

U.S. Fish & Wildlife Service

Annual Performance Report FY2015

*National Wildlife
Refuge System*

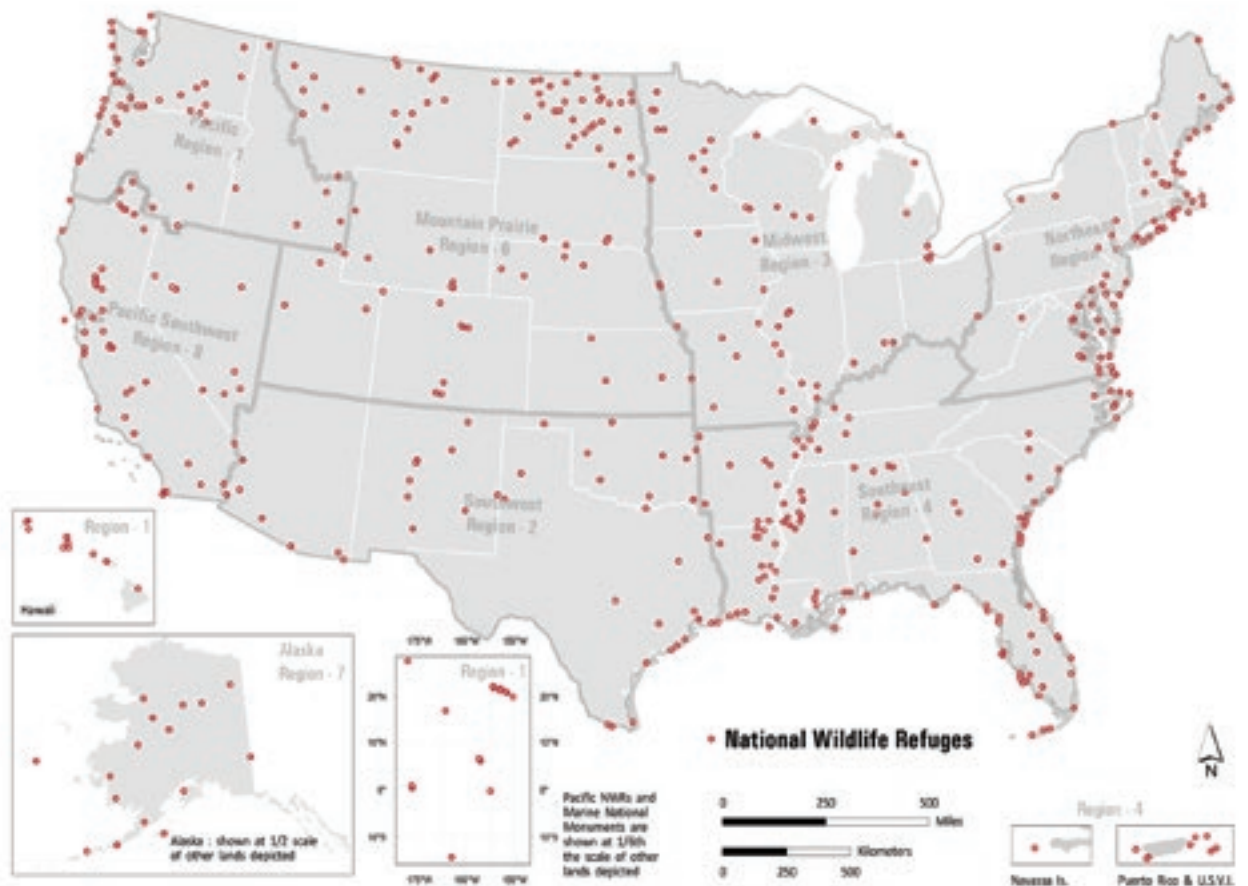


Introduction

Well over a century in the making, the National Wildlife Refuge System (NWRS) is a network of habitats that benefit wildlife, provide unique outdoor experiences for all Americans and protect a healthy environment. The Refuge System has grown to include over 150 million acres of land and water from the Caribbean to Alaska and from Maine to the South Pacific.

