

**Activity: National Wildlife Refuge System**

|  |                        | 2008<br>Actual           | 2009<br>Enacted          | 2010   |                             |                          | Change<br>from 2009<br>(+/-) |
|--|------------------------|--------------------------|--------------------------|--|-----------------------------|--------------------------|------------------------------|
|  |                        |                          |                          | Fixed<br>Costs &<br>Related<br>Changes*<br>(+/-) | Program<br>Changes<br>(+/-) | Budget<br>Request        |                              |
| Wildlife and Habitat<br>Management         | (\$000)<br>FTE         | 180,536<br>1,225         | 199,859<br>1,245         | +2,919<br>+56                                    | +12,000<br>+62              | 214,778<br>1,363         | +14,919<br>+118              |
| Refuge Visitor<br>Services                 | (\$000)<br>FTE         | 72,906<br>586            | 75,571<br>588            | +1,402<br>+5                                     | +2,000<br>0                 | 78,973<br>593            | +3,402<br>+5                 |
| Refuge Law<br>Enforcement                  | (\$000)<br>FTE         | 31,637<br>218            | 36,089<br>223            | +595<br>+12                                      | 0<br>0                      | 36,684<br>235            | +595<br>+12                  |
| Conservation<br>Planning                   | (\$000)<br>FTE         | 11,555<br>83             | 11,789<br>83             | +232<br>0  | 0<br>0                      | 12,021<br>83             | +232<br>0                    |
| <b>Subtotal<br/>Refuge Operations</b>      | <b>(\$000)<br/>FTE</b> | <b>296,634<br/>2,112</b> | <b>323,308<br/>2,139</b> | <b>+5,148<br/>+73</b>                            | <b>+14,000<br/>+62</b>      | <b>342,456<br/>2,274</b> | <b>+19,148<br/>+135</b>      |
| Refuge Maintenance                         | (\$000)<br>FTE         | 137,490<br>699           | 139,551<br>699           | +1,272<br>0                                      | 0<br>0                      | 140,823<br>699           | +1,272<br>0                  |
| <b>National Wildlife<br/>Refuge System</b> | <b>(\$000)<br/>FTE</b> | <b>434,124<br/>2,811</b> | <b>462,859<br/>2,838</b> | <b>+6,420<br/>+73</b>                            | <b>+14,000<br/>+62</b>      | <b>483,279<br/>2,973</b> | <b>+20,420<br/>+135</b>      |

\*The FTE increases listed in the FY2010 "Fixed Cost & Related Changes" column represent FTE positions that were funded in FY2009, but due to the late enactment of the 2009 Appropriations Act, will not be filled until FY10. The savings realized in FY09 by not having to pay salaries will be used to fund one-time expenses, such as human capital recruitment costs, supplies, and equipment.

**Summary of FY 2010 Program Changes for National Wildlife Refuge System**

| Request Component   | (\$000)        | FTE        |
|---|----------------|------------|
| • Wildlife and Habitat Management- Tackling Climate Impacts Initiative                  | +12,000        | +62        |
| • Creating a 21 <sup>st</sup> Century Youth Conservation Corps Initiative               | +2,000         | 0          |
| <b>Total, Program Changes</b>   | <b>+14,000</b> | <b>+62</b> |
| Internal Transfer - NCTC Literature Search Service<br>(Fixed Costs and Related Changes) | -141           | 0          |

**Justification of 2010 Program Changes**

The 2010 budget request for the National Wildlife Refuge System is \$483,279,000 and 2,973 FTEs, a net program change of +\$14,000,000 and +62 FTEs from the FY 2009 Enacted Budget.

**Wildlife and Habitat Management (+\$12,000,000/+62 FTE)** – The 2010 request includes an increase of \$12,000,000 and +62 FTEs for the Refuge System as part of the Secretary’s Tackling Climate Impacts Initiative. These funds will support adaptation for fish, wildlife, plants and habitats to changing environmental conditions driven by climate change across the broad range of terrestrial, coastal, marine, and Arctic ecosystems included in the National Wildlife Refuge System.

**Refuge Visitor Services (+\$2,000,000/+0 FTE)** – The 2010 request includes \$2,000,000 for the 21st Century Youth Corps Initiative, which will allow the National Wildlife Refuge System to build upon existing, proven programs to offer public service opportunities, support science-based education and outdoor learning laboratories, and engage young Americans in wildlife-dependent recreation such as hunting, fishing, wildlife observation, and photography. These programs will be managed through

mentoring and partnerships with Friends organizations, volunteers, educational institutions, and local conservation organizations.

### **Program Overview**

The Fish and Wildlife Service's National Wildlife Refuge System (Refuge System) is considered by many to be our Nation's foremost commitment to conserving wildlife and biological diversity. The Refuge System consists of a network of roughly 96 million acres of land and more than 78,000 square miles of waters and provides habitat for many species of fish and wildlife, sanctuary for hundreds of threatened and endangered species, and secure spawning areas for native fishes. The 550 refuges range from the relatively tiny, half-acre, Mille Lacs National Wildlife Refuge, encompassing two rocky islands in Minnesota's Lake District, to the vast Arctic National Wildlife Refuge spanning 19.6 million acres of boreal forest, tundra, and estuary in Alaska. The Refuge System also encompasses 1.4 million acres managed under easement, agreement or lease, including 37 wetland management districts and 49 wildlife coordination areas. Thus, the Refuge System uses a variety of tools and legal arrangements to protect our nation's fish, wildlife, plants and the habitats on which they depend.

Passage of the National Wildlife Refuge System Refuge Improvement Act of 1997 provided the Refuge System with a clear comprehensive mission, which is:

*"...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."*

- The Refuge System fulfills its mission through the implementation of programmatic activities in five broad areas – Wildlife and Habitat Management, Visitor Services, Refuge Law Enforcement, Conservation Planning, and Refuge Maintenance. Through these programs, the Refuge System monitors, restores, and protects wildlife, fish, plants and habitat, maintains facilities, supports wildlife-dependent recreation, and conducts other activities to achieve strategic goals.

The programs of the Refuge System support Service goals for resource conservation, protection, recreation, and service to communities. Through the Refuge System, the Service works with other Federal agencies and many other partners to conduct vital conservation projects to achieve these goals. For example, the Service is working with the U.S. Geological Survey to conduct ongoing biological monitoring of wildlife populations and habitat to improve management of refuge resources.

### Use of Cost and Performance

The Refuge Maintenance program helps achieve the Refuge System mission by supporting a complex infrastructure including habitat, visitor, administrative, and maintenance facilities and a fleet of vehicles and heavy equipment necessary to conduct wildlife and habitat management activities and to provide nearly 41.2 million visitors with wildlife dependent recreation opportunities. Together, this facility infrastructure and mobile equipment fleet is valued at approximately \$20 billion (as of December 2008). Using principles embodied in Executive Order 13327, Federal Real Property Asset Management and the Department's Asset Management Plan, the Refuge System is managing its portfolio of facility and mobile equipment assets in a manner that focuses on accomplishment of our legislative mission while improving efficiency and effectiveness. Completing condition assessments for all assets has improved management of the portfolio and assists in targeting of funds to meet highest priority maintenance and capital improvement needs.

The Refuge System considers costs and benefits when allocating maintenance funding for these assets. Through the Service Asset and Maintenance Management System (SAMMS), which operates on the DOI's MAXIMO platform, the Refuge System identifies assets that can most effectively be maintained by simultaneously applying an Asset Priority Index (API) and a Facility Condition Index (FCI). The API scores an asset according to how critical it is to achieving the Service mission while the FCI scores an asset according to repair versus replacement costs. These two scoring mechanisms along with factors such as critical health and safety components are applied whenever an asset is entered into SAMMS, enabling managers to see where they should apply funding to most efficiently manage the entire asset portfolio. This insight into asset management enables managers to make better cost/benefit decisions about related matters like lease space and new construction projects.

In FY 2006, the Refuge System completed its first round of condition assessments for all of its assets and 20 percent of assets continue to be assessed annually. The second full round of condition assessments began in 2007. Condition assessment data is updated continuously with the goal of reassessing 20 percent of our assets each year. The assessments are based on DOI guidance and apply specific valuation tools. Through these assessments, the Refuge System developed a full inventory of the assets, improving the quality of information regarding annual operations and maintenance costs. The assessments established baseline FCIs that validate costs for known deferred maintenance needs and documented new needs. The assessments also validate the current replacement value (CRV), which is necessary to determine the FCI. Both DM and CRV estimates are determined using standardized DOI policy guidance to ensure accuracy and uniformity. Regular assessments of the condition of assets and their contribution to the Refuge System mission assure that information used to allocate funding will contribute to effective asset management. By completing assessments for all facilities, the Refuge System improved its ability to provide maintenance, repair, and, where required, replacement costs with greater accuracy. The second round of condition assessments is also focusing on determining component renewal costs to provide information necessary to avoid deferring maintenance, and to improve our asset measurements necessary to accurately use unit costing for DM and CRV estimates.

Reliably functioning physical assets are direct enablers of the Service mission as described in strategic plan goals. Asset management decisions are based on input from field station managers, with assistance of Regional asset management experts and national program managers who are familiar with the resource management impacts that result from asset investment decisions. Annual O&M cost data for each asset has been collected since 2005 in the Federal Real Property Profile. This has helped us identify opportunities for energy efficiency, downsizing, replacement, and other cost saving measures. Asset managers are also identifying opportunities to employ energy conservation and renewable energy strategies within the Refuge System. Within the investments identified in the American Recovery and Reinvestment Act of 2009, \$25 million of \$205 million available to the Refuge System was devoted to stand alone energy conservation and renewable energy projects. In addition energy conservation and renewable energy opportunities are a regular part of planning and completing deferred maintenance projects.

Understanding how each individual asset contributes to the mission, along with an understanding of its history, current condition, and its full life cycle costs combine to help prioritize and optimize allocations. Within the context of portfolio management activities, this approach allows for development of strong and well informed budget requests and identifies efficiencies to be gained during the budget execution phase. The Refuge System allocates Refuge Maintenance funding to its regional offices, and ultimately to its field stations, based on a formula that considers each region's total asset CRV, size and five-year averages of each region's maintenance needs. Allocating funds in this manner allows regional and field managers to effectively plan maintenance activities.

In addition to achieving performance targets, proper support of the Refuge System's infrastructure is critical to mission accomplishments including wetland restoration, wildlife monitoring, and providing wildlife dependent recreation opportunities as well as meeting goals for sustainability and energy independence. The use of the condition assessments as well as the API and FCI has directed funding to the highest priority needs of the Refuge System.

**Activity: National Wildlife Refuge System**

**Subactivity: Wildlife and Habitat Management**

|   |                | 2008<br>Actual | 2009<br>Enacted | 2010   |                             |                   | Change<br>from 2009<br>(+/-) |
|---|----------------|----------------|-----------------|--|-----------------------------|-------------------|------------------------------|
|   |                |                |                 | Fixed<br>Costs &<br>Related<br>Changes<br>(+/-)* | Program<br>Changes<br>(+/-) | Budget<br>Request |                              |
| Wildlife and Habitat Management               | (\$000)        | 168,617        | 187,940         | +2,919   | +12,000                     | 202,859           | +14,919                      |
| Healthy Habitats & Populations                | (\$000)        | 4,833          | 4,833           | 0  | 0                           | 4,833             | 0                            |
| Challenge Cost Sharing Partnerships           | (\$000)        | 4,246          | 4,246           | 0  | 0                           | 4,246             | 0                            |
| Alaska Subsistence                            | (\$000)        | 2,840          | 2,840           | 0  | 0                           | 2,840             | 0                            |
| <b>Total, Wildlife and Habitat Management</b> | <b>(\$000)</b> | <b>180,536</b> | <b>199,859</b>  | <b>+2,919</b>                                    | <b>+12,000</b>              | <b>214,778</b>    | <b>+14,919</b>               |
|   | <b>FTE</b>     | <b>1,225</b>   | <b>1,245</b>    | <b>+56</b>                                       | <b>+62</b>                  | <b>1,363</b>      | <b>+118</b>                  |

\*The FTE increases listed in the FY2010 "Fixed Cost & Related Changes" column represent FTE positions that were funded in FY2009, but due to the late enactment of the 2009 Appropriations Act, will not be filled until FY10. The savings realized in FY09 by not having to pay salaries will be used to fund one-time expenses, such as human capital recruitment costs, supplies, and equipment.

