

**TESTIMONY OF H. DALE HALL, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE,
DEPARTMENT OF THE INTERIOR, BEFORE THE HOUSE NATURAL RESOURCES
SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND OCEANS, REGARDING
IMPLEMENTATION OF THE NATIONAL WILDLIFE REFUGE SYSTEM
IMPROVEMENT ACT OF 1997**

October 9, 2007

Madame Chairwoman and Members of the Subcommittee, I am H. Dale Hall, Director of the U.S. Fish and Wildlife Service (Service). I am here today to discuss implementation of the National Wildlife Refuge System Improvement Act (Improvement Act), which became law ten years ago today. The tenth anniversary of this historic and visionary conservation law provides us with an opportunity to reflect on the progress we have made in the stewardship of the National Wildlife Refuge System (Refuge System) and the challenges that remain before us.

It is important to reflect on the history of America's National Wildlife Refuge System in order to fully understand why there was such a need for the Improvement Act, how this new law improved administration of the Refuge System, and what the remaining challenges are as we continue to work together to realize the full potential of the greatest system of lands in the world dedicated to wildlife conservation.

The Early Years

Our great conservationist President Theodore Roosevelt established the first national wildlife refuge by Executive Order on March 14, 1903, setting aside Pelican Island as a preserve and breeding ground for native birds.

Although Yellowstone had been established in 1872 as a national park, and the first national forest reservation was made in Wyoming in 1891, Roosevelt's action in setting aside Pelican Island was a new kind of conservation undertaking. Pelican Island was small – only five acres – and was set aside as an inviolate sanctuary for birds. It was not protected for human use and enjoyment, nor for timber or other natural resource production. Pelican Island was home to bird species threatened by market shooters seeking plumes for women's fashion, reducing populations of many bird species to alarming levels. In protecting the small area of Pelican Island, Roosevelt recognized that a small refuge for wildlife could have benefits far beyond its boundaries by serving as a safe haven for nesting and feeding.

President Roosevelt went on to establish 53 other refuges, from Key West, Florida's mangrove islands and sand flats to Flattery Rocks along the Washington Coast, where 150,000 pelagic birds nest and migrating birds sometimes swell the population to over one million. He included the Pribilof Islands in Alaska in 1909. Roosevelt established our nation's first waterfowl refuge, Lower Klamath, in 1908.

As an avid hunter, Roosevelt also ensured that the early Refuge System provide habitat and management for big game animals that had been depleted on public lands. From an estimated 60 million bison, no more than a thousand could be found on the Great Plains in 1900. Elk populations had also been greatly depleted across the country. Wichita Mountains in Oklahoma, originally established as a forest reserve in 1901, became a refuge in 1905. Work began there to restore bison, elk, and turkey. The National Bison Range followed in 1909, and the National Elk Refuge was established in 1914.

By the end of the fledgling system's first decade, many of the foundations of today's Refuge System were in place. The early Refuge System already included:

- Inviolate sanctuaries for nesting birds,
- Waterfowl refuges;
- Refuges for "threatened" species;
- Big game ranges withdrawn from the public domain; and
- The first large refuge in Alaska.

A major milestone that occurred around this time was the Migratory Bird Treaty Act of 1918, which was first enacted to implement the 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada. This law offered much-needed protection to many bird species during a time when commercial trade in birds and their feathers was popular. The Migratory Bird Conservation Act of 1929 followed and established the Migratory Bird Conservation Commission to approve land acquisitions from the Migratory Bird Conservation Fund for the National Wildlife Refuge System that are considered important to waterfowl. Since its inception, the commission has approved more than 5.2 million acres of land acquisitions.