Approximately 600 refuges and wetland management districts (WMDs) provide habitat for over 700 species of birds, 220 species of mammals, 250 reptile and amphibian species and more than 1,000

species of fish. Over 380 threatened or endangered plants and animals are protected on wildlife refuges. Refuges also welcome approximately 47 million visitors each year who participate in a wide variety of recreational activities including hunting, fishing, wildlife observation, photography, interpretation and environmental education. According to the 2013 “Banking on Nature” report, these visitors generate \$2.4 billion in annual sales and economic output, creating 35,000 jobs. On average, wildlife refuges return \$4.87 to local economies for every \$1 Congress provides in federal funding.



Accomplishment Reporting

The Refuge Annual Performance Plan (RAPP) documents the annual accomplishments of individual refuges and wetland districts. Every year, managers for each unit of the Refuge System enter performance data for the current fiscal year and estimate performance level for the upcoming year. After all the station-level data are aggregated, annual achievements are summarized in RAPP and reflect how the Refuge System is performing as a whole. This information is used in numerous ways: as part of the next year's budget request to Congress; for inclusion in the Operations Plan; to answer a variety of inquiries from Congress, the Department of the Interior (DOI) and others; to respond to requests from partners such as nonprofit conservation groups; and to communicate priority needs, such as the critical need for invasive species management.

While many performance metrics are tracked for budget planning, outreach and program management specific to the Refuge System, some of these metrics also contribute to the mission-related goals of the entire Service. These particular performance metrics are included in the FWS Operations Plan, which documents the mission-related activities and performance of all Service programs. These specific metrics have been established by DOI as performance goals that meet the requirements of the Government Performance and Results Act (GPRA).

GPRA is a law enacted in 1993 intended to track agencies' accomplishments, and help identify areas for improvement. GPRA requires all government agencies to create five-year strategic plans and track their progress.



Strategic Goals

To accomplish its mission, the Refuge System finalized a strategic plan that contains 12 strategic goals. These outcome-oriented goals cover the areas of habitat and wildlife management, fire management, welcoming and orienting visitors, wilderness stewardship, conservation planning, infrastructure and equipment maintenance, strategic growth and organizational excellence. These goals are reflected in *Conserving the Future: Wildlife Refuges and the Next Generation*, the Service's 2011 vision document for the Refuge System.

1. Conserve, manage and, where appropriate, restore fish, wildlife and plant resources and their habitats to fulfill refuge purposes, trust resource responsibilities and biological diversity and integrity.
2. Provide quality environments with adequate water.
3. Ensure that unique values of wilderness, other special designation areas and cultural resources are protected.
4. Welcome and orient visitors.
5. Provide quality wildlife-dependent recreation and education opportunities.
6. Facilitate partnerships and cooperative projects to engage other conservation agencies, volunteers, friends and partners in the Refuge System mission.
7. Protect resources and visitors through law enforcement.
8. Provide and maintain infrastructure necessary to support safe and reliable public access, wildlife and habitat mission objectives.
9. Complete quality comprehensive conservation plans on schedule and with full engagement of partners.
10. Strategically grow the Refuge System.
11. Reduce wildfire risks and improve habitats.
12. Promote and enhance organizational excellence.



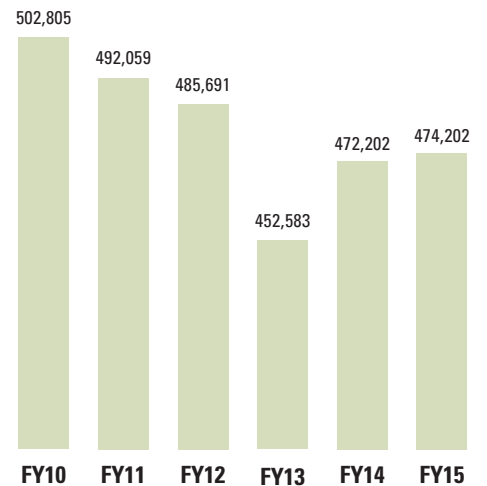
Budget from FY2010–2015

Funding for the National Wildlife Refuge System has declined substantially since Fiscal Year (FY) 2010's record-high appropriation of \$503.3 million. After dropping more than \$50 million in three years—bottoming out at \$452.6 million in FY2013—funding then increased slightly to \$474.2 million for FY2015. But even this funding level is approximately \$72 million below what the Refuge System needs to keep pace with inflation relative to the FY2010 level (i.e. approximately \$8 to \$15 million more is needed each year to keep pace with rising costs such as fuel, utilities and leased space). The decline in funding unfortunately manifests as a decline in accomplishments across the majority of the Refuge System.