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| Request Component   | (\$000)        | FTE        |
|---|----------------|------------|
| • Tackling Climate Impacts Initiative   | +12,000        | +62        |
| <b>Total, Program Changes</b>   | <b>+12,000</b> | <b>+62</b> |
| Internal Transfer - NCTC Literature Search Service<br>(Fixed Costs and Related Changes) | -141           | 0          |

**Justification of 2010 Program Changes**

The FY 2010 budget request for the Wildlife and Habitat Management (WHM) program is \$214,778,000 and 1,363 FTEs, a net program change of +\$12,000,000 and +118 FTEs from the FY 2009 Enacted Budget.

**Tackling Climate Impacts Initiative (+\$12,000,000/+62 FTEs)** – The FY 2010 budget requests \$12,000,000 to support the Service’ new Climate Change Planning and Adaptive Science program. The funding requested will be used to take the first steps toward targeted habitat restoration efforts to mitigate climate change impacts. In order to define appropriate on-the-ground management actions the Refuge System must first understand what impacts climate change is having and where. This requires a systematic approach to inventory and monitoring, as well as habitat and species assessments. This is a key Refuge System operational need. It will provide the data necessary for effective implementation of long-term climate change adaptation activities, and ultimately to successful adaptive management of fish, wildlife and habitat resources in the Refuge System. The Refuge System will initiate a landscape-scale, long-term ecological inventory and monitoring program, which is critically needed to assess climate-driven changes in populations of fish, wildlife, and plants and to understand the effects of a changing climate on ecological processes such as phenology and migration.

This \$12,000,000 will fund Service personnel to conduct inventories and assessments and monitor species, and to prepare and take initial management actions. It will be informed by monitoring protocols and frameworks established through Landscape Conservation Cooperatives (LCCs) and science entities such as the US Geological Survey. Similarly, the information gained through these

efforts will be fed up to the LCCs and to science agencies, to provide them with a more complete picture of what is happening at a local scale. The inventory and monitoring network's emphasis will be on species and habitats that are determined to be especially vulnerable and sensitive to climate change, as a result of assessments expected to be undertaken in FY 2009 and completed early in FY 2010.

Specific actions under this Tackling Climate Impacts Initiative will include actions with respect to:

- Establishing baselines and determining status and trends of fish, wildlife, and plants expected to be highly susceptible to climate change and to detect climate-driven change in ecological processes such as phenology and migration.
- Identifying and addressing climate-related vulnerabilities.
- Conducting vulnerability assessments, including modeling, to project impacts of sea level rise on habitats and fish, wildlife, and plant populations and infrastructure on coastal refuges.
- Protecting and restoring natural landscapes with native vegetation, which yields a two-pronged benefit of increasing habitat connectivity while also sequestering carbon
- Reducing stressors that interact with climate change; including invasive species, contaminants, and wildlife diseases.
- Restoring wetland, forest, grassland, coastal, and marine habitats to support landscape-scale adaptation and mitigation objectives by enhancing connectivity of habitats at landscape scales and simultaneously sequestering carbon.

| <b>Wildlife and Habitat Management – Tackling Climate Impacts Initiative</b>                       |                             |                                      |  |
|--|-----------------------------|--------------------------------------|--|
| <b>Performance Goal</b>  | <b>FY 2009 Plan</b>         | <b>FY 2010 - 2009<br/>(Variance)</b> | <b>2010<br/>President's<br/>Budget</b> |
| G-9.3.1 % of populations of indicator species with improved or stable numbers                      | 0.63 (452 of 723)           | 0.14                                 | 0.77 (559 of 723)                      |
| GP-2.4.1 # of NWRS wetland acres achieving desired condition                                       | 32,079,420                  | 115,447                              | 32,194,867                             |
| GP-2.5.1 # of NWRS upland acres achieving desired condition  | 52,264,381                  | 289,464                              | 52,553,845                             |
| 2.8.1 % NWRs/WMDs free of documented water quality problems w/ sig negative impacts nat resources  | 0.62 (365 of 586)           | 0.11                                 | 0.73 (429 of 586)                      |
| G-2.8.6 # Surface/Ground Water System Protected/Restored   | 809                         | 680                                  | 1,489                                  |
| CSF 11.1 Percent of baseline acres infested with invasive plant species that are controlled (GPRA) | 5% ( 107,657 of 2,312,632 ) | 10.0% ( 214.9% )                     | 15% ( 341,467 of 2,329,450 )           |

**Program Overview**

The Wildlife and Habitat Management (WHM) program element addresses the ecological condition of Refuge System lands, employing actions such as inventory and monitoring of plant and animal populations and habitats; restoration of wetland, forest, grassland and marine habitats; active management of habitats through manipulation of water levels, prescribed burning, haying and grazing; identification and control of the spread of invasive species; air quality monitoring; investigation and cleanup of contaminants; control of wildlife disease outbreaks; and assessment of water quality and quantity. These activities are integral for the Refuge System to conserve, manage and restore fish, wildlife, and plant resources and their habitats at local, landscape, and national scales. These activities are integral to supporting fish and wildlife adaptation to climate change by providing healthy and productive habitats, reducing non-climate environmental stressors, and providing scientific information needed to inform management decisions.

Much of the conservation work done on refuges is accomplished in partnership with adjacent landowners, local communities, non-government organizations, states, and other Federal agencies. Working with partners at landscape scales adds to the effective conservation achievements of the Refuge System, and allows individual refuges to more effectively respond to climate change and other environmental stressors. More than 250 organized groups of volunteers, known as Friends groups, help refuges meet public use and resource management goals. Volunteers annually contribute approximately 20 percent of the work hours performed on refuges.

Through efforts to conserve migratory birds, protect endangered species, restore and manage habitats and combat invasive species, the Refuge System supports the conservation, management, and restoration of fish, wildlife, and plant resources and their habitats.

WHM funding is also used to manage lands and waters with special designations for their unique values, including 75 wilderness areas, 12 wild and scenic rivers, and millions of acres of marine managed areas, including three newly designated marine national monuments in the Pacific: the Pacific Remote Islands, Rose Atoll, and Marianas Trench National Marine Monuments.

The diversity of habitats conserved and managed in the Fish and Wildlife Service's Refuge System includes not only coastal and marine habitats but also freshwater wetlands, forests, grasslands, deserts, tundra, and other types. By necessity habitat restoration and management activities are diverse and include restoring hydrology, re-establishing native plants, managing forests and grasslands, manipulating water levels, and controlling invasive plant and animal species. The Service routinely restores Refuge System habitat at an average cost of approximately \$430 per acre. Those restored acres are critical to provide resting, breeding and nutritional needs of a wide diversity of wildlife. Habitat restoration and protection on refuges also plays an important role in sequestering carbon. The Service cooperates with Federal, state and local entities to complete projects such as:

Climate Adaptation at Alligator River NWR - North Carolina's coast is considered particularly vulnerable to climate change because of its breadth and flatness. A 2008 study by the University of Maryland identified North Carolina's coast as one of the country's most vulnerable areas to climate change. Rising sea levels have already changed the area, which is valuable habitat for an array of wildlife, including black bears, red wolves, and many species of migratory songbirds. Peat soils are degrading, resulting in plants and trees dying as saltwater pushes further inland. If nothing is done researchers estimate one million acres of valuable marsh and forested wetland habitat could be lost within 100 years. The Alligator River National Wildlife Refuge is working with the Nature Conservancy of North Carolina (TNC) to respond to sea level rise, and they are piloting to make the fragile shoreline more resilient to encroaching seas. The project will include planting marsh grasses and restoring wetlands as a buffer to rising sea levels, plus building oyster reefs to absorb wave action. The refuge is also include installing water control structures in canals and ditches to restore the region's natural hydrology and further limit saltwater intrusion. To complement the projects Duke Energy is donating \$1,000,000 for climate change research and adaptation on the entire Albemarle Peninsula, where there are over 540,000 acres of conservation lands in public and private ownership.

Addressing Declines in American Birds - The Service continues to work to reverse the sharp declines in many species of migratory birds as highlighted in the 2009 State of the Birds report. In Hawaii, the Service has created a unique greenhouse program that has aided in the recovery of seven species of endangered plants. The restoration of these Hawaiian forest plants may prevent many Hawaiian bird species from becoming extinct. At the Hakalau Forest NWR, the Service is replanting endangered plants, fencing to exclude feral mammals, aggressively managing invasive plants. These activities are resulting in the population growth of forest birds such as the Hawai'i Creeper and 'Akiapola' au.

Refuge System management can also serve as an example of how to reverse the sharp declines in arid land birds. Outstanding examples of how to effectively restore native grasslands and the imperiled bird species that nest in them already exist at the Huron WMD, LaCreek NWR, and the Souris River Basin refuges. At these locations, the Service has developed successful restoration and enhancement techniques that involve removing invasive woody species or reseeding native grasses and forbs (herbaceous flowering plants).

Loggerhead Sea Turtle Nest Recovery Project - Cape Island, a barrier island in the Cape Romain NWR on the coast of South Carolina, hosts an average of 1,000 loggerhead sea turtle nests each year. This Island is the most significant sea turtle nesting ground north of Cape Canaveral, Florida. The Refuge began monitoring and managing the sea turtle nests in 1980 and now has 30 years invested in the effort. Every year Service staff, along with a cadre of volunteers, work to relocate more than 700 nests, containing approximately 90,000 individual eggs, away from erosion-prone beach areas. They also place cages around the relocated nests and others to prevent raccoons and other wildlife from preying on the eggs. The project has

documented a more than doubling of the nest success rate going from 25 to 78 percent. This equates to an additional 60,000 hatchlings produced every year thanks to the Refuge's relocation and predator management activities.

Nisqually Estuary Restoration - After an extensive planning process that spanned the period of 1996 to 2004 and involved dozens of partners and the public, the Nisqually NWR is actively restoring more than 760 acres of prime estuary habitat in Washington State's Puget Sound. The project will recreate nearly an entire estuary by returning diked agricultural land back to tidal influence and greatly enhanced productivity. This is the largest estuary restoration project in the 2,500 square-mile Puget Sound, and once completed it will reconnect a large portion of the historic Nisqually estuary with the Puget Sound proper. In addition, the project will restore and enhance 37 acres of riparian surge plain forest and 246 acres of freshwater wetlands. While this project is the top priority for recovering Federally threatened Chinook salmon in the Nisqually watershed, it will also provide important habitat for migratory birds and make the estuary more resilient to rising sea levels and other climate change impacts.

Whooping Crane Migration - Whooping cranes were on the verge of extinction in the 1940s, but today more than 500 whooping cranes exist, and several refuges are playing coordinated, key roles in their recovery. Aransas NWR in Texas has long been the southern destination for migrating whooping cranes, but there was a recognized need to establish other populations. Using ultralight aircraft to lead cranes on new migratory routes, the Whooping Crane Recovery Team has now established more than 70 cranes that winter in the states of Georgia, Alabama, South Carolina, Tennessee, and Florida. In January 2009, a new flock of whooping cranes followed an ultralight airplane to Florida's St. Marks NWR after traveling more than 1,200 miles from their summer grounds at Necedah NWR in Wisconsin. Half of the flock is expected to remain at St. Marks NWR for the winter, while the rest of the flock will continue south to Chassahowitzka NWR, near St. Petersburg. The Whooping Crane Recovery Team has established a target number for this reintroduction. Once there are at least 125 individuals, including 25 breeding pairs, migrating in this eastern corridor the population could be considered self sustaining.

Liberation of Rat Island - Rat Island is located in the western Aleutian Islands of Alaska and is part of the Alaska Maritime NWR. The island was heavily infested with Norway rats that arrived on the island before 1780 in a shipwreck. As an invasive species the rats had a devastating effect on ground-nesting birds which had evolved with no natural defenses against the rats. The Alaska Maritime NWR, partnering with The Nature Conservancy and Island Conservation, recently conducted a rat eradication project on the island. With the benefit of exceptionally good weather, the team applied 51 tons of pelletized bait over the 6,900-acre island in 11 days using two helicopters. The project was timed to minimize risk to non-target wildlife. The project must be monitored for at least 2 years with no rat sign before the eradication is declared a success. Control of invasive animals on islands is an excellent example of reducing a non-climate stressor which can support adaptation to climate change by marine birds and other native wildlife.