The "Dust Bowl" Years

In 1929, there were 82 refuges and plans were being made to increase the number to 100-125. These plans were disrupted when the nation plunged into economic depression and was devastated by a gripping drought that turned much of the land into a "dust bowl." Drought conditions severely impacted waterfowl populations and threatened other wildlife. Fortunately, the wildlife profession was beginning to emerge in concert with new scientific approaches to managing and restoring land for wildlife. Three individuals stand out in American history at this time: J. N. "Ding" Darling, Ira Gabrielson, and J. Clark Salyer. In addition, Aldo Leopold published *Game Management* (1933), the first textbook on wildlife management. With their leadership, a cadre of wildlife professionals and citizens began to advance the cause of wildlife conservation in unprecedented ways.

Ding Darling, "the man who saved ducks," was Chief of the Bureau of Biological Survey in 1934 and 1935. Three million acres of land were set aside as wildlife refuges during his tenure. When the Migratory Bird Hunting Stamp Act passed in 1934, he designed the first stamp, which then sold for one dollar toward the purchase of refuges. Today, the sale of Federal Duck Stamps has raised some \$500 million for more than five million acres of our best waterfowl habitat in the Refuge System. At the end of the 1930's, there were 266 national wildlife refuges protecting 13.5 million acres of habitat.

Ira Gabrielson, Darling's successor at the Bureau of Biological Survey and the first Director of the Fish and Wildlife Service, known during his time as "Mr. Conservation," ranks as one of the most noted conservationists of the 20th century. He exerted great influence at a critical time in American history, when evolving wildlife management practices and policies were being merged into our society and government. Among his many accomplishments, he was particularly proud of the expanding National Wildlife Refuge system, establishment of the Federal Aid to Wildlife Restoration and Cooperative Wildlife Research Unit programs, creation of the Patuxent Wildlife Research Refuge, and organization of an impartial, highly successful wildlife law enforcement team. He assisted in planning the first North American Wildlife Conference, called by President Franklin D. Roosevelt in 1936. His wildlife philosophies are reflected in three major books written in the comparatively early years of the current conservation era: "Wildlife Conservation" (1941), "Wildlife Refuges" (1943), and "Wildlife Management" (1951).

Finally, J. Clark Salyer was recruited by J.N. "Ding" Darling in June 1934 to oversee the management of national wildlife refuges in the Biological Survey's fledgling refuge program. Salyer was directed by Darling to develop a waterfowl management program using the conservation principles of wildlife management espoused by Aldo Leopold. Such a program, based on habitat needs of migratory bird species, had never before been attempted on a national scale. Shortly after coming to work for the Biological Survey in 1934, the government issued him a car to travel around the country visiting refuges. Salyer had a fear of flying, so this vehicle provided him with the means to visit refuges in far-flung locations. For his efforts as head of the Division of Wildlife Refuges, Salyer has become known as the "Father of the National Wildlife Refuge System." Under his direction, the system rose in area from 1.5 million acres in the mid-1930's to nearly 29 million acres upon his retirement in 1961. He was the principle architect of President Franklin Roosevelt's duck restoration program of 1934-36.

Continuing Growth

As the next decade unfolded, the nation's attention turned to war. The Department of the Interior turned its headquarters building over to the War Department and the Service relocated to the Merchandise Mart in Chicago, Illinois. Even during these trying times, the Refuge System continued to grow. Kenai and Kodiak Refuges in Alaska were added in 1941, protecting their giant moose and brown bear populations. When Florida's Chassahowitzka Refuge was added in 1943, no one could have imagined that one day it would be the winter habitat for endangered whooping cranes, which today migrate to the refuge all the way from Necedah Refuge in Wisconsin.

During the 1950s, 24 new refuges were added, including Loxahatchee in Florida. This great refuge secured the northern most part of the remaining Everglades and today it is a cornerstone in broader efforts to restore the Everglades ecosystem.

