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Refuges Part of WWII Monument

Three Aleutian Islands, part of Alaska Maritime National Wildlife Refuge, and a war-time detention camp complex located in part within the boundaries of California's Tule Lake Refuge are among the nine sites included in the World War II Valor in the Pacific National Monument created by President Bush on December 5. Of the designated islands, Attu and Kiska were occupied by Japanese forces during World War II; Attu was the site of the only land battle fought in North America. Atka Island is a B-24 bomber crash site. The Tule Lake Detention Center housed Japanese-Americans relocated from the west coast of the United States. The other five sites in the new National Monument are in Hawaii at Pearl Harbor. For additional information, go to https://pwrcms.nps.gov/customcf/apps/ww2ip/

RefugeUpdate

November/December 2008 Vol 5, No 6

GAO Report: Refuge System Funding Did Not Keep Pace



The Government Accountability Office has found that the level of inflation-adjusted funding for refuge operations, maintenance and fire management varied considerably from fiscal years 2002 through 2007. (USFWS)

The Government Accountability Office (GAO), in a report issued in September, found that the level of inflation-adjusted funding for refuge operations, maintenance and fire management varied considerably from fiscal years 2002 through 2007, but that the changes hit individual refuges harder than the overall trend indicated. Citing just one example, GAO noted that Kootenai National Wildlife Refuge in Idaho lost 66 percent of its core funding during the span of years.

Staffing levels showed the impact of funding that did not keep pace with inflation. By FY 2007, the Refuge System had lost 275 employees as compared to FY 2003, the Refuge System's peak financial year and also the year of its Centennial. While 38 refuge complexes and stand-alone refuges

gained staff since 2004, more than three times that number lost permanent employees.

According to the GAO report, from FY 2002 to FY 2007, 96 of the Refuge System's complexes and stand-alone refuges lost funding, while funding remained stable at 34 refuges; 92 complexes and stand-alone refuges saw increased funding.

"In light of continuing federal fiscal constraints and an ever-expanding list of challenges facing refuges, maintaining the Refuge System as envisioned in law - where the biological integrity, diversity and environmental health of the Refuge System are maintained; priority visitor services are provided; and the strategic growth of the system is continued - may be difficult," the report concluded.



H. Dale Hall

From the Director Facing Up to Climate Change

As I prepare to retire from the federal workforce after 34 years of shoulder-to-

shoulder effort with terrific professionals, I take pride in the strides we've made in endangered species protection, the concepts of Strategic Habitat Conservation that are taking hold and the new emphasis on getting kids to do the "belly botany" that will make them lifelong conservationists. As I leave public service, I see climate change as the greatest challenge the Fish and Wildlife Service has ever faced in conserving fish, wildlife and their habitats.

Solving the causes and problems of climate change won't be easy; but doing nothing is not an option. Accordingly, the Service is not standing still.

The seven-member Directorate Working Group on Climate Change – along with the 20-person, Service-wide Climate Change Strategic Plan Team – have

been working steadily on a strategic plan that focuses on adaptation, mitigation and education. Although the plan is not yet ready for primetime – that is, public discussion – we have started to define our role within the larger conservation community and identify some essential first steps that build on our commitment to landscape conservation.

We can't afford to go about business as usual. Instead, the Service must be ready to view everything we do, every decision we make, every dollar we spend through the climate change prism. Because the pace and scale of climate change is like nothing we've ever seen before, the Service must embrace the broad-scale concepts of landscape conservation and work collaboratively across the entire conservation community.

We have to develop cutting-edge science and information that will help refuge managers and others make solid decisions regarding our nation's fish and wildlife resources as they are impacted by our

changing climate. We have to prioritize our activities with the effects of climate change in mind. We must integrate our efforts with those of our partners.

We must reduce our own carbon footprint. We are already doing that in the way that national wildlife refuges build their visitor centers and replace their vehicles and equipment. As the Nation's conservation agency, we are in a unique position to lead by example.

Most importantly, we have to act boldly. The Service can be a leader in moving the conservation community forward on this critical issue. We as individuals and as natural resource professionals must face this challenge with a sense of determination and integrity, with creativity and vision. The solutions won't be easy.

The future of our resources depends on what we do today. My final challenge to you as Director of the Fish and Wildlife Service is to face climate change with the optimism and can-do spirit that have been the hallmarks of our agency since its inception. I have great confidence in you, and know you will rise to the challenge.

Grab Some Binoculars

Ever squint to see whether a duck is a pintail or a mallard? Ever notice a bird way up in the sky and wish you could focus on how it hovers or soars with little or no effort? Now, you can.