The following graphs and descriptions document trends in the Refuge System's accomplishments over the past six years due to budget fluctuations, policy changes, natural disasters and other factors.

Annual budget since 2010

(in thousands of \$)



Workforce Reductions

An immediate impact of budget reductions is fewer full-time, part-time and seasonal U.S. Fish and Wildlife Service employees working on National Wildlife Refuges. Management of the over 150 million acres of land requires the expertise of biologists, fire technicians, law enforcement officers and a myriad of other resource professionals. The U.S. Fish and Wildlife Service has lost 442 full-time employees working on National Wildlife Refuges between FY2011 and FY2015, including a 16 percent loss (n=85) of mechanics, heavy equipment operators and related jobs. These are the people who do much of the physical work on refuges—mowing, disking, planting, spraying, earth-moving and more. In addition, the Refuge System has approximately 11 percent (n=73) fewer refuge managers today than in FY2011, and 11 percent (n=40) fewer wildlife biologists. Across all biological job series—which include positions such as ecologists, foresters, range technicians, refuge managers and wildlife biologists—staffing has declined more than 11 percent since FY2011.

Additionally, refuge law enforcement is at an all-time low, operating at 35 percent of its 1990 staff levels. Today, the Refuge System's 318 full-time officers are responsible for the protection of over 150 million acres and 48 million visitors. The Refuge System has nearly 20 percent (n=48) fewer visitor services professionals than in FY2011, which has forced a reduction in hours of operation and public programs. Simply put, fewer skilled people result in fewer accomplishments for visitors, volunteers, wildlife and habitat conservation.

CASE STUDY

Kilauea Point National Wildlife Refuge, Hawaii

Kilauea Point is one of the most visited refuges in the country and one of the top 10 most visited sites in Hawaii. Due to staff cutbacks, the refuge is now closed two days a week. This has resulted in increased visitation and crowding during open periods. Crowding decreases the quality of visitors' experiences on refuges and can create frustration. Additionally, all special events and celebrations have been cancelled for the past few years because there are no longer enough staff at the refuge to support these events. The refuge averages approximately 400,000 visitors per year, and had nearly a four percent increase in visitation in recent years. While increased visitation is a positive trend, the proper infrastructure and staff to support those numbers must be provided to protect the resource and serve the American public.



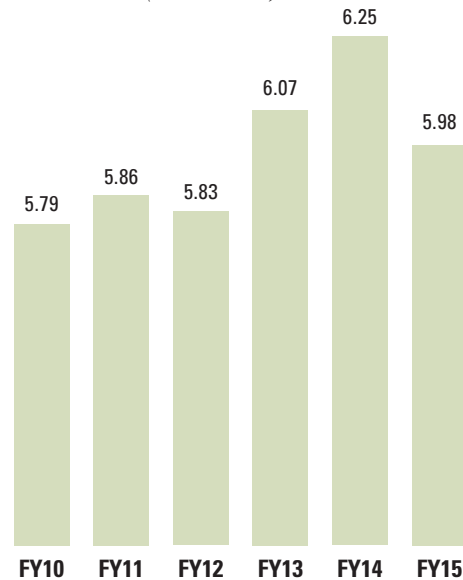
Auxiliary parking at Kilauea Point with endangered nene birds in foreground.

Habitat Restoration and Management

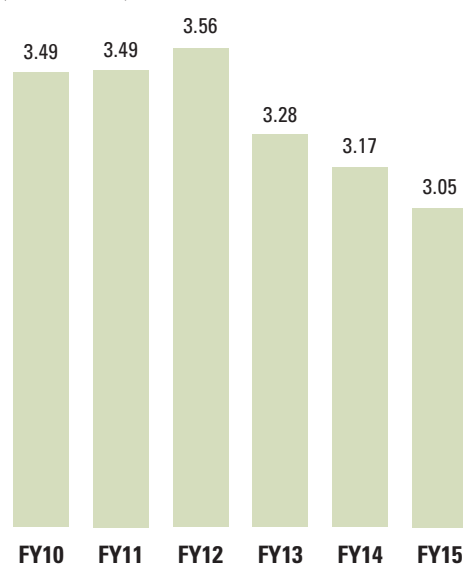
The National Wildlife Refuge System is charged with maintaining the biological integrity, diversity and environmental health of lands within the Refuge System. U.S. Fish and Wildlife Service employees are some of the best in the world at using a wide variety of techniques to improve habitats for all manner of plants and animals. To achieve wildlife and habitat goals, active land management is often required. These activities include restoring wetlands, riparian areas and uplands; managing and restoring coastal, estuarine and marine ecosystems; managing extensive wetland impoundments and other bodies of water; farming, prescribed burning, mowing, haying, grazing, timber harvesting or selective thinning; and controlling invasive plants and animals.