One of our successful wildlife and wetland protection programs is the Small Wetlands Acquisition Program, which began in 1958 with an amendment to the Migratory Bird Hunting and Conservation Stamp Act. This program added a new dimension to the Refuge System: Waterfowl Production Areas (WPAs). WPAs are tracts of land that are generally smaller than refuges, and are acquired in Wetland Management Districts, primarily in the prairie pothole region in North and South Dakota, Minnesota, and Montana, but with other acquisitions

occurring in Nebraska, Wisconsin, Iowa, and Michigan. Today, in addition to the WPAs, wetland easements are taken on lands to prevent draining, burning, or filling of these lands. Nearly 700,000 acres have been acquired in fee title, and about 2.5 million acres of wetland and grassland easements have been purchased to date.

In the late 1950s, the Service's Alaska Regional Director Clarence Rhode advocated adding to the Refuge System an entire watershed in a new refuge at Izembek, and a vast landscape as an Arctic Wildlife Range. Both areas were established as refuges in the closing days of the Eisenhower Administration in 1960. These two refuges added almost twenty million acres to the refuge, essentially overnight. Across the country in New Jersey, local citizens were fighting hard to keep the Great Swamp from being drained and filled to build a jet port for New York City. Their treasure became a national wildlife refuge in 1960 and the site of the first Wilderness area in the Refuge System in 1968.

The Modern Conservation Era

The 1960s and the 1970s saw the enactment of many new laws aimed at protecting the nation's environment and conserving natural resources. In 1966, Congress enacted Public Law 89-669, which included the Endangered Species Preservation Act. It authorized the Service to develop a list of imperiled species, fund studies, and acquire refuge lands using the Land and Water Conservation Fund. Under this authority we added more than 50 national wildlife refuges. In addition, Section 4 and 5 of that 1966 law included the National Wildlife Refuge System Administration Act, the precursor of the National Wildlife Refuge System Improvement Act.

In December 1980, more than 53 million acres were added to the Refuge System with the enactment of the Alaska National Interest Lands Conservation Act (ANILCA), tripling the size of the refuge system. Today, sixteen refuges in Alaska protect 77 million acres of pristine habitat or roughly 80 percent of the total acreage in the Refuge System. Additionally, 18.7 million acres of refuge lands in Alaska are designated as Wilderness, roughly 90 percent of all wilderness lands in the system. The Alaska refuges also offer some of the best hunting and fishing in the world. ANILCA is also significant because it laid the ground work for important parts of the Refuge Improvement Act by identifying priority purposes and called for all Alaska refuges to develop comprehensive conservation plans.

As the American population has grown, it has become increasingly important to protect wildlife in proximity to where people live. Refuges near urban areas, like Minnesota Valley in Minneapolis, San Francisco Bay, Tinicum in Philadelphia, Rocky Mountain Arsenal in Denver, and Bayou Sauvage in New Orleans provide city inhabitants and their children with an opportunity to experience and discover wildlife in close proximity to where they live.

The 1985 Farm Bill conservation programs gave genesis to the Service's Partners for Fish and Wildlife program. These conservation programs encouraged refuge managers to work with partners in the context of the greater surrounding ecosystem.

By 1991, the Refuge System had experienced extraordinarily growth from the five acre Pelican Island in 1903 to 472 units and 90.4 million acres. Beyond a single inviolate sanctuary for native birds, the Refuge System had expanded to include:

- A network of migratory bird habitats encompassing nesting, migration, and wintering habitats;
- A growing number of refuges dedicated to the recovery of endangered species;
- Big game ranges dedicated to a wide variety of large game mammals;
- Sixteen large refuges in Alaska; and
- A variety of unique ecosystems – barrier islands, bottomland hardwood forests, coral reefs – all protecting America’s wildlife heritage

Becoming a “System”

The National Wildlife Refuge System Administration Act of 1966 provided guidelines and directives for administration and management of all areas in the National Wildlife Refuge System, which it defined as including, "wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas." Under the 1966 law, the Secretary is authorized to permit by regulation the use of any area within the system provided "such uses are compatible with the major purposes for which such areas were established."