### **Refuge Wildlife and Habitat Management**

The WHM program element includes management of a broad array of fish, wildlife, plants, and habitat management and restoration on millions of acres of refuge lands every year. Through the Refuge System the Service conserves key habitats across broad landscapes spanning all four North American migratory bird flyways, providing protected areas across the entire range of many endangered species, and conserving expansive marine and Arctic ecosystems. Effective management

of the Refuge System will be critical to support adaptation by fish, wildlife, and plants to changing environmental conditions driven by a changing climate system and other environmental stressors.

Management activities include restoring wetlands, riparian areas, and uplands; maintaining and restoring estuarine and marine ecosystems, including coral reef ecosystems at 177 refuges; managing extensive wetland impoundments and other bodies of water; managing vegetative habitats through farming, prescribed burning, mowing, haying, grazing, forest harvest or selective forest thinning; and control and management of invasive plants and animals. Such activities are carried out with operational funding, particularly for managing extensive wetland impoundments requiring water management facilities such as dikes, levees, pumps, spillways, and water-level control structures. Water resources are vitally important to wildlife and their habitats, making water rights protection and adjudication an ever increasing endeavor as demand for water grows everywhere. Management actions for wildlife populations include reintroducing imperiled species, erecting nest structures, controlling predators, banding and radio-tracking wildlife, and inventorying and monitoring species and habitats.

Invasive species control activities are also critical and include preventing the introduction and spread of invasive species, and controlling or eradicating invasives where they are established. Integrated pest management techniques are used wherever feasible but mechanical removal and/or herbicides are sometimes needed for extensive infestations. Rapid response and eradication of emerging invasive species populations is attempted wherever possible to limit establishment, to limit range expansion, and to prevent the need for more costly ongoing treatments which are inevitably required once invasives become established. Climate change is projected to exacerbate infestations, as rapidly changing ecological conditions are expected to favor many invasive species, making early detection and rapid response even more critical.

The Service also uses WHM funding to review and manage lands and waters with special designations such as wilderness areas, wild and scenic rivers, proposed as marine protected areas, western hemisphere shorebird reserves, and world heritage sites. The Service manages wilderness areas to preserve their natural and undeveloped character, and manage wild and scenic rivers to protect their outstanding values. This element also funds employees who review projects funded or permitted by the Service per the National Historic Preservation Act (NHPA). The NHPA reviews typically include field surveys, archaeological investigations, and site evaluations. The Refuge System employs a majority of the Service's cultural resource specialists and provides compliance reviews for projects funded by other programs, such as grants issued by the Ecological Services program.

### **Healthy Habitats & Populations**

The Healthy Habitats & Populations program element directs funds to environmental contaminant investigations and cleanup on refuges; managing mineral resources during all phases of exploration, drilling, production, clean-up and restoration; and for addressing wildlife diseases found on refuges, such as chronic wasting disease. Reducing these non-climate stressors is a key component of supporting fish and wildlife adaptation across the Refuge System.

Managing the extraction of oil, natural gas, and other mineral resources continues to be a challenge for refuges, with more than one-fourth (155 refuges) of all refuges having mineral extraction activities within their boundaries. Past and current activities include exploration, drilling and production, pipelines and hard-rock mining, all of which have a direct impact on wildlife and their habitat. This element funds the management and oversight of mineral activities to ensure refuge resources are protected and that Best Management Practices are employed during resource extraction.

### Cost Sharing and Partnerships

The Refuge System's Challenge Cost-Share (CCS) Program provides a foundation for cooperative efforts; engages local communities, organizations and citizens in conservation; fosters innovation; and delivers valuable conservation outcomes. Challenge Cost Share grants are part of a broad scale effort to forge partnerships with private groups and citizens. Roughly \$4,300,000 was awarded in CCS grants in FY 2008 and similar amounts are estimated to be dispersed as grants through the CCS in FY 2009 and FY 2020. The grants go to states, tribes, local governments and private landowners through programs that preserve open space, restore habitat for wildlife, and protect endangered species. The goal of the grants is to empower Federal land managers, including those on our National wildlife refuges, to form partnerships within local communities to better care for the land and its wildlife.

The CCS funding supports projects with partners with a maximum Federal match of 50% (a 1:1 ratio of Federal to non-federal match). This program allows the Service to leverage resources in a way that focuses on national resource management priorities such as controlling invasive species, improving water resources, and restoring/enhancing critical habitat. The CCS program has become a role model for other bureaus due to its demonstrated ability to leverage the potential of external resources to achieve the greatest conservation benefit.

| CCS Component  | 2010 Request |
|--|--------------|
| CCS Administration Salaries (Included in Wildlife and Habitat Management General Operations) | 943          |
| Wildlife and Habitat Management CCS  | 4,246        |
| Visitor Services CCS   | 2,404        |
| <b>Total NWRS CCS</b>  | <b>7,593</b> |

### Alaska Subsistence

The Alaska Subsistence program manages subsistence uses by rural Alaskans on 237 million acres of Federal lands by coordinating the regulation and management of subsistence harvests among five Federal bureaus (the U.S. Fish and Wildlife Service, the National Park Service, the Bureau of Land Management, the Bureau of Indian Affairs, and the U.S. Forest Service), coordinating with the Alaska Department of Fish and Game, and providing technical and administrative support for 10 rural Regional Advisory Councils.

### 2010 Program Performance

If funded, the FY 2010 budget request will allow the Service to enhance efforts to conserve core resources benefiting terrestrial and aquatic habitats for migratory and resident wildlife. The funding will strengthen the Service's ability to sustain biological communities and provide quality environments with adequate water supplies in FY 2010 and beyond. The Service will conduct over 4,295 inventory and monitoring actions, with increased emphasis on monitoring species and habitats especially vulnerable to climate change. The Service will implement over 2,154 recovery actions for threatened and endangered species, complete 10 contaminant cleanup projects, and restore over 24,869 wetland and open water acres. These activities will not only benefit wildlife and habitat, but also support the continued provision of high quality wildlife-dependent recreation opportunities for approximately 41.2 million annual visitors. The Service will also restore more than 113,188 upland habitat acres, an increase of 19,718 acres from FY 2008 levels.

The Service will continue traditional habitat management activities such as water manipulation, haying, farming, grazing, timber harvest, and selective forest thinning. In FY 2010, the Refuge System will direct over \$8,000,000 to treat more than 341,467 acres infested with invasive plants. In addition, the Service will control 285 invasive animal populations. Invasive species management and control activities include continuing the operation of five Invasive Species Strike Teams in Arizona and New Mexico, south Florida, the Missouri-Yellowstone-Columbia Basin, North Dakota, as well as Hawaii and the Pacific Islands. Strike Teams focus on early detection and rapid response to newly emerging infestations.

**Program Performance Overview**

| Performance Goal   | 2005 Actual | 2006 Actual | 2007 Actual | 2008 Plan | 2008 Actual | 2009 Plan | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|--|-------------|-------------|-------------|-----------|-------------|-----------|-------------------------|-------------------------------|-----------------------|
| <b>Landscapes and Watersheds</b>   |             |             |             |           |             |           |                         |                               |                       |
| CSF 1.1 Number of FWS riparian (stream/shoreline) (including marine and coastal) miles restored to the condition specified in management plans - annual (GPRA)                             | 80          | 97          | 58          | 63        | 63          | 163       | 163                     | 0                             | 163                   |
| CSF Total Actual/Projected Expenditures(\$000)   | unk         | \$2,997     | \$3,747     | unk       | \$3,105     | \$4,710   | \$4,818                 | \$108                         | \$5,144               |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk         | \$2,026     | \$2,328     | unk       | \$1,872     | \$3,385   | \$3,463                 | \$78                          | \$3,708               |
| Actual/Projected Cost Per Mile (whole dollars)   | unk         | \$31,045    | \$64,599    | unk       | \$58,549    | \$28,816  | \$29,479                | \$663                         | \$31,560              |
| CSF 1.2 Number of FWS riparian (stream/shoreline) (including marine and coastal) miles managed or protected to maintain desired condition as specified in management plans - annual (GPRA) | 2,871       | 5,144       | 59,125      | 58,901    | 58,901      | 309,974   | 309,974                 | 0                             | 309,974               |
| CSF Total Actual/Projected Expenditures(\$000)   | unk         | \$4,265     | \$3,864     | unk       | \$4,883     | \$5,878   | \$6,013                 | \$135                         | \$6,437               |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk         | \$3,234     | \$2,533     | unk       | \$3,758     | \$4,464   | \$4,567                 | \$103                         | \$4,889               |
| Actual/Projected Cost Per Mile (whole dollars)   | unk         | \$829       | \$65        | unk       | \$75        | \$19      | \$19                    | \$0                           | \$21                  |
| CSF 2.1 Number of FWS wetland acres restored to the condition specified in management plans - annual (GPRA)  | 40,027      | 49,765      | 24,889      | 23,999    | 23,999      | 20,222    | 20,222                  | 0                             | 20,222                |
| CSF Total Actual/Projected Expenditures(\$000)   | unk         | \$10,287    | \$10,361    | unk       | \$11,672    | \$12,729  | \$13,022                | \$293                         | \$13,941              |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk         | \$8,875     | \$7,996     | unk       | \$9,780     | \$10,846  | \$11,095                | \$249                         | \$11,878              |

| Performance Goal  | 2005 Actual | 2006 Actual | 2007 Actual | 2008 Plan  | 2008 Actual | 2009 Plan  | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|---|-------------|-------------|-------------|------------|-------------|------------|-------------------------|-------------------------------|-----------------------|
| Actual/Projected Cost Per Acre (whole dollars)  | unk         | \$207       | \$416       | unk        | \$469       | \$629      | \$644                   | \$14                          | \$689                 |
| CSF 2.2 Number of FWS upland acres restored to the condition specified in management plans - annual (GPRA)                              | 174,421     | 198,663     | 56,177      | 75,281     | 75,281      | 113,188    | 113,188                 | 0                             | 113,188               |
| CSF Total Actual/Projected Expenditures(\$000)  | unk         | \$12,331    | \$12,447    | unk        | \$14,947    | \$18,118   | \$18,534                | \$417                         | \$19,842              |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk         | \$10,316    | \$9,293     | unk        | \$12,293    | \$15,276   | \$15,627                | \$351                         | \$16,730              |
| Actual/Projected Cost Per Acre (whole dollars)  | unk         | \$62        | \$222       | unk        | \$160       | \$160      | \$164                   | \$4                           | \$175                 |
| CSF 2.3 Number of FWS coastal and marine acres restored to the condition specified in management plans - annual (GPRA)                  | 214,428     | 5,903       | 7,159       | 11,499     | 11,499      | 12,773     | 12,773                  | 0                             | 12,773                |
| CSF Total Actual/Projected Expenditures(\$000)  | unk         | \$1,910     | \$1,748     | unk        | \$2,608     | \$2,083    | \$2,130                 | \$48                          | \$2,281               |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk         | \$1,629     | \$1,334     | unk        | \$2,253     | \$1,786    | \$1,827                 | \$41                          | \$1,956               |
| Actual/Projected Cost Per Acre (whole dollars)  | unk         | \$324       | \$244       | unk        | \$294       | \$163      | \$167                   | \$4                           | \$179                 |
| CSF 2.4 Number of FWS wetland acres managed or protected to maintain desired condition as specified in management plans - annual (GPRA) | 1,150,276   | 21,357,697  | 21,624,566  | 31,805,704 | 31,805,704  | 32,079,420 | 32,079,420              | 0                             | 32,079,420            |
| CSF Total Actual/Projected Expenditures(\$000)  | unk         | \$79,404    | \$88,702    | unk        | \$96,670    | \$109,750  | \$112,275               | \$2,524                       | \$120,198,479         |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk         | \$67,224    | \$67,253    | unk        | \$77,732    | \$89,103   | \$91,152                | \$2,049                       | \$97,585              |
| Actual/Projected Cost Per Acre (whole dollars)  | unk         | \$4         | \$4         | unk        | \$3         | \$3        | \$3                     | \$0                           | \$4                   |