Overall the Refuge System has 5.98 million acres where habitat management is needed but deferred. This is a reduction from FY2014, showing the Services' commitment to addressing habitat management needs. This reduction is a positive. Over the past six years we have also experienced a decline in the acres getting the management they need. This reduction is seen as a negative, 431,186 fewer acres are getting the management they need as compared with FY2010.

Acres where management is needed but deferred (in millions)



Acres receiving needed management (in millions)



CASE STUDY

Central Valley National Wildlife Refuges, California



The Sacramento, San Luis and Kern National Wildlife Refuge Complexes in the Central Valley of California manage some 75,000 acres of wetlands in a region that has lost about 95 percent of its total wetland acreage. These Pacific Flyway Refuges rely on a complex and extensive system of canals, ditches, water control structures and dikes to move water on and off intensively managed wetlands that are essential to the survival of over one million fall and wintering waterbirds. Staff reductions have resulted in 20,000 acres of managed wetlands not receiving needed management. In addition, annual maintenance of waterways and conveyances is not being conducted; impacting infrastructure such as water control structures and fish screens. The San Luis National Wildlife Refuge Complex recorded a 37 percent decline in duck use of the complex wetlands in FY2015 due to habitat reductions partially caused by maintenance backlogs.

Above: A water delivery canal being cleaned of accumulated silt and invasive plants at the Sacramento National Wildlife Refuge Complex.

Habitat restoration and management are two key components to providing high-quality habitat for the wildlife species that depend on refuges. Reduced funding and staffing over the last several years has limited the Service's ability to restore and maintain refuge lands and waters. Since FY2010 the Refuge System experienced an 88 percent reduction in the number of acres and miles of wetlands, upland, open water and riparian areas restored.

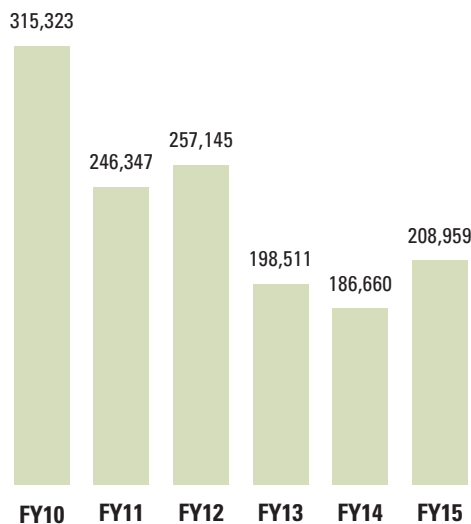
Additionally, wetland, upland and open water management was cut on 431,186 acres of critical habitat within the Refuge System over the past six years. This includes lost capacity to manage 212,552 upland acres, 186,394 wetland acres and 32,240 open-water acres. Capacity to manage 66,459 acres of moist soil was lost, representing nearly a 50 percent decrease in the amount of moist soil managed since FY2010. All told, the Refuge System experienced a loss of management capacity on nearly 500,000 acres of upland, wetland, open water and moist soil habitats across the country. The decline in habitat quality is impacting both refuge system lands and waters. For example, impaired surface water has increased by 22 percent on refuge land since FY2011 (303d Clean Water Act).