Eighty national wildlife refuges will be able to offer visitors a pair of loaner binoculars to focus on wildlife with new clarity. These refuges, spread across the country, received the binoculars and accompanying field guides, thanks to donations from Vortex Optics, Houghton Mifflin Harcourt publishers and the National Fish and Wildlife Foundation.

"We were honored and excited to work with the National Wildlife Refuge System in providing Vortex binoculars to various refuges around the country.

The binocular loaner program will be a great way for visitors to maximize their enjoyment on national wildlife refuges," says Joe Hamilton, national sales manager of Vortex Optics.

Almost a third of the nation's Important Bird Areas of global significance are on national wildlife refuges. National wildlife refuges are home to more than 700 bird species. The optics loaner program is part of the Refuge System's Birding Initiative, created to help birders understand the importance of national wildlife refuges to their sport, and to attract new enthusiasts to an adventure that already enralls more than 46 million Americans. ♦

RefugeUpdate

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Making Energy Efficiency Pay Off

In separate awards, the Department of the Interior (DOI) and the Department of Energy have cited San Andres National Wildlife Refuge's innovative renewable energy program as a model for other federal agencies.

In a do-it-yourself effort that began in 2005, refuge staff members have installed a 6,000-watt hybrid solar cell and wind energy system that meets most of the station's power needs.

In mid-November, San Andres refuge received a 2008 DOI Environmental Achievement Award for "for exceptional achievements." (For a report on other U.S. Fish and Wildlife Service recipients, see story on page 3.)

In October, the Department of Energy designated San Andres Refuge the winner of a Federal Energy and Water Management Award. The department noted that the refuge's "project team overcame numerous obstacles, obtaining funding from cost savings on other maintenance projects and technical advice from the local utility."

San Andres Refuge has a small headquarters about 15 miles from the refuge that sits in a sunny, windy spot alongside a busy highway in south central New Mexico. The refuge itself is enclosed within the sprawling White Sands Missile Range and, because of security restrictions, is closed to the public.

Getting Advice from the Source

San Andres Refuge was looking for ways to free up money for various projects when refuge manager Kevin Cobble got the idea to save on energy costs, which were running about \$3,000 a year. "My dad was a mechanical engineering professor at New Mexico State, and he used to do a lot of research on solar power," he says. "I guess that kind of rubbed off me."

Cobble and his team got advice on how to proceed from El Paso Electric, which also agreed to install a meter that runs backwards when the refuge produces



San Andres National Wildlife Refuge in New Mexico installed an award-winning solar cell and wind energy system that meet most of the station's power needs. (USFWS)

more power than it consumes. After that, Cobble says, it was easy. Cobble, another staff member and a volunteer installed the panels. A professional electrician applied the finishing touches.

The solar/wind system provides about 80 percent of the facility's power. Some months, when it supplies 100 percent, the refuge's utility bill is no more than the mandatory customer service charge of \$12.43.

"We get calls from other refuges that are interested in installing their own systems," says Cobble. "The wind generator attracts a lot of local visitors. It's 30 feet tall, so it's hard to miss. Several people a week stop by because they want to know how it works, how to get one for themselves. It's been a very useful public relations tool." The refuge is planning an interpretative display about its renewable energy.

Ottawa Refuge Earns Energy Award

The Department of Energy also presented an energy management award to Ottawa National Wildlife Refuge in

Ohio, spotlighting the innovative design of the station's new visitor center.

Ottawa Refuge's 13,000-square-foot visitor center, which earned the Department's 2008 award for Sustainable Design of a High Performance Building, continues national wildlife refuges' legacy of "green building" awards. The visitor center, which opened to the public last year, replaced an outmoded headquarters built in the 1940s.

The new center's sustainable design has cut energy use in half. It incorporates a variety of energy-efficiency techniques. These include high-efficiency lighting controlled by motion and daylight sensors; radiant floor heating on the main level; point-of-use hot water heaters; high-efficiency tinted windows; improved "super" insulation; a reflective metal roof; natural linoleum flooring; carpeting with a high content of recycled material; and rainwater gardens and holding ponds. ♦

Watts Up? Lots of Energy-Saving Innovations

Their jobs and duty stations are vastly different, but Dan Thorington, of Alaska Maritime National Wildlife Refuge, and Joel Kemm, St. Croix Wetland Management District, share a knack for devising common-sense solutions to environmental challenges – and for rigorous follow-through. For their efforts, which have produced substantial savings and served as models for other stations, they are among the winners of 2008 Department of the Interior Environmental Achievement Awards.