| Performance Goal  | 2005 Actual       | 2006 Actual       | 2007 Actual      | 2008 Plan       | 2008 Actual     | 2009 Plan        | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|---|-------------------|-------------------|------------------|-----------------|-----------------|------------------|-------------------------|-------------------------------|-----------------------|
| CSF 2.5 Number of FWS upland acres managed or protected to maintain desired condition as specified in management plans - annual (GPRA)              | 2,502,152         | 52,791,511        | 52,689,376       | 51,750,305      | 51,750,305      | 52,264,381       | 52,264,381              | 0                             | 52,264,381            |
| CSF Total Actual/Projected Expenditures(\$000)  | unk               | \$58,652          | \$62,709         | unk             | \$63,241        | \$70,435         | \$72,055                | \$1,620                       | \$77,141              |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk               | \$49,382          | \$47,444         | unk             | \$50,938        | \$57,188         | \$58,503                | \$1,315                       | \$3                   |
| Actual/Projected Cost Per Acre (whole dollars)  | unk               | \$1               | \$1              | unk             | \$1             | \$1              | \$1                     | \$0                           | \$1                   |
| CSF 2.6 Number of FWS coastal and marine acres managed and protected to maintain desired condition as specified in management plans - annual (GPRA) | 174,586           | 2,359,228         | 2,366,041        | 2,388,449       | 2,388,449       | 2,913,747        | 2,913,747               | 0                             | 2,913,747             |
| CSF Total Actual/Projected Expenditures(\$000)  | unk               | \$22,586          | \$26,257         | unk             | \$29,173        | \$29,957         | \$30,646                | \$689                         | \$32,809              |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk               | \$19,669          | \$20,849         | unk             | \$24,661        | \$25,549         | \$26,137                | \$588                         | \$27,982              |
| Actual/Projected Cost Per Acre (whole dollars)  | unk               | \$10              | \$11             | unk             | \$12            | \$10             | \$11                    | \$0                           | \$11                  |
| CSF 2.9 Other Habitat Protection Activities - FWS Lands - metric tbd  | unk               | unk               | unk              | unk             | unk             | unk              | unk                     | unk                           | unk                   |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk               | \$44,942          | \$51,124         | unk             | \$43,638        | \$43,581         | \$44,583                | \$1,002                       | \$47,730              |
| 2.9.2 % of known contaminated sites on NWRS lands remediated during the FY (GPRA)   | 14% ( 19 of 140 ) | 20% ( 24 of 120 ) | 43% ( 15 of 35 ) | 32% ( 9 of 28 ) | 32% ( 9 of 28 ) | 42% ( 10 of 24 ) | 42% ( 10 of 24 )        | 0.0%                          | 42% ( 10 of 24 )      |

| Performance Goal   | 2005 Actual                  | 2006 Actual                  | 2007 Actual                  | 2008 Plan                    | 2008 Actual                  | 2009 Plan                   | 2010 President's Budget     | Change from 2009 Plan to 2010 | Long-term Target 2013       |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|
| <b>Sustaining Biological Communities</b>   |                              |                              |                              |                              |                              |                             |                             |                               |                             |
| CSF 6.1 Percent of all migratory bird species that are at healthy and sustainable levels (GPRA) (PART) | 61.4% ( 561 of 913 )         | 61.4% ( 561 of 913 )         | 61.5% ( 561 of 912 )         | 62.3% ( 568 of 912 )         | 62.3% ( 568 of 912 )         | 62.3% ( 568 of 912 )        | 62.5% ( 570 of 912 )        | 0.2% ( 0.4% )                 | 62.5% ( 570 of 912 )        |
| CSF Total Actual/Projected Expenditures(\$000)   | unk                          | \$28,207                     | \$28,553                     | unk                          | \$47,443                     | \$50,527                    | \$51,871                    | \$1,344                       | \$55,532                    |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk                          | \$8,651                      | \$8,212                      | unk                          | \$14,603                     | \$15,040                    | \$15,386                    | \$346                         | \$16,472                    |
| Actual/Projected Cost Per Species (whole dollars)  | unk                          | \$50,280                     | \$50,897                     | unk                          | \$83,526                     | \$88,956                    | \$91,002                    | \$2,046                       | \$97,424                    |
| CSF 9.3 Percent of populations of indicator species with improved or stable numbers (PART)             | unk                          | 83% ( 370 of 444 )           | 70% ( 431 of 615 )           | 61% ( 393 of 647 )           | 61% ( 393 of 647 )           | 63% ( 452 of 723 )          | 63% ( 452 of 723 )          | 0.0%                          | 63% ( 452 of 723 )          |
| CSF Total Actual/Projected Expenditures(\$000)   | unk                          | \$24,912                     | \$25,134                     | unk                          | \$25,408                     | \$25,818                    | \$26,412                    | \$594                         | \$28,276                    |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk                          | \$17,018                     | \$15,517                     | unk                          | \$17,464                     | \$18,117                    | \$18,534                    | \$417                         | \$19,842                    |
| Actual/Projected Cost Per Populations (whole dollars)  | unk                          | \$67,331                     | \$58,315                     | unk                          | \$45,453                     | \$57,120                    | \$58,433                    | \$1,314                       | \$62,558                    |
| CSF 11.1 Percent of baseline acres infested with invasive plant species that are controlled (GPRA)     | 12% ( 238,752 of 1,996,273 ) | 12% ( 284,363 of 2,356,740 ) | 14% ( 280,961 of 2,015,841 ) | 11% ( 260,028 of 2,329,450 ) | 11% ( 260,028 of 2,329,450 ) | 5% ( 107,657 of 2,312,632 ) | 5% ( 107,657 of 2,312,632 ) | 0.0%                          | 5% ( 107,657 of 2,312,632 ) |
| CSF Total Actual/Projected Expenditures(\$000)   | unk                          | \$24,802                     | \$29,097                     | unk                          | \$30,285                     | \$41,014                    | \$41,958                    | \$943                         | \$44,919                    |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk                          | \$18,710                     | \$19,867                     | unk                          | \$23,804                     | \$32,589                    | \$33,339                    | \$750                         | \$35,692                    |
| Actual/Projected Cost Per Acre (whole dollars)   | unk                          | \$87                         | \$104                        | unk                          | \$89                         | \$381                       | \$390                       | \$9                           | \$417                       |
| CSF 12.1 Percent of invasive animal populations that are controlled (GPRA)                             | 3% ( 155 of 4,964 )          | 6% ( 288 of 4,978 )          | 7% ( 302 of 4,493 )          | 7% ( 289 of 4,387 )          | 7% ( 289 of 4,387 )          | 7% ( 285 of 3,900 )         | 7% ( 285 of 3,900 )         | 0.0%                          | 7% ( 285 of 3,900 )         |

| Performance Goal   | 2005 Actual  | 2006 Actual         | 2007 Actual         | 2008 Plan           | 2008 Actual         | 2009 Plan           | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|-------------------------------|-----------------------|
| CSF Total Actual/Projected Expenditures(\$000)                                       | unk  | \$3,386             | \$3,167             | unk                 | \$3,490             | \$3,875             | \$3,964                 | \$89                          | \$4,244               |
| CSF Program Total Actual/Projected Expenditures(\$000)                               | unk  | \$1,842             | \$1,609             | unk                 | \$1,868             | \$2,288             | \$2,341                 | \$53                          | \$2,506               |
| Actual/Projected Cost Per Populations (whole dollars)                                | unk  | \$11,757            | \$10,486            | unk                 | \$12,332            | \$13,596            | \$13,909                | \$313                         | \$14,890              |
| 12.1.1 % of invasive animal populations that are controlled (GPRA)(PART)             | 3% ( 155 of 4,964 )  | 6% ( 288 of 4,978 ) | 7% ( 302 of 4,493 ) | 7% ( 289 of 4,387 ) | 7% ( 289 of 4,387 ) | 7% ( 285 of 3,900 ) | 7% ( 285 of 3,900 )     | 0.0%                          | 7% ( 285 of 3,900 )   |
| <b>Advance Modernization/Integration</b>   |  |                     |                     |                     |                     |                     |                         |                               |                       |
| CSF 52.1 Number of volunteer hours per year supporting FWS mission activities (GPRA) | 1,404,064  | 2,164,648           | 2,328,109           | 1,963,849           | 1,963,849           | 2,038,775           | 2,054,841               | 16,066 ( 0.8% )               | 2,161,587             |
| <b>Comment</b>   | The reason for the increase in volunteer hours at the CSF level is due to the increased contribution of the National Fish Hatcheries program in FY 2010. |                     |                     |                     |                     |                     |                         |                               |                       |
| 52.1.1 # of volunteer hours are annually contributed to NWRs (GPRA)                  | 1,284,009  | 1,277,523           | 1,307,291           | 1,216,110           | 1,216,110           | 1,283,140           | 1,283,140               | 0                             | 1,283,140             |
| 52.1.8 % of NWRs/WMDs have a Friends Groups  | 51% ( 249 of 487 )   | 79% ( 384 of 485 )  | 61% ( 287 of 469 )  | 48% ( 288 of 594 )  | 48% ( 288 of 594 )  | 70% ( 327 of 464 )  | 70% ( 327 of 464 )      | 0.0%                          | 70% ( 327 of 464 )    |
| 52.1.8.1 # of NWRs with Friends Groups   | 249  | 384                 | 287                 | 288                 | 288                 | 327                 | 327                     | 0                             | 327                   |
| 52.1.8.2 # of NWRs with wildlife dependent recreation                                | 487  | 485                 | 469                 | 594                 | 594                 | 464                 | 464                     | 0                             | 464                   |

**Activity: National Wildlife Refuge System**  
**Subactivity: Refuge Maintenance**

|                                       |                | 2008<br>Actual | 2009<br>Enacted | 2010  |                             |                   | Change<br>from 2009<br>(+/-) |
|---------------------------------------|----------------|----------------|-----------------|---|-----------------------------|-------------------|------------------------------|
|                                       |                |                |                 | Fixed<br>Costs &<br>Related<br>Changes<br>(+/-) | Program<br>Changes<br>(+/-) | Budget<br>Request |                              |
| Maintenance Support                   | (\$000)        | 51,790         | 53,851          | +1,272  | 0                           | 55,123            | +1,272                       |
| Annual Maintenance                    | (\$000)        | 25,581         | 25,581          | 0   | 0                           | 25,581            | 0                            |
| Equipment Replacement                 | (\$000)        | 5,981          | 5,981           | 0   | 0                           | 5,981             | 0                            |
| Heavy Equipment<br>Replacement        | (\$000)        | 5,783          | 5,783           | 0   | 0                           | 5,783             | 0                            |
| Deferred Maintenance                  | (\$000)        | 42,239         | 42,239          | 0   | 0                           | 42,239            | 0                            |
| Deferred Maintenance WO/RO<br>Support | (\$000)        | 6,116          | 6,116           | 0   | 0                           | 6,116             | 0                            |
| <b>Total, Refuge Maintenance</b>      | <b>(\$000)</b> | <b>137,490</b> | <b>139,551</b>  | <b>+1,272</b>                                   | <b>0</b>                    | <b>140,823</b>    | <b>+1,272</b>                |
|                                       | <i>FTE</i>     | <i>699</i>     | <i>699</i>      | <i>0</i>  | <i>0</i>                    | <i>699</i>        | <i>0</i>                     |

**Program Overview**

The Refuge Maintenance Program supports a complex infrastructure including habitat management, visitor, administrative, and maintenance facilities and a fleet of vehicles and heavy equipment necessary to conduct wildlife and habitat management activities and to provide our 41.2 million visitors with access to our lands. Together, this facility infrastructure and mobile equipment fleet is valued at approximately \$20 billion.

Adequately maintained facility and mobile equipment assets enables the Service to achieve its conservation mission. The Service uses a strategic, portfolio-based approach to manage these assets in a manner that informs decision-making and maximizes efficient and effective mission delivery with an emphasis on health and safety needs and long-term protection of our investments. To further this goal the Service strives to accurately:

- account for what the Service owns;
- determine the costs to operate and maintain each individual asset;
- track the condition of assets;
- plan and prioritize budgets to include disposal of any un-needed assets, and
- understand and plan life-cycle costs for both existing and proposed new assets.