The 1966 law defined what the Refuge System was, but lacked the findings, purposes and other clarifying language that are usually found in organic legislation. Most importantly, it did not provide effective guidance as to how the Refuge System was to be administered as a *system*. A wide variety of reviews, reports and lawsuits highlighted that the Refuge System was not being managed effectively as a system. The most damning evidence came from the General Accounting Office in a 1989 report entitled, “*Continuing Problems with Incompatible Uses Call for Bold Action*”. The report found that 59% of refuges had harmful uses occurring on their land.

Since GAO did not reference most of the "harmful" uses to specific refuges, and since that term had no legal or regulatory meaning, the Service conducted its own detailed, refuge-by-refuge survey in an effort to find, understand and correct these problems. We found that there were relatively few uses that violated the compatibility standard, and that many of the "harmful uses" cited by managers were the result of lack of authority, retained private rights, or were situations such the presence of debris or contaminants that were not actually "uses" of the refuge. While schedules were instituted to terminate the incompatible uses, the underlying findings of this survey further illustrated that existing regulations were not being consistently understood or interpreted, and that refuges were not being managed as a system.

Around this time, efforts to enact organic legislation for the Refuge System were initiated by conservation organizations. The Service opposed this effort. At the time, concepts like refuge planning were believed to be an unnecessary burden for the agency. In addition, the Service was not entirely comfortable with the level of public involvement and partnership that is today recognized as required for effective conservation. Largely because of disagreement within the

conservation community about what was needed to “fix” the Refuge System, organic legislation could not get any traction in Congress.

In 1990, the Service began the process of writing an Environmental Impact Statement (EIS) that would guide the administration of the System. The draft EIS, entitled *Refuges 2003*, was never finalized. Absent clear Congressional guidance, the myriad of possible future directions for the Refuge System simply left too many options, complexities, and opinions for any consensus to be reached. While there were many questions about the future of the Refuge System, one central question needed an answer before any progress could be made: *What was the role of wildlife dependent uses, including hunting and fishing, in the Refuge System?*

In 1996, Executive Order 12996 recognized wildlife dependent uses such as hunting, fishing, wildlife observation and photography, and environmental education and interpretation as the priority public uses of the Refuge System. The Executive Order recognized both the importance of hunters and anglers to conservation and the growing importance of others who enjoy watching wildlife in wild places, while also making clear that all uses on refuges must first be compatible with the Refuge System’s primary mission: wildlife conservation.

The Executive Order showed that compromise was possible, and what was needed was bipartisan leadership from Congress, the Executive Branch, and the conservation community. Former Secretary of the Interior Bruce Babbitt, Congressional sponsors Don Young of Alaska and John Dingell of Michigan, and leaders of key sportsmen’s and environmental organizations joined forces to draft legislation to address the varying concerns and interests on management and public use of the National Wildlife Refuge System. Other Congressmen who were instrumental in building overwhelming bipartisan support for the bill were George Miller from California, John Tanner of Tennessee, Jim Saxton from New Jersey, and Neil Abercrombie of Hawaii. In the Senate, Senators John Chafee from Rhode Island, Dirk Kempthorne of Idaho, Bob Graham from Florida, and Max Baucus from Montana provided the essential leadership that pushed the legislation through Congress.

All of these conservation leaders, plus a number of hard working, innovative staff working behind the scenes, stayed dedicated to finding a consensus for the future of the Refuge System. On October 9, 1997, they succeeded, and the National Wildlife Refuge System Improvement Act was signed into law. The Improvement Act provides guidance to the Secretary of the Interior for the overall management of the Refuge System. The Improvement Act’s primary components include:

- A strong and singular Refuge System mission for the conservation, management and restoration of fish, wildlife, and plant resources and their habitats for the benefit of present and future generations of Americans;
- A requirement that the Secretary maintain the biological integrity, diversity and environmental health of the Refuge System;
- A requirement to plan and direct the continued growth of the Refuge System to best accomplish the mission of the System and contribute to the conservation of the ecosystems of the United States, while complementing the efforts of States and other partners;
- A new process for determining compatible uses of refuges;

- A recognition that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation, when determined to be compatible, are legitimate and appropriate public uses of the Refuge System;
- That these compatible wildlife-dependent recreational uses are the priority general public uses of the Refuge System;
- A requirement for preparing comprehensive conservation plans (CCPs);
- A direction to ensure effective coordination and cooperation with adjacent land owners, State fish and wildlife agencies, and other Federal agencies; and,
- A responsibility to maintain adequate water quantity and water quality and acquire water rights that are needed.