The new Nulhegan Basin Administration and Visitor Contact Center at Silvio O. Conte National Fish and Wildlife Refuge, already designated the Service's first Energy Star building, also was cited. San Andres National Wildlife Refuge in New Mexico, singled out by DOI for its on-site renewable energy generation project, has received a 2008 Department of Energy Federal Energy and Water Management Award. (See related story, page 3.)

Dan Thorington, custodian and recycling coordinator for Alaska Maritime Refuge's visitor center, has developed a highly successful recycling program. He is also urging other government agencies and private businesses to adopt similar programs.

Soon after Thorington began working in the building, he produced a creative "recycling guide" that emphasizes reducing the consumption of materials, reusing items until their usefulness has been exhausted and recycling everything possible. The guide has been distributed to refuge staff and thousands of refuge visitors.

Thorington developed a collection, recovery, consolidation and recycling process. Multiple collection bins are located at all workstations, printers and public use areas. He keeps meticulous recycling records; since, 2004, he has recycled more than 37,000 pounds of



Dan Thorington has captured a 2008 Environmental Achievement Award for starting an ambitious – and rigorous – recycling program at Alaska Maritime National Wildlife Refuge's visitor center. (USFWS)

waste, including 11,000 pounds of mixed paper, 5,500 pounds of cardboard, 1,800 pounds of plastics, 1,500 pounds of electronic waste and more than 5,000 pounds of compost materials. Savings to the refuge have been measured in thousands of dollars. Many staff members have started recycling at home.

Thorington works with a local waste collection agency and several local businesses to co-sponsor an electronics recycling event each April. Community groups regularly contact him for advice on starting their own recycling programs.

Joel Kemm, a fire specialist at St. Croix Wetland Management District (WMD) in Minnesota, works to help restore prairie and oak savanna habitat for nesting waterfowl and other grassland birds. One step is removing woody brush and scrub trees. Loggers viewed such timber

stands as unmarketable. So Kemm persisted in working with loggers to create a partnership: loggers chipped the wood for use at local co-generation plants and other facilities to create bio-energy production. He saved the Service tens of thousands of dollars in tree removal expenses and accelerated the restoration of native habitat.

Kimm, eager for converts, presented his idea at a private lands coordination meeting that included more than 50 representatives from other agencies and organizations. St. Croix WMD is also meeting with neighboring stations, including Minnesota Valley Refuge and WMD, to combine projects to further restoration on a landscape scale.

Nulhegan Basin Sustainable Administration Building and Visitor Contact Center demonstrates the feasibility of sustainable building design for

small visitor facilities. The structure has, among other features, energy-efficient lighting and occupancy sensors, together with operable windows and a high-efficiency furnace. The annual bill for energy is \$11,811 as compared to an industry average of \$16,053 for similar buildings.

The refuge intends to erect a display to showcase the benefits of sustainability and energy efficiency. Subsequent to this project's success, several other wildlife refuges are contemplating similar designs. The Service plans to use a site-adapted version of the Nulhegan building design at Ohio River Islands Refuge in West Virginia. ♦

By Teachers, For Teachers

by Kim Strassburg

Community involvement has been an avenue to success for Tualatin River National Wildlife Refuge in Oregon. The community's desire to preserve green space where future generations could enjoy nature led to the refuge's 1992 establishment.

That same community dedication culminated in an all-volunteer Teacher Team and an environmental education program that was ready to reach students when the refuge opened to the public in 2006.

To date, the refuge has trained more than 300 educators and hosted nearly 5,000 students. The program has gained a solid reputation among educators, partially because the Teacher Team train other educators. Here's how we did it.

Educator Information Night

As early as 2004, just after the refuge's first visitor services professional was hired, refuge staff knew that the local school districts and parents wanted a quality environmental education

experience. Fourteen school districts lie within the refuge's service area, and many had said that they wanted to bring students.

So in May 2004, refuge staff invited teachers to an "Educator Information Night" – giving a sneak peek at the refuge and a meaningful way to get involved. A dozen teachers came. They brainstormed what they hoped to see in a refuge education program. They talked about the challenges local schools face.

That gathering gave rise to the seven-member Teacher Team, composed of private and public school teachers for kindergarten through grade 8; a retired science director from a local school district; a student teacher; and the refuge's visitor service manager. Armed with a large pile of time-tested environmental education curricula, the team modeled its program after Don Edwards San Francisco Bay (California) Refuge's *Salt Marsh Manual*, Nisqually (Washington) Refuge's *Where the River Meets the Sound* and the Mountain-Prairie Region's *Rhythms of the Refuge* educator guides.