Using principles embodied in Executive Order 13327, Federal Real Property Asset Management, the Department’s Capital Asset and Investment Control policy, and the Department’s guidance for deferred maintenance and capital improvement plans., the Refuge System is managing its portfolio of facility and mobile equipment assets in a manner that focuses on accomplishing our legislative mission using the most cost effective means possible. Developing a full inventory of what the Service owns, understanding annual Operations and Maintenance costs and regularly assessing the condition of assets and their contribution to our mission all contribute to effective management of our assets.

In addition to achieving performance targets for assets using the Facility Condition Index (FCI), proper support of Refuge System infrastructure is critical to achieving other performance targets for

the entire range of mission accomplishments including wetland restoration, wildlife monitoring, and providing recreational opportunities for the public. The Service uses the FCI, which is a measure of the ratio of the repair to the replacement costs for each asset, in combination with the Asset Priority Index (API), which indicates the relative importance of an asset to accomplishing our mission, to prioritize the use of maintenance funding. The Service continues to prioritize maintenance needs through improved data, which underlies development of five-year budget plans, including the FCI and the API, which are key measures for the program and the DOI Asset Management Plan. The FCI for conservation facilities, for example, is currently 0.07, which industry standards rate as acceptable condition. The Refuge System is using its Service Asset and Maintenance Management System (SAMMS) to document assessments, facility maintenance histories, and maintenance schedules to improve its overall FCI and to reduce out-year project costs.

Energy conservation, reduction of energy costs and application of renewable energy sources is a current priority associated with management of Refuge System facility assets. Over \$25,000,000 is being devoted to energy conservation and application of renewable energy measures in the American Recovery and Reinvestment Act of 2009. As deferred maintenance projects are completed, sustainable energy measures are incorporated to reduce annual Operations and Maintenance costs and to help reduce our dependence upon petroleum based energy. These efforts also reduce the carbon footprint of the Refuge System in furtherance of goals established in the Fish and Wildlife Service's Climate Change Strategic Plan.

Using the latest maintenance management systems and business practices, the Refuge System maintenance program contributes to achieving the goals in the Department of the Interior's Strategic Plan. The Service is using financial and performance data to improve its management of facility infrastructure and its mobile equipment fleet. The Service has developed an asset management plan to aid in management of our assets, based on workload drivers including General Services Administration useful life standards, geographic location, utilization patterns, interagency equipment sharing agreements, and generally accepted asset management principles.

Over 3,500 Refuge System employees, 34,000 volunteers, and 41.2 million annual visitors depend on the maintenance program to help achieve the Strategic Plan goals:

- 1) to manage the more than 150 million acres of land and water in the Refuge System;
- 2) to actively manipulate about 3.5 million acres of land each year to achieve habitat goals;
- 3) to enable attention to fish, wildlife, plants, and associated natural features on refuge lands;
- 4) to conserve cultural and historical resources found on refuge lands;
- 5) to provide access and programs for 41.2 million visitors annually; and
- 6) to support specialized wildland fire prevention and suppression activities.

In addition to managing an extensive facility infrastructure with over 41,000 assets valued at approximately \$20 billion, as of December 2008, the Service owns and maintains a variety of traditional and specialized mobile equipment items necessary to achieve our strategic goals.

Most of the over 4,000 vehicles used on refuges are four-wheel-drive trucks and utility vehicles used for fire fighting, wildlife and habitat surveys, transporting equipment and tools to remote sites, and law enforcement. Thousands of refuge volunteers also rely on these vehicles for transportation. Agricultural, earthmoving, and construction equipment are used to maintain wetland impoundments and roads; enhance areas for wildlife habitat; control invasive plants; and maintain and construct modest visitor facilities such as boardwalks, observation platforms, tour routes, and nature trails. Smaller, specialized equipment like all-terrain vehicles, aircraft, boats, small tractors and

snowmobiles are needed to access remote or rugged areas. They are also crucial on most refuges for law enforcement, public safety and wildlife surveys.

The Refuge Maintenance budget request now includes six program elements as described below.

### **Refuge Maintenance Support**

Refuge Maintenance Support includes salaries and associated funding for maintenance activities at refuge field stations. Maintenance staff support all refuge programs both indirectly, by maintaining functional facilities and reliable equipment needed to achieve our mission, and directly, by performing tasks such as mowing fields to enhance habitat, removing unwanted woody vegetation from wetland impoundments, and controlling invasive plants. Ongoing maintenance of visitor facilities including roads, trails and a variety of small facilities needed to provide visitors with appropriate access to refuge lands is vital to enabling a positive experience for 41.2 million annual visitors.

### **Annual Maintenance**

Annual maintenance encompasses all activities needed to keep our facility portfolio functioning for its intended purpose. It includes such items as utilities, custodial care, and snow removal for our offices, administrative, and visitor center buildings. It involves repairing system failures in the year they occur, and includes preventive and cyclic maintenance, purchasing maintenance supplies, and obtaining contracts. Preventive maintenance; including scheduled servicing, repairs, and parts replacement; results in fewer breakdowns and is required to achieve the expected life of facilities and equipment. Cyclic maintenance is preventive maintenance scheduled in periods greater than one year. Annual maintenance allows scheduled replacement of small equipment (defined as equipment of less than \$5,000 in value) and addresses problems cost-effectively, before they grow in expense. The Youth Conservation Corps, a temporary employment program for high school youth, is also included under this category since much of their work supports annual maintenance.

### **Equipment Replacement**

Equipment replacement includes repairing and replacing damaged and worn mobile equipment valued at \$5,000 to \$25,000 including passenger vehicles and pickup trucks. Because it is difficult to access remote and rough terrain, the Service needs a wide variety of vehicles and equipment to achieve our mission. Most of the 4,000 refuge vehicles are used for fire fighting, wildlife and habitat surveys, transporting equipment to remote work sites, and transporting volunteers. Equipment replacement also includes a rental and leasing program that provides a cost-effective alternative to purchasing equipment. In many cases, renting or leasing allows refuge staff to complete vital projects while limiting the size and cost of the equipment fleet.

### **Heavy Equipment Replacement**

Heavy equipment is any equipment item exceeding \$25,000 in replacement cost, excluding passenger vehicles and light trucks. The Refuge System owns over 3,700 heavy equipment assets with a combined replacement value of about \$353,000,000. The Refuge System depends on reliable heavy equipment since 3.5 million acres are managed through water control, tillage, mowing, invasive species control, or farming for habitat management, wildfire prevention, and other goals. Providing access to refuge lands and facilities by managing a variety of access roads is vital to all aspects of conservation land management. Visitor programs rely on heavy equipment for maintenance of roads, trails, boat ramps, and facilities, as well as enhancing habitat for wildlife in particular areas. This program element also includes a rental and leasing program to provide a cost-effective alternative to purchasing equipment, allowing refuge staff to complete vital projects while limiting the size and cost of the heavy equipment fleet.

**Deferred Maintenance Projects**

Deferred maintenance projects include repair, rehabilitation, disposal, and replacement of facilities. The Service maintains an inventory of deferred maintenance and capital improvement needs for all field stations consistent with Federal Accounting Standards. Available funds are directed to the highest priority projects based upon FCI (Facility Condition Index, a ratio of repair to replacement cost) and API (Asset Priority Index, an indicator of individual assets' contribution to the refuge system mission) scores in accordance with the DOI guidance on deferred maintenance and capital improvement plans. Ranking scores are currently derived from ten DOI-wide priority ranking factors. This deferred maintenance category funds both Service engineers and temporary contract staff working on deferred maintenance projects. Through the Refuge Roads program, refuge public use roads (identified as public roads, bridges, and parking) are authorized to receive \$29,000,000 per year in funding support from the Federal Highway Administration, which is in addition to the \$42,200,000 request for refuges deferred maintenance.

**Regional and Central Support**

The regional and central office support element includes management and coordination of the facility and equipment maintenance and improvement effort at the regional and national level. Primary activities include:

- Management and technical support for implementing the Service Asset and Maintenance Management System (SAMMS) through refining software, managing databases and servers, providing support via a help desk, and training personnel to use the software.
- Completing condition assessments of facilities at field stations to ensure that real property data is accurate and complete every five years. This program supports decision-making for facility management, and provides technical support and short-term assistance on deferred maintenance projects.
- Developing and implementing 5-year maintenance plans, including coordinating (and reporting on) project completions.
- Planning and implementing major maintenance and capital improvement efforts to include development of budget plans, monitoring annual O&M costs, executing completion of deferred maintenance and related costs, coordinating energy conservation initiatives, prioritizing needs across multiple field locations, responding to major health and safety issues, and identification and disposal of assets that are not mission dependent.
- Managing a heavy equipment program including operator safety training, budget planning, consolidated purchasing of replacement equipment, and coordination of equipment rental.

**2010 Program Performance**

The 2010 budget request will support maintenance staffing for field stations as well as provide annual preventive maintenance, including funds for supplies, materials, and contracts. These funds will allow the Service to repair facilities and equipment and perform cyclical maintenance on schedule. The budget will also support replacement of mobile equipment assets and allow initiation of approximately 280 deferred maintenance projects which will improve the condition of Service assets as measured by the FCI. These funds will allow the Service to fund projects to repair facilities and equipment within the year in which deficiencies occur and perform cyclical maintenance on schedule, ensuring that cyclic projects do not become deferred maintenance.

The Service will use the assessments of its facilities conducted under its ongoing condition assessment program to focus maintenance activities on highest priority needs. By completing the assessment of all facilities every five years, the Service will improve its ability to provide maintenance, repair, and, where required, replacement costs with greater accuracy. Under this subactivity, the Service will also continue use of SAMMS to reduce these costs through improved maintenance management.

The Service will also continue to use maintenance funding to support refuge operations. The facilities and equipment utilized on refuges contributes to wildlife and habitat management goals to ensure that the Refuge System maintains at least 89% of its lands in desired conditions. Maintenance funding will also support visitor services functions by ensuring the safety of observation decks, trails, hunting blinds, and fishing piers. These facilities will help provide more than 41.2 million visitors with high quality, wildlife-dependent recreation opportunities.

**Program Performance Overview**

| Performance Goal   | 2005 Actual                            | 2006 Actual                            | 2007 Actual                            | 2008 Plan                              | 2008 Actual                            | 2009 Plan                              | 2010 President's Budget                | Change from 2009 Plan to 2010 | Long-term Target 2013                  |
|--|--|--|--|--|--|--|--|-------------------------------|--|
| <b>Landscapes and Watersheds</b>   |  |  |  |  |  |  |  |                               |  |
| CSF 2.11 Conservation and Biological Research Facilities Improvement: Overall condition of NWRS 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) | 0.060 ( 264,205,661 of 4,369,650,675 ) | 0.051 ( 245,325,994 of 4,836,456,971 ) | 0.067 ( 422,736,509 of 6,337,408,107 ) | 0.068 ( 448,100,700 of 6,590,882,843 ) | 0.068 ( 448,100,700 of 6,590,882,843 ) | 0.071 ( 377,358,020 of 5,294,933,472 ) | 0.071 ( 377,358,020 of 5,294,933,472 ) | 0.000 ( 0.0% )                | 0.071 ( 377,358,020 of 5,300,000,000 ) |
| 2.11.1 The condition of NWRS conservation and biological research facilities, as measured by the DOI FCI, is x. (GPRA)(PART)   | 0.060 ( 264,205,661 of 4,369,650,675 ) | 0.051 ( 245,325,994 of 4,836,456,971 ) | 0.067 ( 422,736,509 of 6,337,408,107 ) | 0.068 ( 448,100,700 of 6,590,882,843 ) | 0.068 ( 448,100,700 of 6,590,882,843 ) | 0.071 ( 377,358,020 of 5,294,933,472 ) | 0.071 ( 377,358,020 of 5,294,933,472 ) | 0.000 ( 0.0% )                | 0.071 ( 377,358,020 of 5,300,000,000 ) |
| <b>Protect Cultural and Natural Heritage Resources</b>   |  |  |  |  |  |  |  |                               |  |
| CSF 13.1 Percent of archaeological sites and historic structures on FWS inventory in good condition  | 14% ( 2,267 of 16,261 )                | 19% ( 2,795 of 14,347 )                | 12% ( 2,858 of 24,098 )                | 13% ( 2,708 of 20,743 )                | 13% ( 2,708 of 20,743 )                | 13% ( 2,912 of 21,608 )                | 13% ( 2,912 of 21,608 )                | 0.0%                          | 13% ( 2,912 of 21,608 )                |
| CSF Total Actual/Projected Expenditures(\$000)   | unk                                    | \$3,131                                | \$3,977                                | unk                                    | \$4,134                                | \$3,806                                | \$3,894                                | \$88                          | \$4,168                                |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk                                    | \$2,123                                | \$2,263                                | unk                                    | \$2,928                                | \$2,675                                | \$2,737                                | \$62                          | \$2,930                                |
| Actual/Projected Cost Per Unit (whole dollars)   | unk                                    | \$1,120                                | \$1,392                                | unk                                    | \$1,430                                | \$1,307                                | \$1,337                                | \$30                          | \$1,431                                |
| 13.1.4 % of NWRS historic structures in FWS inventory that are in good condition (GPRA)  | 14% ( 2,250 of 16,241 )                | 19% ( 2,795 of 14,347 )                | 1% ( 86 of 11,583 )                    | 6% ( 130 of 2,181 )                    | 6% ( 130 of 2,181 )                    | 4% ( 98 of 2,723 )                     | 4% ( 98 of 2,723 )                     | 0.0%                          | 4% ( 98 of 2,723 )                     |