Many of the Improvement Act's provisions were new and remain innovative in public lands law. The Service has worked hard with our State fish and wildlife agency partners to involve the public in developing policies to guide the implementation of the Improvement Act. We have met the Improvement Act's requirements to develop implementing regulations on determining compatible uses. We have developed new policies on: the mission, goals, and purposes of the Refuge System; comprehensive conservation planning; appropriate refuge uses; wildlife dependent recreation; habitat management planning; and, the biological diversity, integrity, and environmental health of refuges. These policies are providing refuge managers with the consistent guidance needed to implement the Improvement Act and further the process of becoming a true *system* of lands that are managed in a consistent and coordinated manner. The Service has completed 254 CCPs and is well on its way to completing the required plans for all refuges by the 2012 statutory deadline.

The Refuge System has embraced partnerships with all who share a concern for the future of America's wildlife. Today, our over 38,000 volunteers and 250 Refuge Friends groups are essential contributors to every aspect of refuge management. Twenty-two diverse national conservation organizations have formed the Cooperative Alliance for Refuge Enhancement (CARE), and they have worked together for a decade to provide support for the System.

Finally, as the Refuge System has evolved it has provided increasing opportunity to link with other protected area systems in the marine environment as called for in the President's Ocean Action Plan. A good example is the Northwestern Hawaiian Islands Marine National Monument established by President Bush on June 15, 2006, under the authority of the Antiquities Act of 1906. The Hawaiian Islands National Wildlife Refuge and Midway Atoll National Wildlife Refuge are within this new monument. Also included in the monument are the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, administered by National Oceanic and Atmospheric Administration's (NOAA) National Marine Sanctuary Program, and the State of Hawaii's Northwestern Hawaiian Islands State Marine Refuge and Kure Atoll Wildlife Sanctuary.

Emerging Issues and Unseen Challenges

The National Wildlife Refuge System Improvement Act is the most modern organic Act of any of the Federal land management agencies. It is forward looking and visionary in many respects.

For example, its requirement to maintain biological diversity, integrity, and environmental health reflect a modern understanding of ecological principles. The Improvement Act envisions a collaborative approach to conservation, where partnerships with others are an essential ingredient in conservation success. It requires public involvement in conservation planning and compatibility determinations and recognized the growing critical importance of water quality and quantity in wildlife conservation.

Recognizing water issues were perhaps the harbinger of an issue not well understood a decade ago: the effect of climate change on wildlife and their habitat. The Service is working hard to evaluate how climate change will affect the way refuges are managed as part of broader efforts to consider how climate change will affect wildlife conservation. Refuges will play important roles in monitoring wildlife, adapting management to changing conditions, restoring habitat that will sequester carbon, and reducing our own carbon footprint. We are just beginning our efforts to deal with what will likely be the largest conservation challenge of the century.

The threat of invasive species was known a decade ago, yet it seems the problem grows more complex every day. We are making progress addressing invasive species on refuges, but not as quickly as is needed. The problem takes on an added dimension when we consider infectious diseases like West Nile virus, and their impact on wildlife populations. Avian influenza was not an issue that demanded attention ten years ago.