Since it opened to the public in 2006, Tualatin River National Wildlife Refuge's environmental education program has acquired a solid reputation. The Oregon refuge has trained more than 300 educators and hosted nearly 5,000 students. (USFWS)

With funding from the refuge Friends group, each member of the Teacher Team committed themselves to developing grade-specific lesson plans that met state learning benchmarks. Many activities were adapted from such national curricula as Project Learning Tree and Project

Wild; the rest were developed from scratch. Within months, the team had compiled and created 18 pre-field trip lessons, more than two dozen on-site activities and eight post-field trip lessons for students in grades K-8.

Field Tested and Rated

The first test came in spring 2005. The Teacher Team brought their students, as did some who hadn't been involved in writing the curricula. Each teacher evaluated student experiences, logistics and lesson plans and suggested improvements. In total, 11 classes and 275 participants took part. By the start of the 2005 school year, the curriculum layout and design were complete.

The team discovered that details matter. For example, students had richer experiences when the refuge provided loaner field guides, binoculars, hand lenses, water quality test kits and other equipment. Although the curricula models relied on teachers to lead students on the refuge, each group was welcomed by a volunteer, who provided an introduction to wildlife observation techniques and helped students practice walking like a fox, listening like a deer and watching like an owl.

The Teacher Team is still intact – except for the student teacher who has graduated. With funding from the National Fish and Wildlife Foundation, the team is developing new lessons for the Discovery Classroom in the refuge's Wildlife Center. The praise makes it all worthwhile.

"I wish we had more time to spend at the Refuge," wrote one teacher. "Thanks for providing this incredible educational experience." ♦

Kim Strassburg is the visitor services manager at Tualatin River National Wildlife Refuge in Oregon. For more information, go to www.fws.gov/tualatinriver.

Have Expertise, Will Travel

by Steven Kohl

It's not much of a stretch to say that the sun never sets on Refuge System specialists whose expertise is recognized – and increasingly in demand – around the world.

Most countries maintain nature reserves and other protected areas whose goals are strikingly similar to those of the National Wildlife Refuge System – managing national natural resources for the benefit of present and future generations.

At the same time, the U.S. Fish and Wildlife Service recognizes the importance of establishing and maintaining global ties for the purposes of sharing information, providing training opportunities and exchanging staff. People from all levels of the Refuge System, from Washington Office administrators to junior refuge biologists, travel abroad on Service business. Relationships between the Refuge System and counterparts in other countries develop in various ways:

The annual cycles of migratory species, whether birds or marine mammals, take them to countries such as Mexico, Canada and Russia. Refuge biologists travel to those countries or host foreign colleagues for joint field work. Across-the-border communications and in-person consultations are common.

Refuge staff members serve as instructors. For example, under the Service's Russia program, refuge personnel have led workshops on designing visitor center displays for effective conservation outreach and on recruiting and retaining volunteers.

Refuge staff members sit on panels that review applications submitted by foreign nature reserves and parks for Service grants. Some of those grants are for conserving endangered species a reserve is charged with protecting; others are for the acquisition of technology or equipment needed to function more effectively.

Many Refuge System employees are delegates to international conferences or

Invasive Animals: A Growing Global Problem

Alaska Maritime National Wildlife Refuge has become an international crossroads for scientists who are front-line combatants in the global war on invasive animals, among them foxes and rats. (USFWS)



by Poppy Benson

After making their way up 1,300 miles of Alaskan coast, flying their helicopter over and around storms, two New Zealand pilots zero in on a 7,000-acre island and blanket it with . . . rat poison.

An everyday occurrence? No. But Alaska Maritime National Wildlife Refuge has become an international crossroads for scientists who are front-line combatants in the global war on invasive animal species, especially those that invade islands and proceed to wipe out entire populations of nesting birds,



The expertise of the National Wildlife Refuge System is recognized – and increasingly in demand – around the world. As a result, people from all levels of the Refuge System, from Washington Office administrators to junior refuge biologists, travel abroad – even to such points as a panda preserve in China – on Service business. (NPS)

congresses, where they have opportunities to meet and network with counterparts from many countries. Foreign countries request assistance from Department of the Interior bureaus in evaluating resource management needs and recommending action strategies.

One Refuge System manager has traveled twice to the country of Georgia

as an adviser to its parks and reserves. Chinese officials have invited Refuge System staff members to assess the impacts of growing numbers of visitors on what had been secluded reserves.