| Performance Goal  | 2005 Actual        | 2006 Actual                         | 2007 Actual                         | 2008 Plan                           | 2008 Actual                         | 2009 Plan                           | 2010 President's Budget             | Change from 2009 Plan to 2010 | Long-term Target 2013               |
|---|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------|-------------------------------------|
| 13.1.6 NWRs Cultural and Natural Heritage-related Facilities Improvement: Overall condition of NWRs cultural and natural heritage facilities (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) (PART) | unk                | 0.108 ( 13,947,344 of 129,709,631 ) | 0.114 ( 15,513,151 of 135,826,669 ) | 0.116 ( 16,443,940 of 141,258,209 ) | 0.116 ( 16,443,940 of 141,258,209 ) | 0.125 ( 13,685,243 of 109,468,431 ) | 0.125 ( 13,685,243 of 109,468,431 ) | 0.000 ( 0.0% )                | 0.125 ( 13,658,243 of 109,468,431 ) |
| <b>Improve Recreation Opportunities for America</b>   |                    |                                     |                                     |                                     |                                     |                                     |                                     |                               |                                     |
| CSF 15.2 Percent of NWRs/WMDs open to six priority NWRs recreation activities   | 52% ( 3 of 6 )     | 83% ( 5 of 6 )                      | 83% ( 5 of 6 )                      | 85% ( 5 of 6 )                      | 0.0%                          | 85% ( 5 of 6 )                      |
| CSF Total Actual/Projected Expenditures(\$000)  | unk                | \$55,779                            | \$64,510                            | unk                                 | \$67,614                            | \$72,219                            | \$73,880                            | \$1,661                       | \$79,187                            |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk                | \$43,484                            | \$43,316                            | unk                                 | \$46,765                            | \$51,236                            | \$52,415                            | \$1,178                       | \$56,114                            |
| Actual/Projected Cost Per NWRs/WMDs (whole dollars)   | unk                | \$11,170,377                        | \$12,940,514                        | unk                                 | \$13,253,464                        | \$14,172,667                        | \$14,498,639                        | \$325,971                     | \$15,521,905                        |
| 15.2.26 % of priority recreation facilities that meet applicable accessibility standards (GPRA)   | 55% ( 268 of 487 ) | 63% ( 293 of 463 )                  | 67% ( 313 of 470 )                  | 67% ( 309 of 464 )                  | 67% ( 309 of 464 )                  | 75% ( 346 of 464 )                  | 75% ( 346 of 464 )                  | 0.0%                          | 75% ( 346 of 464 )                  |
| <b>Advance Modernization/Integration</b>  |                    |                                     |                                     |                                     |                                     |                                     |                                     |                               |                                     |

| Performance Goal  | 2005 Actual                               | 2006 Actual                               | 2007 Actual                               | 2008 Plan                                 | 2008 Actual                               | 2009 Plan                                 | 2010 President's Budget                   | Change from 2009 Plan to 2010 | Long-term Target 2013                     |
|---|---|---|---|---|---|---|---|-------------------------------|---|
| CSF 54.1 Service-wide Comprehensive Facilities Improvement: Overall condition of 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) | 0.203 ( 3,019,750,168 of 14,902,033,280 ) | 0.085 ( 1,537,247,434 of 18,001,608,137 ) | 0.127 ( 2,680,244,758 of 21,049,079,363 ) | 0.130 ( 2,821,825,018 of 21,627,575,171 ) | 0.130 ( 2,821,825,018 of 21,627,575,171 ) | 0.119 ( 2,845,713,995 of 23,813,857,472 ) | 0.119 ( 2,834,568,973 of 23,855,346,740 ) | 0                             | 0.119 ( 2,834,568,973 of 23,855,346,740 ) |
| 54.1.9 Percent of assets targeted for disposal that were disposed (GPRA)  | unk                                       | unk                                       | unk                                       | 100% ( 17 of 17 )                         | 100% ( 17 of 17 )                         | 117% ( 62 of 53 )                         | 117% ( 62 of 53 )                         | 0.0%                          | 117% ( 62 of 53 )                         |

**Activity: National Wildlife Refuge System**  
**Subactivity: Visitor Services**

|  |                | 2008<br>Actual | 2009<br>Enacted | 2010   |                             |                   | Change<br>from 2009<br>(+/-) |
|--|----------------|----------------|-----------------|--|-----------------------------|-------------------|------------------------------|
|  |                |                |                 | Fixed<br>Costs &<br>Related<br>Changes<br>(+/-)* | Program<br>Changes<br>(+/-) | Budget<br>Request |                              |
| Refuge Visitor Services                                      | (\$000)        | 69,794         | 71,459          | +1,402   | 0                           | 72,861            | +1,402                       |
| Creating a 21 <sup>st</sup> Century Youth Conservation Corps | (\$000)        | 0              | 0               | 0  | +2,000                      | 2,000             | +2,000                       |
| Visitor Facility Enhancements                                | (\$000)        | 0              | 0               | 0  | 0                           | 0                 | 0                            |
| Volunteers Partnerships                                      | (\$000)        | 1,708          | 1,708           | 0  | 0                           | 1,708             | 0                            |
| Challenge Cost Sharing Partnerships                          | (\$000)        | 1,404          | 2,404           | 0  | 0                           | 2,404             | 0                            |
| <b>Total, Refuge Visitor Services</b>                        | <b>(\$000)</b> | <b>72,906</b>  | <b>75,571</b>   | <b>+1,402</b>                                    | <b>+2,000</b>               | <b>78,973</b>     | <b>+3,402</b>                |
|  | <b>FTE</b>     | <b>586</b>     | <b>588</b>      | <b>+5</b>  | <b>0</b>                    | <b>593</b>        | <b>+5</b>                    |
| Other Major Resources  | (\$000)        | 4,660          | 4,750           | 0  | +50                         | 4,800             | +50                          |
| Recreation Fee Program                                       | FTE            | 29             | 29              | 0  | 0                           | 29                | 0                            |

\*The FTE increases listed in the FY2010 "Fixed Cost & Related Changes" column represent FTE positions that were funded in FY2009, but due to the late enactment of the 2009 Appropriations Act, will not be filled until FY10. The savings realized in FY09 by not having to pay salaries will be used to fund one-time expenses, such as human capital recruitment costs, supplies, and equipment.

**Summary of FY 2010 Program Changes for National Wildlife Refuge System**

| Request Component  | (\$000)       | FTE      |
|--|---------------|----------|
| • Creating a 21 <sup>st</sup> Century Youth Conservation Corps | +2,000        | 0        |
| <b>Total, Program Changes</b>                                  | <b>+2,000</b> | <b>0</b> |

**Justification of 2010 Program Changes**

The FY 2010 budget request for the Refuge System Visitor Services program is \$79,973,000 and 593 FTEs, a program change of +\$2,000,000 and +5 FTEs from the FY 2009 Enacted Budget.

**Creating a 21<sup>st</sup> Century Youth Conservation Corps (+\$2,000,000/+0 FTE)** - Under this initiative, the Refuge System will build upon existing proven programs with new and creative approaches to offer public service opportunities, support science-based education and outdoor learning laboratories, and engage young Americans in wildlife-dependent recreation such as hunting, fishing, wildlife observation and photography. Hundreds of national wildlife refuges offer employment, education and recreation opportunities that connect youth with the outdoors. These connections foster understanding and appreciation of the need to conserve America’s natural resources. These youth programs also provide opportunities to educate youth about career opportunities and promote public service as part of a life-long commitment to natural resource conservation. These programs are managed through mentoring and partnerships with Friends organizations, volunteers, educational institutions, and local conservation organizations.

Refuges offer multiple entry points to connect children and youth and develop interest in a career in natural resource management. Specific programs benefiting from this funding include:

- **Environmental Education** which involves nearly 800,000 students and teachers, providing outdoor laboratories that adhere to curriculum standards.
- **Wildlife-Dependent Recreation** programs, such as fishing, wildlife observation, photography, and hunting, offer outstanding opportunities for youth to enjoy the natural world and build stronger relationships with their families, peers, and communities.
- **Youth Conservation Corps** which provides opportunities for young adults from varied backgrounds to work together on conservation projects such as maintenance and construction, habitat management, and visitor services. Enrollees learn about potential career opportunities and are offered guidance and training.
- **Volunteer and Community Service Programs**, which involve tens of thousands of Americans each year on refuges. Our volunteers work with school and youth groups and support organizations, such as the Scouts. Volunteers often serve as important role models and mentors for our Nation's youth.
- **Student Temporary Employment Program (STEP)**, which is designed to introduce talented students to the advantages and challenges of working for the Federal Government, combining academic study with on-the-job work experience on a refuge.
- **Student Conservation Association (SCA)**, which works with refuges to offer conservation internships and summer trail crew opportunities. The SCA focuses on developing conservation and community leaders while accomplishing important work supporting our mission.

### **Program Overview**

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The Refuge System Improvement Act of 1997 (Improvement Act) clarified that providing wildlife-dependent recreation is a prominent and important goal for the Refuge System. The Improvement Act recognizes the importance of a close connection between wildlife resources, the American character, and the need to conserve wildlife for future generations of Americans. The Refuge System embraces the Act and weaves its mandates into our daily work to provide greater access to Refuge System lands, when appropriate and compatible.

The Refuge System's priority public uses, the so-called "Big 6", are hunting, fishing, wildlife photography, wildlife observation, environmental education, and interpretation. The Refuge System Visitor Services program also includes recreation fees, cultural resource protection and interpretation, an accessibility program, volunteers and Friends programs, special use permits, concessions management and a host of other activities designed to welcome and orient visitors to the Refuge System.

The Visitor Services program creates quality experiences for the American public through access to knowledgeable staff as well as interpretive signs and brochures, while supplying safe and accessible facilities. The program also manages recreation fees in a manner that provides the government with a fair return on investments and visitors with exceptional value for fees paid. Local communities that have the ability to enjoy quality wildlife-dependent recreational experiences on refuges often carry those experiences to the next level, by making a personal commitment to and involvement in meeting

the Refuge System's mission. Of the more than 41.2 million annual Refuge System visitors in FY 2008, more than 2 million came to hunt, 7 million to fish, and 26 million to observe wildlife from trails, observation towers, decks, and platforms. In addition, 5 million came to photograph wildlife, while almost one million participated in on-site and off-site environmental education activities. Moreover, more than 28 million visitors were involved in interpretive programs, which included 15 million who took advantage of our visitor centers and exhibits.

The focus of Refuge System Visitor Services is to welcome and orient Refuge System visitors, support Friends and volunteer initiatives, and conserve cultural and archaeological resources. Under this budget element, the Refuge System ensures that wildlife-dependent recreational opportunities are provided, where compatible with refuge purposes.