Population growth and its effect on habitat were predictable a decade ago, but several aspects of that change have presented new challenges. Illegal immigration along the Southwest border has caused severe damage to border refuges and has taxed our law enforcement capabilities. At many refuges throughout the System, we see areas that were once rural being encroached upon by more and more development. This is changing the nature of refuge law enforcement by bringing more urban crimes to refuges, from methamphetamine labs to assaults on refuge officers. These pressures from beyond our boundaries also bring environmental challenges as some refuges become isolated islands in a sea of development.

The growth in population, changing demographics, and the accelerating dominance of technology in everyday life is also changing the way people interact with wildlife. As our population increases by roughly 10% for each of the next five decades, achieving the System's mission will become more and more difficult. Census estimates indicate demographic subsets of our population will be growing at rates of up to more than 300%. To achieve our mission in the near future we need to start looking now at how to adapt the system to best benefit future generations, and especially these rapidly growing subsets. Hunters and anglers have always been a cornerstone of America conservation, but they represent a smaller percentage of the population every year. The latest National Survey of Fishing, Hunting, and Wildlife-Associated Recreation indicates that over the past decade that hunting has decreased by 10% and fishing has decreased by 15%. Wildlife watching, however, has increased by 13%. The Refuge System will have to change with the times to ensure it remains true to its mission to conserve fish, wildlife, and plant resources for present and future generations. Today, more children are living in urban areas and do not have the same outdoor experiences that were common with past generations. While the Refuge System continues to provide great hunting and fishing opportunities, the Service must recognize that digital cameras, iPods, and virtual geo-caching are tools that we can use to

connect children with nature. Environmental education and interpretation are priority public uses of the Refuge System, and they need more emphasis now and in the future.

Strategic Habitat Conservation

Since passage of the Improvement Act, the Refuge System has met with both great accomplishments and increasing challenges. Tried and true concepts, like providing wildlife with the essentials of food, water, and cover, have been augmented with enhanced understanding of ecological processes. The Service has adopted a visionary framework for strategic habitat conservation that will guide our land management and conservation efforts in the future.

Strategic habitat conservation begins with biological planning that identifies measurable, landscape level, outcome goals. With these goals in mind, staff designs conservation activities and programs. With respect to the Refuge System, this means that the Service must look at refuge lands in relation to a broader network of protected areas and other conservation efforts on private land. In other words, we must take a landscape-level approach. We must use principles of conservation biology and protected area design, incorporating ecological considerations such as: are refuges large enough to accomplish their purpose, are they connected with other protected areas and is there enough redundancy in the System to assure wildlife sustainability as conditions change?

The Service has long been a leader and preeminent practitioner of land management for wildlife. We can intensively manage land when needed, or use a light hand where appropriate. We have a proven track record in restoring degraded habitats, using fire to reduce fuel build ups and improve wildlife habitat, managing water levels to insure productive wetlands meet the needs of wildlife, and a wide variety of other habitat management practices.

Our strategic habitat conservation framework will require effective inventory and monitoring, so that we can continue to adapt and improve our management practices. These monitoring efforts on national wildlife refuges are evolving to meet the challenges. Our new biological monitoring team is working on multiple refuges in several regions to experiment with new protocols that will evaluate the effectiveness of our management strategies and allow us to adapt our practices to meet changing future conditions. Finally, strategic habitat conservation must be informed by continuing research to ensure that we apply the best science available, and that is the foundation of all our work.

Conclusion

In conclusion, I would like to thank you for holding this oversight hearing and for your interest in the future of the National Wildlife Refuge System. The challenges of our changing world will require the Refuge System and the Service to be innovative and adaptive.

Our roots are in the past, today's challenges are new and vexing, and we all have some trepidation about an uncertain future. However, change is constant and managing it is always a challenge. What we need is the same open, honest, bipartisan collaboration that we all found when we worked together to craft the National Wildlife Refuge System Improvement Act. If we

can continue with that type of leadership, we will be successful in meeting the challenges of the years ahead.

Madame Chairwoman, I thank you for the opportunity to appear before you today, and I would be pleased to respond to any questions that you or other Members of the Subcommittee might have.