Some stations host foreign nature reserve staff members traveling to the U.S. under Service exchange programs. Each year, several foreign protected

area specialists formally and informally seek out the manager of San Francisco Refuge Complex because they want to see firsthand how an urban refuge is administered.

Refuges and the Service's Division of International Conservation work together to match foreign requests for specialized help with available Refuge System experts. In recent months, there have been calls for wetland biologists; coordinators of successful volunteer programs; moose ecologists; designers of visitor center interior spaces; law enforcement personnel who can address visitor security questions; and specialists in designing management plans and the budgets that go with them.

In the foreseeable future, we expect the list will continue to grow. ♦

Steven Kohl is head of the Russia-East Asia branch of the Service's Division of International Conservation.

some of them threatened or endangered, and other native species.

From Scotland to the Galapagos, from New Zealand to the Falkland Islands and Russia, the refuge seeks expert advice for its own peculiar challenges and provides others with "here's how" information based on its successes.

From Alaska to Galapagos

Several of Alaska Maritime's 2,500 islands provide examples of the rapid, savage advances that non-native animals can make. Over time, refuge islands have been invaded by a Noah's ark of invasives, among them rats, foxes, cattle, sheep, horses, ground squirrels, hares, caribou, reindeer and even buffalo. Many of the invasives have dealt with effectively; some not.

The refuge is best known for a fox removal program that began slowly after WW II and picked up steam in the 1990s. There is still clean-up work to be done, but more than one million acres of habitat have been reclaimed. At least a quarter million birds have repopulated the islands that are fox-free, and one species, the Aleutian cackling goose, has been saved from extinction.

That accomplishment caught the attention of the Charles Darwin Research Station, based in the Galapagos Islands, and in short order the refuge's supervisory biologist Vernon Byrd and invasive species biologist Steve Ebbert received invitations to a 1997 international workshop there. They participated in a peer review of the Galapagos' invasive species problem and

helped craft a plan to rid Isla Isabela, the largest of the Galapagos Islands, of the feral goats that were destroying the habitat of endemic species. Byrd subsequently was off to Russia to help our sister refuge, the Commander Islands Nature Reserve, develop an invasive species management plan.

Earlier this year, scientists based on the Falkland Islands invited Ebbert to spend two weeks visiting their fox- and rat-infested islands and conduct a workshop for habitat restoration staff.

Taking on the Rats

Alaska Maritime biologists asked a New Zealand specialist to tour a rat-infested refuge island, and then invited two other New Zealand experts to a workshop to help devise a rat eradication drive. As

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For nearly 35 years, even during the Cold War, American and Russian wildlife specialists have participated in exchange programs. Earlier this year, Service representatives participated in a workshop for Russian botanical garden volunteers in St. Petersburg, Russia.

Mexico's condor recovery program is closely tied to Hopper Mountain's.

Finding a Passion for Volunteerism in Russia

by Kristen Gilbert

One morning in January 2008, as a bull moose nibbled at a willow behind my office at National Elk Refuge, my phone rang. "Hi, Kristen," I heard. "This is Kevin Kilcullen from the Branch of Visitor Services in the Washington office. Would you like to go to Russia?"

I paused, a little confused. "Yes," I responded tentatively. Hours later, Steven Kohl, with U.S. Fish and Wildlife Service's Division of International Conservation, contacted me. Steven, who is charge of the division's wide-ranging Russia-East Asia projects, was coordinating the first volunteerism-themed exchange to Russia.

For nearly 35 years, even during the Cold War, American and Russian wildlife specialists have participated in many, many exchange programs, I was to learn. In fact, about 100 Russian and American scientists a year now participate in joint conservation programs, many focused on safeguarding rare or endangered wildlife in Alaska, Siberia and the Russian Far East. Recent projects have ranged from workshops on brown bear conservation and designing refuge visitor center displays to surveying sea birds and shore birds in the Bering Sea region.

Why was I chosen for the volunteerism workshop? I have a background in biology and environmental education, and have been working closely with volunteers for 11 years. Volunteers at

Big Birds Connect the Americas

The international reach of Southern California's Hopper Mountain National Wildlife Refuge Complex – and of Marc Weitzel, project leader since 1991 – grows long and longer.