Invasive Species

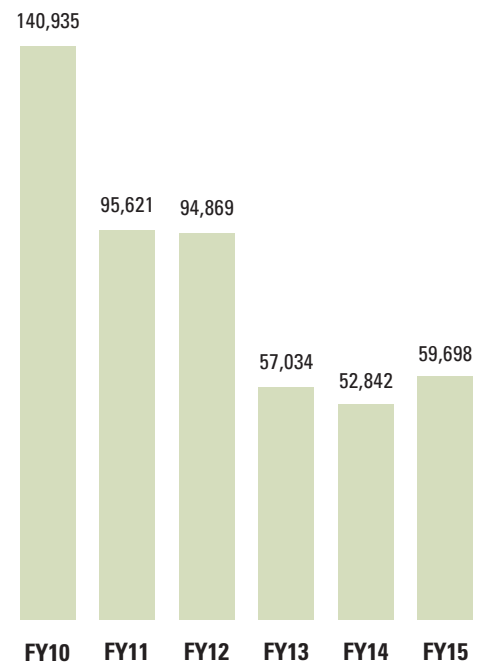
Non-native, invasive plants degrade fish and wildlife habitat and often spread rapidly as they outcompete native plants. To respond, the Service trains invasive species professionals, establishes highly skilled strike teams and works with prescribed fire professionals to effectively address the problem with fire.

Although invasive species management is a central component of attaining long-term habitat objectives, with limited funding and staff, the Refuge System is unable to fully control rapid expansion of invasive plants. From FY2010 to FY2015, the number of Refuge System acres where non-native plants were controlled declined by 58 percent.

Acres treated for non-native invasive plants



Acres of non-native invasive plants controlled



CASE STUDY*Invasive Species Management in the Northeast*

Across refuges in the Northeast since FY2010, acres treated for non-native, invasive plants has gone down 37 percent, acres of non-native, invasive plants controlled has gone down 34 percent and acres infested with non-native, invasive plants has gone up five percent. Reductions in invasive control result in costly efficiency losses, as high-quality habitat that received substantial previous investment reverts to lower-quality habitat dominated by invasive species.



For example, Rhode Island National Wildlife Refuge Complex treated 185 acres for invasive plants in FY2011 but was only able to treat 50 acres in FY2015. Without being able to detect or control the spread of 18 invasive species that the refuge targets, Rhode Island National Wildlife Refuge Complex will experience a \$150,000 loss in previous habitat investment.

Control of invasive species including common tansy (top) and autumn olive

(bottom) has declined. Without control, these species spread back into treated areas, undoing the efforts of previous dollars spent.

CASE STUDY*Restoring Alaska's Islands by Removing Invasive Species*

Alaska Maritime National Wildlife Refuge has a long, proud history of eradicating invasive vertebrate species from refuge islands. The refuge supports globally significant resources, including 40 million breeding seabirds. Many seabird species evolved to breed in dense colonies on islands normally free of mammalian predators. Refuge staff and partners spent decades restoring island habitat by eradicating invasive species. To date, non-native mammals including foxes, rats and European rabbits have been eradicated from over one million refuge acres. Hundreds of thousands of additional seabirds cruise the world's oceans thanks to this eradication work. Waterfowl, passerines and native plants also benefit from invasive mammal eradication.

Unfortunately shrinking budgets are forcing refuge staff to pull back from invasive species eradication work. Important long-term research on rat-auklet interactions stopped on the world's largest auklet colony on Kiska Island. No new rat eradication has been implemented since rats were eradicated from Hawadax Island (formerly Rat Island) in 2008. Now, with more than a dozen islands still suffering from introduced rats, and many additional islands supporting non-native foxes, cattle, horses, reindeer and other species, the invasive species work at the refuge is slowing to a crawl due to a smaller staff size and reduced budgets.



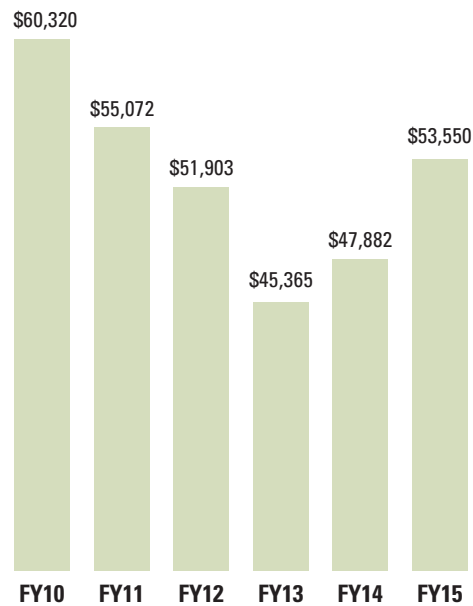
The Aleutian cackling goose was delisted as an endangered species due in large part to fox eradication on Alaska Maritime National Wildlife Refuge.