Visitor Services program elements include:

- **Refuge Visitor Services** - This category includes the salary and base funding that supports recreational activities, with priority given to wildlife-dependent recreation as required by the Improvement Act. The Refuge System provides the Big-Six types of wildlife-dependent recreation to the extent that they are found to be compatible with the purposes of a particular refuge. Non-wildlife dependent recreation (e.x., swimming, horseback riding, etc.) is considered to be a lower priority and must be determined to be both appropriate and compatible with the Refuge System mission and individual refuge purposes before being allowed on a refuge. Interpretive activities include interpretive programs, tours, staffed and un-staffed exhibits and workshops to learn about bird watching and natural resource management programs. Environmental education involves structured classroom or outdoor activities that help provide awareness and direct connections with wildlife and natural resource issues. Teacher workshops, which are particularly effective at reaching local school districts, provide a service that teachers can use in developing course materials and instruction for their students. The Visitor Services Program also funds staff that review projects funded or permitted by the Service for compliance with the National Historic Preservation Act. These regulatory reviews may include field surveys, archaeological investigations, site evaluations and mitigation. The Refuge System employs a majority of the Service's cultural resource specialists and provides compliance reviews for projects funded by other programs, such as permits and grants issued by the Ecological Services program.
- **Visitor Facility Enhancements** - This program element includes the development and rehabilitation of small outdoor facilities that support quality visitor programs on refuges. Parking areas at trailheads, wildlife observation platforms, kiosks, fishing piers, interpretive signs, trails, and boardwalks are all examples of such enhancements.
- **Friends and Volunteers** - This program element encompasses activities directed by the Volunteer and Community Partnership Enhancement Act of 1998. Annually, volunteers contribute nearly 20 percent of the work hours performed on refuges. More than 200 non-profit groups, or Friends organizations, assist refuges in meeting visitor services and natural resource management goals. Managing a refuge's partnership with Friends and Volunteers Programs requires developing projects and activities suitable for volunteers; maintaining communication and an organizational framework to ensure that partner's skill sets are matched to appropriate jobs; and training and outfitting volunteers with the proper equipment to perform quality work in a safe manner.

**Cost-Sharing Partnerships**

The part of the Challenge Cost Share program that includes recreational activities and public events is under this program element. This program element includes activities with partners that are recreational, interpretive and educational, or involve the public in other ways.

The Visitor Services Program aligns closely with Refuge System strategic goals. This program uses its four elements to achieve the key strategic goals to:

- Welcome and orient visitors,
- Provide quality wildlife-dependent recreation and education opportunities,
- Facilitate partnerships and cooperative projects to engage other conservation agencies, volunteers, Friends, and partners in the Refuge System's mission, and
- Ensure that unique cultural and historic resources are protected, used, and interpreted as specified by authorizing legislation and policies.

**Welcome and Orient Visitors**

Under this element, the Refuge System clearly identifies all wildlife refuges that are open to the public, and ensures that visitors understand who we are, what we do, and how to enjoy their visits to refuges. Welcoming and orienting visitors provides a unique brand identity that helps the public distinguish between the Service, including the Refuge System, and other land management entities. This identity can be heightened through clear and accurate signage, brochures, interpretive materials, uniforms, adequate and accessible recreational facilities, and knowledgeable staff or volunteers available to answer questions and describe the role of the individual refuge within the context of the Refuge System's mission.

**Provide Quality Wildlife-Dependent Recreation and Education Opportunities**

Opportunities for compatible wildlife-dependent recreation (wildlife observation, hunting, fishing, nature photography, environmental education and interpretation) are provided and evaluated by visitor satisfaction surveys to ensure that we offer quality experiences for the public to enjoy America's wild lands, fish, wildlife, and plants. When those recreational activities are managed according to the principles of sound fish and wildlife management and administration on national wildlife refuges, they engender stewardship and a conservation ethic within the public.

Quality interpretation and environmental education programs engage the public in, and increase community support for, the conservation mission of the Refuge System; make fish, wildlife, plants, and wildlife habitat relevant, meaningful and accessible to the American public; and help teachers, students and visitors understand the causes and consequences of climate change affecting fish and wildlife resources.

The Refuge System recently launched a new birding initiative in response to the growing interest among Americans to watch birds in their communities and on refuges. Nearly 50 million Americans enjoy bird-watching each year and it is possibly the fastest growing wildlife-dependent recreational activity in the United States. An example of one program underway is the partnership with the Cornell Laboratory of Ornithology to use the interactive birding program, e-Bird, for visitors and volunteers to record bird observations on refuges. The Refuge System and the Lab are also examining other education and interpretive programs, such as Celebrate Urban Birds, to reach new and diverse audiences and make refuges more birder friendly. In 2008, new partnerships resulted in the distribution of optics and birding field guides to 80 national wildlife refuges for use by visitors and school groups. Birding programs and festivals generate significant revenue and create jobs for local economies, as documented in the Refuge System's 2006 Banking on Nature study.

The visitor facility enhancement program supports the development, rehabilitation, and construction of facilities such as parking areas at trailheads, wildlife observation platforms, kiosks, and other projects that are necessary for interpretation and environmental education on refuges.

The Refuge System continues to support volunteers and Friends through on-site training, mentoring, workshops, and awards. New efforts are underway to build a suite of Refuge System citizen science programs for participation by Friends organizations, volunteers, and visitors. Partners include the National Phenology Network, Project Budburst, and the Cornell Laboratory of Ornithology. These programs offer volunteers and visitors new, meaningful opportunities to contribute data that will help us understand the causes and consequences of climate change on refuges and adjacent landscapes.

The Challenge Cost Share Program includes partnerships that promote quality recreational programs, support public conservation events, and convey conservation messages through communication with the public.

### **Cultural and Historic Resources Are Protected and Interpreted**

Under this program, we ensure that significant cultural and historic resources are protected, used and interpreted as specified by authorizing legislation and policies. The Refuge System protects many significant cultural and archaeological sites. The Refuge System has identified more than 20,000 archaeological and historical sites within its borders to date, with more yet to be discovered. Refuge System museum collections consist of approximately 6.2 million objects maintained in Service facilities or on loan to more than 200 non-federal repositories, such as qualified museums and academic institutions, for scientific study, public viewing, and long-term care.

### **2010 Program Performance**

If funded, the FY 10 budget request will allow the Refuge System to welcome more than 42 million visitors to enjoy educational and interpretive programs, hunting, fishing, wildlife observation, and photography. During 2010, available funding will be used to develop recreational and other visitor programs and to maintain visitor satisfaction rates, which are currently at over 85 percent. The Refuge System will maintain this level of satisfaction by providing quality facilities, knowledgeable visitor services specialists and volunteers, and by introducing visitors to the Refuge System through programs that connect children with nature and promote bird watching, one of the Country's fastest growing outdoor recreation activities.

The Refuge System will support nearly 30,000 volunteers that contribute more than 1.3 million hours to conservation and recreation programs. The Refuge System will continue to support training programs for volunteer coordinators and provide support for refuges working with Friends organizations.

The Refuge System will continue to provide support and to mentor new and existing Friends organizations, promote quality wildlife-dependant recreation programs, and produce effective refuge signage, brochures, and web-based information.

Recent examples of projects completed by Friends organizations include:

- The Friends of the Heinz NWR at Tinicum (PA) established a backyard habitat demonstration site at the Cusano Environmental Education Center at the refuge to show visitors habitat improvements they can make in their own backyards.

- The Friends of Sherburne NWR (MN) developed an environmental education curriculum guide about the wetlands, prairie openings and oak savanna ecosystems unique to the refuge, and offered educator training on how to integrate the guide into outdoor studies.
- The SEWEE Association (SC) improved fishing opportunities and access to the Bonny Hall Unit of ACE Basin NWR by creating a parking area, improving water management for fishing, and replacing a foot bridge located on the Refuge.
- The Friends of Trinity River NWR (TX) built a fully accessible 140-linear foot pier on the Champion Lake tract of the Trinity River NWR to increase wildlife observation, fishing, birding, photography, and conservation education program opportunities.

**Program Performance Overview**

| Performance Goal  | 2005 Actual    | 2006 Actual       | 2007 Actual       | 2008 Plan         | 2008 Actual       | 2009 Plan         | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|---|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|-------------------------------|-----------------------|
| <b>Improve Recreation Opportunities for America</b>   |                |                   |                   |                   |                   |                   |                         |                               |                       |
| CSF 15.2 Percent of NWRs/WMDs open to six priority NWRS recreation activities   | 52% ( 3 of 6 ) | 83% ( 5 of 6 )    | 83% ( 5 of 6 )    | 85% ( 5 of 6 )          | 0.0%                          | 85% ( 5 of 6 )        |
| CSF Total Actual/Projected Expenditures(\$000)  | unk            | \$55,779          | \$64,510          | unk               | \$67,614          | \$72,219          | \$73,880                | \$1,661                       | \$79,187              |
| CSF Program Total Actual/Projected Expenditures(\$000)  | unk            | \$43,484          | \$43,316          | unk               | \$46,765          | \$51,236          | \$52,415                | \$1,178                       | \$56,114              |
| Actual/Projected Cost Per NWRs/WMDs (whole dollars)   | unk            | \$11,170,377      | \$12,940,514      | unk               | \$13,253,464      | \$14,172,667      | \$14,498,639            | \$325,971                     | \$15,521,905          |
| 15.2.1 % of NWRs/WMDs open to six priority NWRS recreation activities (applies within constraints of compatibility standard): % open to hunting, % open to fishing, % open to wildlife observation & photography, % open to environmental education, % open to interpretation, and % open to other recreational uses (PART) | 52% ( 3 of 6 ) | 83% ( 5 of 6 )    | 83% ( 5 of 6 )    | 85% ( 5 of 6 )          | 0.0%                          | 85% ( 5 of 6 )        |
| 15.2.20 % of visitors are satisfied with the quality of experience (GPRA)   | unk            | 85% ( 85 of 100 )       | 0.0%                          | 85% ( 85 of 100 )     |
| <b>Advance Modernization/Integration</b>  |                |                   |                   |                   |                   |                   |                         |                               |                       |
| 52.1.1 # of volunteer hours are annually contributed to NWRS (GPRA)   | 1,284,009      | 1,277,523         | 1,307,291         | 1,216,110         | 1,216,110         | 1,283,140         | 1,283,140               | 0                             | 1,389,886             |

**Activity: National Wildlife Refuge System**  
**Subactivity: Refuge Law Enforcement**

|  |                              | 2008<br>Actual              | 2009<br>Enacted             | 2010   |                             |                             | Change<br>from 2009<br>(+/-) |
|--|------------------------------|-----------------------------|-----------------------------|--|-----------------------------|-----------------------------|------------------------------|
|  |                              |                             |                             | Fixed<br>Costs &<br>Related<br>Changes*<br>(+/-) | Program<br>Changes<br>(+/-) | Budget<br>Request           |                              |
| Refuge Law Enforcement                   | (\$000)                      | 31,062                      | 34,514                      | +595   | 0                           | 35,109                      | +595                         |
| Safe Borderlands                         | (\$000)                      | 0                           | 1,000                       | 0  | 0                           | 1,000                       | 0                            |
| IMARS                                    | (\$000)                      | 575                         | 575                         | 0  | 0                           | 575                         | 0                            |
| <b>Total, Refuge Law<br/>Enforcement</b> | <b>(\$000)</b><br><b>FTE</b> | <b>31,637</b><br><b>218</b> | <b>36,089</b><br><b>223</b> | <b>+595</b><br><b>+12</b>                        | <b>0</b><br><b>0</b>        | <b>36,684</b><br><b>235</b> | <b>+595</b><br><b>+12</b>    |

\*The FTE increases listed in the FY2010 "Fixed Cost & Related Changes" column represent FTE positions that were funded in FY2009, but due to the late enactment of the 2009 Appropriations Act, will not be filled until FY10. The savings realized in FY09 by not having to pay salaries will be used to fund one-time expenses, such as human capital recruitment costs, supplies, and equipment.

### Program Overview

The Refuge System employs a professional cadre of law enforcement officers dedicated to natural resource protection and public safety. Refuge law enforcement officers also contribute to community policing, environmental education and outreach, and other activities supporting the Service's conservation mission. Refuge law enforcement officers are routinely involved with the greater law enforcement community in cooperative efforts to combat the Nation's drug problem, address border security issues, and other challenges.