Weitzel, a collateral duty senior advisor with the Department of the Interior's International Technical Assistance Program (ITAP), has been dispatched over the years on assessment and training projects to, among other distant points, Ecuador, the Republic of Georgia, Mozambique, Vietnam and Tajikistan. He also helps select U.S. Fish and Wildlife Service employees and other department specialists for short-term overseas details with ITAP. This year, he secured a donation of binoculars for an ITAP project in Jordan, and in November he helped assemble two multi-agency teams that will assist the Republic of Georgia with on-site wildland

fire planning and suppression training.

Meanwhile, because of the refuge's role as manager of the ambitious, multi-agency effort to protect and reintroduce the endangered California condor, the leaders of similar recovery programs in several South American nations and in Mexico have turned to Hopper Mountain Refuge for training and logistical aid. Refuge staff starting releasing California condors into the wild in January 1992. The captive and wild populations of California condors now exceed 300, a significant increase the low in 1982 of only 22 birds.

Refuge staff has provided technical assistance to counterpart recovery activities in Colombia, Ecuador, Venezuela and Argentina by designing release sites and assisting with post-release management. The refuge has also

National Elk Refuge contribute nearly 11,000 hours every year.

So in April there I was in St. Petersburg as one of three Service representatives participating in a four-day seminar with 30 Russians, most of them affiliated with botanical gardens. A few people spoke a little English. We met at the Komarov Botanical Institute, established in 1714 by Peter the Great.

Others in the American delegation were Maggie O'Connell, formerly with the Washington Office's Branch of Visitor Services, Kohl and Peter Olin, director of the Minnesota Landscape Arboretum. We also had two language specialists who interpreted the proceedings and helped us get around the city. Kohl, fluent in Russian, helped with translations, too.

After a first-day botanical garden tour, we settled into a workshop with alternating English and Russian presentations. Maggie, Peter and

I covered all aspects of volunteer programs – recruitment, supervision, recognition, retention. The first of my three presentations was titled, “Leading Volunteers: Tools and Lessons to Fulfill your Mission.” I closed with the idea that volunteers are more than unpaid employees and need to be paid through motivation and pride.

New Concept

As the symposium progressed, I learned that Russian volunteerism is a relatively new concept. Many of their presentations focused on getting school groups to perform volunteer services. The Russians often became animated as they described their successes. We met the Komorov Botanical Institute's only volunteer, a quiet, unimposing business woman who worked with plants to relieve work-related stress. She had a growing passion for the garden, just like many

American volunteers have for national wildlife refuges.

After the first day of the symposium, we all sat down for a banquet. The Russians had a host of folk songs; we all sang heartily. The American contingent broke into the theme song to “The Beverly Hillbillies,” “This Land is Your Land” and “Jingle Bells.”

We had wide-ranging after-hours conversations with several young professionals in the group and our translators, confirming that passion for the natural world – whether you are a volunteer or paid staff – crosses international boundaries. ♦

Kristen Gilbert is visitor center manager and volunteer coordinator at National Elk Refuge in Wyoming.

hosted representatives from Venezuela's, Colombia's and Argentina's recovery programs.

Disappeared in 1937

Mexico's condor recovery program is closely tied to Hopper Mountain's. California condors disappeared from Mexico in 1937. Mexico began releasing condors in northern Baja California in 2002. Along with a U.S. Condor Program partner, the San Diego Zoological Society, refuge staff has provided on-site assistance in all aspects of pre- and post-condor release management and hosted Mexican specialists at the refuge.

Given the big birds' flight capabilities, the hope is that the reintroduced condors will ultimately range from the Pacific Coast to the Gulf of California, as well as northward across the U.S. border, providing an important link to reintroduced populations in California.

In 2007, Mexico's recovery program took an exponential leap forward when

the refuge, in concert with the San Diego Zoo, transferred two grown condors to the Chapultepec Zoo in Mexico City as seed stock for future breeding. With these birds on display, the Chapultepec Zoo has become only the third institution in the world to have live condors on exhibit. The Zoo is now actively involved in Condor Program outreach. Hopper Mountain Refuge provided the zoo with, among other support, written outreach material and replicas of condor skulls and eggs for display areas.

Hopper Mountain Refuge's condor program has led to other international partnerships. For example, the refuge hosted project managers and provided technical input for Japan's white-crested ibis reintroduction program; that effort is now reintroducing the endangered ibis



A global leader of efforts to protect and reintroduce condors and other bird species, Hopper Mountain National Wildlife Refuge Complex has supported related programs in several Latin American nations as well as in Japan and India. (USFWS)

into historic habitat. More recently, the refuge formed an alliance with a vulture recovery project in India. The alliance or

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Close Cooperation Along Canadian Border

by Chuck Traxler

Detroit River International Wildlife Refuge includes islands, wetlands, shoals and riverfront habitat along 48 miles of the lower Detroit River and western Lake Erie, in both Canada and the United States. Although currently there is no property

(essentially the Canadian Fish and Wildlife Service) – to collectively combine Canadian and U.S. resources to meet international conservation goals.