Prescribed Fires on National Wildlife Refuges

Fire Budget

Since the 1930s, the U.S. Fish and Wildlife Service has used fire as an effective tool for managing land and habitat. Because more than 80 percent of refuge lands in the continental U.S. and more than 90 percent in Alaska are fire-adapted ecosystems with vegetation and wildlife that are dependent on periodic burns, the Service frequently uses prescribed fires to maintain or restore healthy habitats. Using prescribed fire reduces hazardous fuel loads, wildfire risk to communities and the cost of wildfire suppression. The Service manages fire on more land management units than any other agency and is responsible for protecting more than 75 million combustible acres. As the Fuels budget was reduced by 38 percent between FY2010 and FY2013, the number of acres treated with prescribed fires dropped by 52 percent. While these numbers rebounded slightly in FY2014 and FY2015, they are still below FY2010 levels. Consequences of these reductions include higher potential catastrophic wildfires due to the accumulation of fuels and reduced habitat quality for fire adapted species.

Preparedness and fuels funding



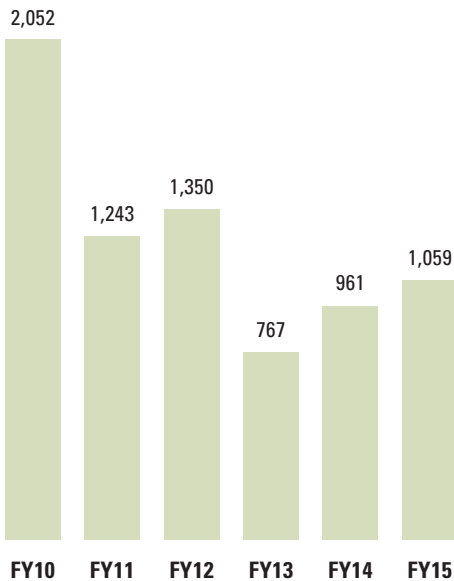
Acres Treated with Fire

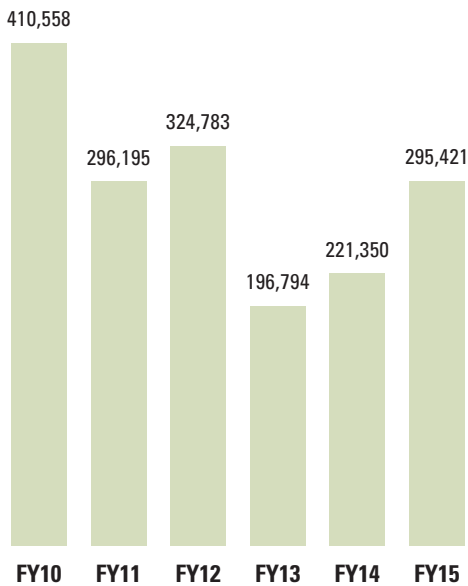
The number of prescribed fires and other ways of managing fuel has gone down dramatically since FY2010. Between FY2010 and FY2015 there was a 48 percent reduction in prescribed fire and other fuel treatments. Overall, 115,137 fewer acres were treated.

Dwindling fire funding has dramatically decreased Hazardous Fuels Reductions accomplishments.



Fuel treatments include prescribed fire, chemical and mechanical treatments. Prescribed fire accounts for approximately 96 percent of all fuel treatments.

Number of fuels treatments

Number of acres treated

CASE STUDY*Grand Bay National Wildlife Refuge and the Mississippi Sandhill Crane, Mississippi*

Prescribed burning was drastically reduced from FY2000 through FY2015 at Grand Bay National Wildlife Refuge. During this time, 22 percent fewer acres were treated as compared to FY1998 through FY2009. The reduction in prescribed burning increased fire risk to adjoining landowners. The refuge lands adjacent to residential areas did not receive prescribed fire for a period of 12 years. The recommended burn frequency is every three years. Due to the accumulation of fuel, when a wildfire ignited in November 2014 (brown in the center of the photo), the fire was extremely difficult to control and came uncomfortably close to the nearby community.

