whole or in part to Fisheries Program involvement - FWMA	300	296	265	260	165	175	175	175	0	175
7.21.3.8 # of aquatic T&E populations where the Fisheries Program has a statutory or programmatic responsibility - FWMA	592	589	585	639	639	701	701	701	0	701
7.21.4.6 % of aquatic T&E populations managed or influenced by the Fisheries Program with approved Recovery plans - FWMA	81% (477 of 592)	81% (480 of 589)	62% (365 of 585)	57% (365 of 639)	57% (365 of 639)	59%	59%	59% (416 of 701)	0	59% (416 of 701)
7.21.4.7 # of aquatic T&E populations with Recovery Plans, due in whole or in part to Fisheries Program involvement - FWMA	477	480	365	365	365	416	416	416	0	416
7.21.4.8 # of aquatic T&E populations where the Fisheries Program has a statutory or programmatic responsibility - FWMA	592	589	585	639	639	701	701	701	0	701
7.21.5.6 % of tasks implemented as prescribed in Recovery Plans - FWMA	0%	47% (368 of 782)	47% (496 of 1,050)	38% (489 of 1,286)	0% (505 of 1,286)	32% (443 of 1,404)	32% (443 of 1,404)	32% (443 of 1,404)	0	32% (443 of 1,404)
7.21.5.7 # of Recovery Plan tasks implemented by the Fisheries Program - FWMA	n/a	368	496	489	505	443	443	443	0	443
7.21.5.8 # of tasks for which the Fisheries Program has a statutory or programmatic responsibility and that are prescribed in Recovery Plans - FWMA	n/a	782	1,050	1,286	1,286	1,404	1,404	1,404	0	1,404
CSF 9.1 Percent of marine mammals achieving optimal sustainable populations (GPRA)	40% (4 of 10)	40% (4 of 10)	30% (3 of 10)	30% (3 of 10)	40% (4 of 10)	40% (4 of 10)	40% (4 of 10)	40% (4 of 10)	0	40% (4 of 10)
CSF Total Actual/Projected Expenditures(\$000)	\$5,082	\$3,050	\$3,548	n/a	\$5,230	\$5,351	\$5,351	\$5,474	\$123	\$5,600
CSF Program Total Actual/Projected Expenditures(\$000)	\$18	\$33	\$19	n/a	\$62	\$64	\$64	\$65	\$1	\$67
Actual/Projected Cost Per Populations (whole dollars)	\$1,270,419	\$762,491	\$1,182,520	n/a	\$1,307,593	\$1,337,667	\$1,337,667	\$1,368,434	\$30,766	\$1,399,908

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Sustain Biological Communities										
9.1.1 % of marine mammals achieving optimal sustainable populations (GPRA)	40% (4 of 10)	40% (4 of 10)	30% (3 of 10)	30% (3 of 10)	40% (4 of 10)	0	40% (4 of 10)			
9.1.1.1 # marine mammals with optimal sustainable population (GPRA)	4	4	3	3	4	4	4	4	0	4
9.1.1.2 total # marine mammal populations (GPRA)	10	10	10	10	10	10	10	10	0	10
9.1.2 # of marine mammal stocks with voluntary harvest guidelines	2	2	2	2	2	2	2	2	0	2
9.1.3 # of cooperative agreements with Alaska Natives for marine mammal management and monitoring	3	3	3	2	2	3	3	3	0	3
9.1.4 # of marine mammal stocks with incidental take regulations that require mitigating measures	2	2	3	3	3	3	3	3	0	3
9.1.5 # of current marine mammal stock assessments	4	4	3	10	10	10	10	10	0	10
9.1.6 % of populations managed or influenced by the Marine Mammal Program for which current population trend is known	60% (6 of 10)	50% (5 of 10)	70% (7 of 10)	0	70% (7 of 10)					
9.1.6.1 # of marine mammals with known population trends	6	5	7	7	7	7	7	7	0	7
9.1.6.2 total # of marine mammal populations	10	10	10	10	10	10	10	10	0	10
CSF 12.2 Number of aquatic invasive species populations controlled/managed - annual	n/a	14	11	11	11	11	11	11	0	11
CSF Total Actual/Projected Expenditures(\$000)	n/a	\$16,276	\$18,098	n/a	\$19,435	\$19,882	\$19,882	\$20,340	\$457	\$20,807
CSF Program Total Actual/Projected Expenditures(\$000)	n/a	\$11,865	\$3,161	n/a	\$1,642	\$1,679	\$1,679	\$1,718	\$39	\$1,758
Actual/Projected Cost Per Populations (whole dollars)	n/a	\$1,162,537	\$1,645,257	n/a	\$1,766,840	\$1,807,477	\$1,807,477	\$1,849,049	\$41,572	\$1,891,577
12.2.6 # of activities conducted to support the management/control of aquatic invasive species - FWMA	42	150	1,670	256	303	152	152	153	1	153
Improve Recreational Opportunities for America										
CSF 15.4 Percent of mitigation tasks implemented as prescribed in approved management plans	n/a	73% (30 of 41)	64% (49 of 77)	86% (64 of 74)	76% (56 of 74)	92% (70 of 76)	92% (70 of 76)	95% (72 of 76)	3% (2 of 76)	95% (72 of 76)
CSF Total Actual/Projected Expenditures(\$000)	n/a	\$23,147	\$23,184	n/a	\$24,029	\$30,727	\$30,727	\$32,332	\$1,605	\$0