Waves of canvasback, scaup and other migratory birds are clear signs of the area's international importance to migrating wildlife. And, just below the water's surface, some 10 million walleye migrate through the Detroit River each year, making it one of the best walleye fisheries in both countries. "The birds and fish don't notice the boundary between our nations," says Hartig, "so for us to effectively manage these resources, we need to cross those boundaries ourselves."

Hartig acknowledges that working across a border has its challenges. Getting clearance to enter Canada for meetings, finding funding sources to conduct restoration projects in another



Staff members at Detroit River International Wildlife Refuge – which stretches along 48 miles of the lower Detroit River and western Lake Erie, in both Canada and the United States – are collaborating on a number of conservation projects with their Canadian counterparts. (USFWS)

in Canada officially part of the refuge, the enabling legislation allows for that possibility. Consequently, a large part of refuge manager John Hartig's job involves working closely with several international organizations, Canadian agencies – such as Environment Canada

International Birds and Artists Flock to a Subarctic Refuge

by Brian McCaffery

Each year, avian visitors from around the world converge on Alaska's Yukon Delta National Wildlife Refuge, a subarctic oasis of wetlands that supports migrants from six different flyways. Wheatears from Africa, godwits from Australia and Chile, curlews and plovers from Oceania and songbirds from the Orinoco and Amazon River basins arrive to mate and raise their young. This year, the refuge's international visitors also included a writer/artist from New Zealand and a photographer from the Netherlands.

Keith Woodley, manager of the Miranda Shorebird Centre, and Jan van de Kam, professional wildlife photographer,

spent several weeks on the tundra at the refuge's historic Old Chevak field station, the former site of a native village in the heart of some of the world's richest waterbird habitat.

Woodley, whose hand-painted murals adorn the visitor center at Miranda, is both an educator and an international shorebird aficionado, having joined expeditions to China and South Korea to study, capture and mark migrant shorebirds. Van de Kam's photographs form the visual core of recently published books such as *Shorebirds: An Illustrated Behavioural Ecology* and *Life along Land's Edge: Wildlife on the Shores of Roebuck Bay, Broome*. His images also grace the Web site of the Global Flyway

nation and even needing to communicate with some staff and public audiences in a language other than English are all issues that must be addressed. “However,” says Hartig, “the benefits to the wildlife and people of both nations have greatly outweighed any challenges we’ve had to face.”

In 2007, refuge staff worked closely with Parks Canada, Michigan Sea Grant, Wild Birds Unlimited, Inc. and many other public and private organizations to dedicate a new observation deck on the refuge and prepare a map showing birding destinations on both sides of the Detroit River. While the deck was constructed on U.S. soil, the map highlights internationally significant birding destinations on the refuge, as well as at city, county and state parks in the U.S. and at provincial and national parks in Canada that are just a short drive from the refuge. The joint project sought to raise public awareness of

significant bird habitat and recreational opportunities on both sides of the border.

Over the past few decades, both nations have been working to clean up the air, water and soil that had been degraded in this heavily industrial area. Thanks to these efforts, fish are once again spawning in the lower Detroit River. Refuge staff work closely with co-located U.S. Fish and Wildlife Service ecological services and nearby fisheries staff, as well as U.S. Geological Survey and Environment Canada staff to monitor water conditions and fish populations in U.S. and Canadian waters.

Improving Water Quality

Thanks to improvements in water quality, the river also appears to once again support lake sturgeon populations, but the lack of spawning habitat limited their numbers. So, refuge staff alongside other U.S. Fish and Wildlife Service staff and Canadian professionals launched the first-ever fish habitat

restoration project in the Great Lakes to receive funding from both the U.S. and Canada. Biologists from the two countries engineered and built a lake sturgeon spawning reef in the Detroit River, located in Canadian waters just off Fighting Island. The project was completed in October 2008.

“This is the next big step in raising the international nature of this refuge,” says Hartig. “It was funded, constructed and will be monitored by both nations. And, if the sturgeon and the river perform as we hope, both nations will be able to share in its success.”

You can follow the progress of the Fighting Island spawning reef and other international projects on the refuge’s Web site: <http://midwest.fws.gov/detroitriver> ♦

Chuck Traxler is an outreach coordinator with the Midwest Region.