While the Refuge System continues to improve its law enforcement operations through the hiring and training of full-time officers, dual-function officers continue to play a critical role in meeting law enforcement needs. Dual-function officers dedicate 25 to 50 percent of their time to law enforcement activities and spend the balance of their time on traditional conservation and wildlife-dependent recreation programs. The Refuge System began to phase out dual-function officers with full-time officers in FY 2002 to improve effectiveness and efficiency. This phase out will allow current dual-function officers to focus on their primary duties. Refuges rely on partnerships with local, county, and State law enforcement officers and other Federal agencies to provide back-up support to Refuge law enforcement.

The Refuge System has also instituted a Zone System to provide critical law enforcement planning, deployment, and support to multiple wildlife refuges with maximum efficiency through experienced officers. A Zone Officer provides refuges within his or her designated zone with technical assistance on law enforcement, institutes reliable record-keeping and defensible reviews, enhances training, and promotes communication and coordination with other law enforcement agencies.

### Refuge Law Enforcement

This program element includes funding for the Refuge Law Enforcement Program. Included under the funding are zone officers, regional refuge law enforcement chiefs, field officers, training, equipment, and supplies.

**Incident Management Analysis Reporting System (IMARS)**

The Refuge Law Enforcement program is working with the DOI to develop and implement the Department-wide Incident Management Analysis Reporting system (IMARS). The program will document all law enforcement-related incidents occurring on refuges, and will be accessible at all levels of the organization. It will track not only different types of crimes, but also locations, which will allow us to be proactive in crime prevention. This information is necessary to prioritize law enforcement officer needs and to deploy officers in emergencies.

**2010 Program Performance**

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If funded, the FY 2010 budget request will support 235 FTEs within the Refuge Law Enforcement program. These officers will provide for the security and safety of refuge visitors, government property, and natural resources. These officers will document more than 117,000 illegal incidents occurring on national wildlife refuges ranging from trespass and illegal taking of game to violations of Federal drug and immigration laws.

During FY 2010, the Division of Refuge Law Enforcement will continue to pursue the goal of protecting lives, resources, and properties. In FY 2009, the program added six new officers to the high-priority locations of the southwest border. The additional officers will contribute to the Refuge System's ability to reduce the destruction of habitat and prevent illegal drug and immigration activities on refuges.

The Refuge System will continue to implement the DOI Incident Management, Analysis, and Reporting System (IMARS). The budget request includes \$575,000 for the Secretarial priority.

Refuge Law Enforcement will continue to support the monitoring of approximately 33,200 easement contracts, ensuring that the terms are met on at least 95 percent of the contracts. The program will also support the development of community policing programs, to include the development of policing agreements with state and local law enforcement organizations.

**Program Performance Overview**

| Performance Goal   | 2005 Actual       | 2006 Actual      | 2007 Actual      | 2008 Plan        | 2008 Actual      | 2009 Plan        | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|--|-------------------|------------------|------------------|------------------|------------------|------------------|-------------------------|-------------------------------|-----------------------|
| <b>Improve Protection of Lives, Resources, and Property</b>  |                   |                  |                  |                  |                  |                  |                         |                               |                       |
| CSF 17.1 % of NWRs/WMDs having law enforcement staffing comparable to the need identified in the NWRs Law Enforcement Deployment Model                   | 10% ( 24 of 233 ) | 8% ( 18 of 227 ) | 9% ( 17 of 189 ) | 9% ( 17 of 189 )        | 0.0%                          | 9% ( 17 of 189 )      |
| CSF Total Actual/Projected Expenditures(\$000)   | unk               | \$48,585         | \$55,387         | unk              | \$61,160         | \$73,414         | \$75,102                | \$1,689                       | \$76,829              |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk               | \$39,344         | \$43,947         | unk              | \$50,803         | \$60,806         | \$62,204                | \$1,399                       | \$63,635              |
| Actual/Projected Cost Per NWRs/WMDs (whole dollars)  | unk               | \$2,699,172      | \$3,077,075      | unk              | \$3,397,778      | \$4,318,457      | \$4,417,782             | \$99,325                      | \$4,519,391           |
| 17.1.10 % change in Part I offenses that occur on FWS lands or under FWS jurisdiction (GPRA)   | unk               | unk              | ( 0 of 653 )     | ( 0 of 653 )     | ( 0 of 653 )     | ( 0 of 511 )     | ( 0 of 511 )            | 0                             | ( 0 of 511 )          |
| 17.1.11 % change in Part II offenses (excluding natural, cultural and heritage resource crimes) that occur on FWS lands or under FWS jurisdiction (GPRA) | unk               | unk              | ( 0 of 43,525 )  | ( 0 of 43,525 )  | ( 0 of 43,525 )  | ( 0 of 37,027 )  | ( 0 of 37,027 )         | 0                             | ( 0 of 37,027 )       |
| 17.1.12 % change of natural, cultural and heritage resource crimes that occur on FWS lands or under FWS jurisdiction (GPRA)                              | unk               | unk              | ( 0 of 22,312 )  | ( 0 of 22,312 )  | ( 0 of 22,312 )  | ( 0 of 40,421 )  | ( 0 of 40,421 )         | 0                             | ( 0 of 40,421 )       |

**Activity: National Wildlife Refuge System**  
**Subactivity: Conservation Planning**

|  |                              | 2008<br>Actual             | 2009<br>Enacted            | 2010  |                             |                            | Change<br>from 2009<br>(+/-) |
|--|------------------------------|----------------------------|----------------------------|---|-----------------------------|----------------------------|------------------------------|
|  |                              |                            |                            | Fixed<br>Costs &<br>Related<br>Changes<br>(+/-) | Program<br>Changes<br>(+/-) | Budget<br>Request          |                              |
| Refuge Planning                                    | (\$000)                      | 7,131                      | 7,365                      | +232  | 0                           | 7,597                      | +232                         |
| Land Protection Planning                           | (\$000)                      | 3,440                      | 3,440                      | 0   | 0                           | 3,440                      | 0                            |
| Comprehensive Conservation<br>Plans                | (\$000)                      | 984                        | 984                        | 0   | 0                           | 984                        | 0                            |
| <b>Total, Comprehensive<br/>Conservation Plans</b> | <b>(\$000)</b><br><i>FTE</i> | <b>11,555</b><br><b>83</b> | <b>11,789</b><br><b>83</b> | <b>+232</b><br><b>0</b>                         | <b>0</b><br><b>0</b>        | <b>12,021</b><br><b>83</b> | <b>+232</b><br><b>0</b>      |

**Program Overview**

**Refuge Planning** - Comprehensive Conservation Plans (CCPs) and step-down management plans, such as Habitat Management and Visitor Services plans, are developed for individual refuges by conservation planners with input from the public, states and other partners. This subactivity supports funding for these plans as well as for Geographic Information System capability and other related support tools.

**Land Protection Planning** - This planning function evaluates potential land acquisitions to support the strategic growth of the Refuge System. Refuge field stations work in cooperation with others to identify and protect habitats for migratory birds and other important species. In some cases, Land Protection Plans will be prepared to expand existing refuges or to establish new refuges in order to address the needs of fish, wildlife, and plant communities. Specific activities include gathering background data, coordinating with state and local entities, involving the public, analyzing ecological, legal, and financial issues, as well as printing and distributing draft and final plan documents.

The Service has developed three draft planning policies to guide the strategic management of the Refuge System. When finalized, these policies will be incorporated into the Service Manual as sections on Strategic Growth, Land Protection Planning, and Land Acquisition Planning. The Strategic Growth policy provides guidance to identify areas of ecological importance for conservation and potential land acquisitions or exchange. The Land Protection Planning policy describes the specific procedures and documents used in the conservation planning processes. The Land Acquisition Planning policy provides criteria for prioritizing approved proposals for funding.

**Comprehensive Conservation Plans** - The Improvement Act (Act) mandated that a Comprehensive Conservation Plan (CCP) be completed for every refuge in existence at the time that Act was passed, within 15 years of the Act's passage. There were 551 units of the refuge system (this number includes wetland management districts) at the time of the passage of the Act. Since then, Congress has mandated that the Service also complete CCPs for three newly-established stations before the 2012 deadline. Thus, 554 field stations require completed CCPs by 2012. Through the end of FY 2008, 318 CCPs have been completed and another 90 CCPs are anticipated to be completed in FY 2009. The CCPs ensure that each refuge unit is comprehensively managed to fulfill the purpose(s) for which it was established. Developing a CCP facilitates decision making regarding issues such as wildlife-dependent recreation, the construction of facilities, and the development of biological programs. The process of completing a CCP also helps refuge managers address any conflicting uses that may exist or be proposed. Once a refuge finishes its CCP, it may develop subsequent step-down management plans to meet the CCP's goals and objectives. Issues addressed by these step-down management plans include habitat management, visitor services, fire management, wildlife

inventorying and monitoring, and wilderness management plans. Completed CCPs allow refuge managers to implement resource management actions that support State Wildlife Action Plans, improving the condition of habitat and benefiting wildlife. Refuge personnel also have the ability to improve and increase wildlife-dependent recreation opportunities which are critical to connecting people, particularly children, with nature.

The Refuge System uses CCP development as the primary method to conduct citizen-centered government. Developing these long-term plans relies on public participation and input. Local communities, state conservation agencies, and other partners help guide refuge management through the development of each CCP. Diverse private organizations, such as the National Rifle Association, Defenders of Wildlife and many others also participate in the CCP planning process.

### **2010 Program Performance**

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The Refuge System is striving to achieve the Congressional mandate of completing CCPs for all 554 covered units (including wetland management districts) of the Refuge System by 2012. At the end of FY 2010, the Refuge System will have completed CCPs for 466 refuges with CCPs leaving 85 refuges left to complete by 2012. The Refuge System will complete 54 CCPs during FY 2010.

Refuge CCPs are a high-priority across the System. Managers and supervisors throughout the Refuge System are held accountable for their timely completion and field staffs are redirected to work on them. The Service uses a System-wide on-line CCP Accomplishment Database to schedule CCPs and monitor their progress toward completion.

**Program Performance Overview**

| Performance Goal   | 2005 Actual  | 2006 Actual | 2007 Actual | 2008 Plan | 2008 Actual | 2009 Plan | 2010 President's Budget | Change from 2009 Plan to 2010 | Long-term Target 2013 |
|--|--|-------------|-------------|-----------|-------------|-----------|-------------------------|-------------------------------|-----------------------|
| <b>Landscapes and Watersheds</b>   |  |             |             |           |             |           |                         |                               |                       |
| CSF 2.10 Sum of the number of NWRs/WMDs completing a Comprehensive Conservation Plan during the year and the number of NWRs/WMDs with a plan under development | 211  | 225         | 221         | 204       | 211         | 264       | 142                     | -122 ( -46.2% )               | 142                   |
| CSF Total Actual/Projected Expenditures(\$000)   | unk  | \$14,701    | \$17,756    | unk       | \$27,593    | \$30,300  | \$16,673                | (\$13,627)                    | \$17,849              |
| CSF Program Total Actual/Projected Expenditures(\$000)   | unk  | \$11,430    | \$14,344    | unk       | \$21,668    | \$24,347  | \$24,907                | \$560                         | \$26,665              |
| Actual/Projected Cost Per NWRs/WMDs (whole dollars)  | unk  | \$65,339    | \$80,343    | unk       | \$130,770   | \$114,773 | \$117,413               | \$2,640                       | \$125,699             |
| 2.10.1 # of NWRs/WMDs with a Comprehensive Conservation Plan completed - cumulative  | 124  | 204         | 263         | 350       | 318         | 332       | 466                     | 134 ( 28.8% )                 | 466                   |
| Comments:  | The increase in FY 2010 performance is due to change in program funding. |             |             |           |             |           |                         |                               |                       |
| 2.10.2 # of NWRs/WMDs with Comprehensive Conservation Planning underway at the end of the FY   | 171  | 128         | 166         | 112       | 152         | 175       | 88                      | -87 ( -98.9% )                | 88                    |
| Comments:  | The decrease in FY 2010 performance is due to change in program funding. |             |             |           |             |           |                         |                               |                       |
| 2.10.3 # of NWRs/WMDs with a Comprehensive Conservation Plan completed (during the year)   | 40   | 97          | 55          | 92        | 59          | 89        | 54                      | -35 ( -64.8% )                | 54                    |
| Comments:  | The decrease in FY 2010 performance is due to change in program funding. |             |             |           |             |           |                         |                               |                       |

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