Program Performance Overview Table - Management Assistance

Performance Goal	2006 Actual	2007 Actual	2008 Actual	2009 Plan	2009 Actual	2010 Plan	2011 Base Budget	2011 President's Budget Request	Program Change Accruing in 2011	Long-term Target 2012
Improve Recreational Opportunities for America										
CSF Program Total Actual/Projected Expenditures(\$000)	n/a	\$621	\$833	n/a	\$696	\$712	\$712	\$728	\$16	\$745
Actual/Projected Cost Per Tasks (whole dollars)	n/a	\$771,573	\$473,139	n/a	\$429,086	\$438,955	\$438,955	\$449,051	\$10,096	\$459,380
15.4.1.6 % of mitigation tasks implemented as prescribed in approved management plans - FWMA	n/a	n/a	14% (11 of 77)	30% (22 of 74)	15% (11 of 74)	34% (26 of 76)	34% (26 of 76)	34% (26 of 76)	0	34% (26 of 76)
15.4.1.7 # of mitigation tasks implemented as prescribed in approved management plans - FWMA	n/a	n/a	11	22	11	26	26	26	0	26
15.4.1.8 total # of mitigation tasks - FWMA	n/a	n/a	77	74	74	76	76	76	0	76
15.4.6.6 % of fish populations at levels sufficient to provide quality recreational fishing opportunities - FWMA	n/a	n/a	39% (469 of 1,189)	58% (644 of 1,108)	60% (660 of 1,108)	47% (685 of 1,471)	47% (685 of 1,471)	47% (685 of 1,471)	0	47% (685 of 1,471)
15.4.6.7 # of fish populations for which the Fisheries Program has a defined statutory or programmatic responsibility, that currently provide recreational fishing opportunities - FWMA	n/a	n/a	469	644	660	685	685	685	0	685
15.4.6.8 Total # fish populations, representing recreational fish species for which the Fisheries Program has a defined statutory or programmatic responsibility, that potentially provide recreational fishing opportunities - FWMA	n/a	n/a	1,189	1,108	1,108	1,471	1,471	1,471	0	1,471
CSF 18.1 Percent of planned tasks implemented for Tribal fish and wildlife conservation as prescribed by Tribal plans or agreements	79% (61 of 77)	79% (79 of 100)	87% (123 of 142)	43% (230 of 538)	65% (351 of 538)	46% (281 of 608)	46% (281 of 608)	46% (281 of 608)	0	46% (281 of 608)
CSF Total Actual/Projected Expenditures(\$000)	\$4,834	\$6,170	\$6,109	n/a	\$8,047	\$6,591	\$6,591	\$6,742	\$152	\$6,897
CSF Program Total Actual/Projected Expenditures(\$000)	\$901	\$884	\$1,036	n/a	\$923	\$944	\$944	\$965	\$22	\$988
Actual/Projected Cost Per tasks (whole dollars)	\$79,241	\$78,103	\$49,670	n/a	\$22,927	\$23,455	\$23,455	\$23,994	\$539	\$24,546
Advance Modernization of America										
CSF 52.1 Number of volunteer hours per year supporting FWS mission activities (GPRA)	2,164,648	2,328,109	2,229,555	2,038,775	2,214,648	2,040,259	2,040,259	1,501,633	(-538,626)	1,501,633

Note: 2011 Base Budget is equal to 2010 Plan (enacted level) plus fixed cost (absorbed).

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