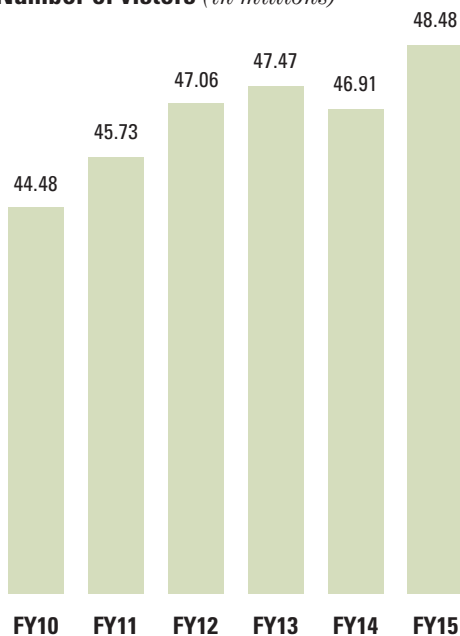
In addition to human safety concerns, reduced fire frequency also causes an increase in invasive plants which reduces the open savanna habitat that the endangered Mississippi Sandhill Crane depends on. Open savanna habitat is the only habitat that this endangered species forages and nests in. The encroachment of invasive trees and shrubs modifies the savanna to such a great extent that adult cranes and their young no longer use it.

Visitation Trends

Visitors

Refuges have seen a steady increase in the number of visitors in recent years. The Refuge System's priority public uses are hunting, fishing, wildlife photography, wildlife observation, environmental education and interpretation. The Refuge System's visitor service responsibilities also include cultural resource protection and interpretation, accessibility efforts, volunteers and Friends mentoring, special use permits, recreation fees, concessions management and a host of other activities designed to welcome and orient visitors to the Refuge System. Partners are critical in helping staff accomplish the visitor service goals of individual refuges and the mission of the Refuge System.

Number of visitors (in millions)



CASE STUDY

Visitor Service Capacity

Although visitor numbers are up, the capacity to serve and educate the public on national wildlife refuges is decreasing. For example, with no visitor service staff, national wildlife refuges throughout Arizona have lost significant capacity to serve and educate the public. Refuge visitor centers in Arizona now have more limited hours. These refuges also had a decrease in school field trips, environmental education programs, community engagement, outreach and special events. Havasu and Bill Williams National Wildlife Refuges in Arizona have a combined annual visitation of 3,287,000 visitors with no dedicated visitor service staff at either refuge.

In another part of the country at Minnesota Valley National Wildlife Refuge Complex, visitor services staff was reduced by 50 percent. This reduction in capacity resulted in an annual reduction of 9,000 student visits to the refuge complex and an estimated loss of 20,000 people who were previously reached through community events.

While growing visitor numbers highlight the American public's increasing interest in getting outside and onto national wildlife refuges, the Service is losing opportunities to become relevant to Americans due to a decrease in capacity to serve visitors and volunteers.



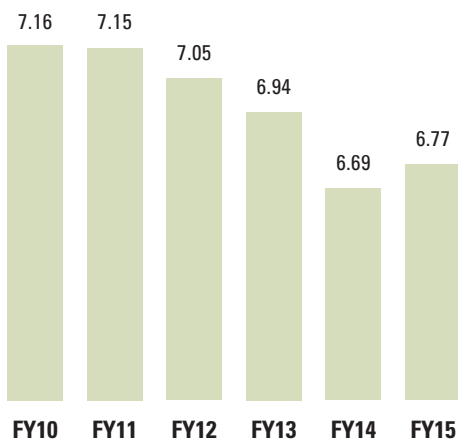
Despite declines in almost all refuge performance measures, the number of visitors to refuges is increasing. We need to build our capacity to serve visitors like these intrepid explorers at Minnesota Valley National Wildlife Refuge.

Fishing

As one of the priority recreational uses on national wildlife refuges, fishing offers people a fun and often relaxing way to enjoy their public lands. More than 300 units of the Refuge System offer recreational fishing, while another 56 support fishing on adjacent waters by offering boat ramps and parking facilities. Each year, millions of Americans enjoy either freshwater or saltwater fishing on refuges, however, that number is waning. The number of fishing visits dropped five percent in the past six years. While the causes are currently unclear, fewer staff and curtailed hours at many national wildlife refuges may be contributing to the decline.

Visit: fws.gov/refuges/fishingguide

Number of fishing visits (*in millions*)

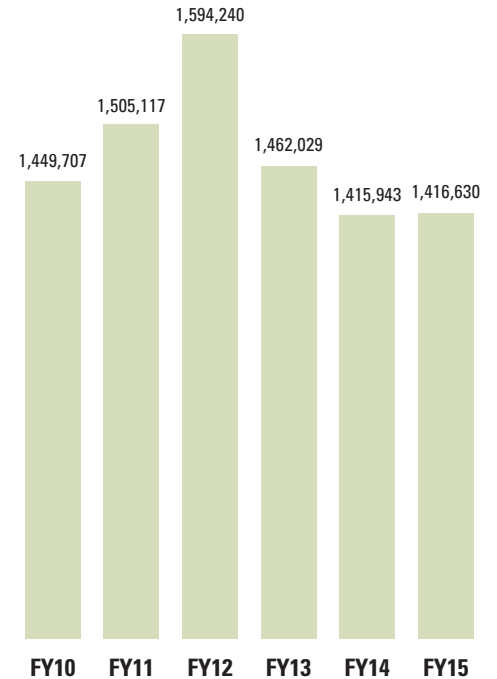


Volunteer Engagement

Refuge System volunteers are individuals who want to give back to their communities, parents who want to set good examples for their children, retired people willing to share their knowledge, concerned citizens who want to learn more about conservation and passionate people who enjoy the outdoors and want to spread the word about America's natural treasures. Service volunteers facilitate recreation activities, habitat restoration, maintenance, administrative activities and many other tasks as directed by the Volunteer and Community Partnership Enhancement Act of 1998. In FY2015, the Service benefited from the hard work and commitment of over 36,000 volunteers who contributed more than 1.4 million hours of volunteer service. These volunteers contributed \$32 million in work and logged hours equivalent to 681 full time employees. Volunteers contribute nearly 20 percent of the work hours performed on refuges. Unfortunately the number of volunteer hours has been dropping since FY2012.

For its 150+ million acres, the Refuge System employs only about 3,000 people. These employees are passionate and hard-working, but cannot accomplish the work of the Refuge System without the help of thousands of dedicated volunteers. As budgets decline and fewer employees are available to train and oversee volunteers, the number of volunteers has declined by 14 percent. A reduced contribution by volunteers is a significant and serious effect of shrinking budgets.

Number of volunteer hours



Conclusion

CASE STUDY

Rocky Mountain Arsenal National Wildlife Refuge, Colorado

Volunteers play an important role in meeting and greeting visitors. However, with a reduced number of Service staff able to train and coordinate volunteers, volunteers numbers are declining. Volunteer effort and visitor experience are intertwined. The number of visitors at Rocky Mountain Arsenal, a priority Urban National Wildlife Refuge, increased from under 23,000 in FY2010 to 310,000 in FY2015. But the visitor center is now closed two days a week and is largely run by volunteers due to reductions in budget and staffing. Because of the proximity to Denver International Airport, a number of visitors from across the U.S. and other countries attempt to visit the refuge and are surprised to find it closed on those days.

The number of volunteers working at the refuge decreased from 220 to 80 in recent years. Volunteers worked 6,391 hours in FY2010. This increased steadily up to FY2014 when volunteers were working 13,614 hours. It plummeted in FY2015 when volunteers worked 2,980 hours. The refuge no longer has a volunteer coordinator to reach out to new volunteers and most of the current volunteers are elderly and only available to work a reduced amount of hours. The visitor experience at Rocky Mountain Arsenal National Wildlife Refuge would be significantly enhanced by adding bilingual staff or volunteers to reach out to the large number of Spanish- speaking visitors and provide information to orient and inform all visitors.

The primary purpose of the Refuge Annual Performance Plan (RAPP) is to document accomplishments of individual refuges and wetland management districts. RAPP data also helps show how the Refuge System is contributing more broadly to fish, wildlife and habitat conservation. This report calls particular attention to the direct correlation between annual funding and the Refuge System's ability to meet its conservation mission. Regardless of future budgets, Service employees, volunteers and partners will continue their passion and hard work for protecting one of the largest networks of conservation lands and waters on Earth.



Volunteers play a critical role in helping us reach the next generation of conservation leaders.

December 2016