In Alaska, Yukon Delta National Wildlife Refuge’s rich waterbird habitat attracts international migrants (among them, bar-tailed godwits) from six different flyways – and a growing number of writers and artists. (USFWS)

Network, as well as numerous graduate theses and other scientific publications.

Separate but related projects brought Woodley and van de Kam to Yukon Delta Refuge. Woodley is currently writing a book about bar-tailed godwits, which annually migrate between Alaska and New Zealand. His experiences with godwits in New Zealand, Australia, China and South Korea illuminate

his perspective, but he felt that his effort would be incomplete without a trip to their remote northern breeding grounds.

Vibrant Mosaic

Arriving at Old Chevak in late April, when wintry conditions still prevailed, he witnessed the transformation of the

tundra from a silent and snowy landscape to a vibrant mosaic of wetlands throbbing with bird and insect life. During his six-week stay, he documented re-nesting in a pair of bar-tailed godwits, a phenomenon not previously confirmed on the Yukon-Kuskokwim Delta. With his wealth of new tundra experiences, he returned to New Zealand to continue writing to meet his publisher’s manuscript submission deadline.

Van de Kam journeyed to Old Chevak in mid-May to get the final images for a book on shorebird and wetland conservation in the East Asia/Australasian Flyway. He was particularly interested in photographing birds found around the Yellow Sea, including Alaska’s breeding bar-tailed godwits. During three weeks at Old Chevak, he captured images of godwits displaying, courting, fighting and incubating. Those images were

continued on pg 12

Invasive Animals: A Growing Global Problem – continued from pg 7

the final plan was taking shape, Steve Ebbert was dispatched to New Zealand to witness an eradication campaign. Ebbert, along with former refuge biologist Peter Dunlevy, also took part in a campaign to eradicate rats on Canna Island, off the western coast of Scotland, as guests of the nonprofit organization Wildlife Management International.

Alaska Maritime's rat eradication program on Rat Island got underway earlier this year. Meticulous planning, trial runs and great partners – The Nature Conservancy and Island Conservation – paid off big time. The logistics were incredibly complex. New Zealand pilots were enlisted to drop

the rodenticide because they had vast experience dispersing bait from buckets along lines laid out by GPS. Monitoring in 2009 and 2010 will determine if every last rat is gone from Rat Island and if the ecosystem is beginning to restore itself after 200-plus years of rat domination.

Meanwhile, refuge biologist Art Sowls created a multifaceted rat prevention program to protect refuge birds on the Pribilof Islands in the Bering Sea. His project grew into a large, partnered statewide effort with a Web site, www.stoprats.org, and free rat kits for ships and help lead to tough state laws that make it illegal to harbor rats on boats in Alaskan waters. Russians, New

Zealanders, Australians and Barbadians are keen to design similar outreach programs.

Byrd and Ebbert are now involved in an ambitious effort, coordinated by the University of Alaska Fairbanks with help from the National Science Foundation, to enlist invasive-animal scientists and a host of universities around the globe in a research-sharing network. The project aims to produce guidelines for island restoration. ♦

Poppy Benson is public programs supervisor at Alaska Maritime National Wildlife Refuge.

International Birds and Artists Flock to a Subarctic Refuge – continued from pg 11

incorporated into his book, which was released in October in Changwon, South Korea at the 10th Meeting of the Conference of Contracting Parties to the Ramsar Convention on Wetlands.

In recent years, Old Chevak, has attracted other writers and artists. In 2002, photographer and writer Michael Forsberg stayed there while collecting photographic images and experiences for his seminal work, *On Ancient Wings: The Sandhill Cranes of North America*. Two years later, author and Pulitzer Prize finalist Scott Weidensaul spent a week at the station as he retraced Roger Tory Peterson's continent-spanning journey a half-century earlier. Weidensaul's reflections on Yukon Delta Refuge were recounted in his 2005 book, *Return to Wild America: A Yearlong Search for the Continent's Natural Soul*.

In 2004, British artist James McCallum worked with me as a volunteer at Old Chevak on a study of bar-tailed godwits. McCallum's watercolor images were published in his 2007 book, *Arctic Flight: Adventures Amongst Northern Birds*.

Along with sound science, evocative art can go a long way toward promoting and sustaining the mission of the National Wildlife Refuge System.

♦
Brian McCaffery is an education specialist at Yukon Delta National Wildlife Refuge in Alaska.



Jan van de Kam, a professional wildlife photographer from the Netherlands, spent several weeks on the tundra at Alaska's Yukon Delta National Wildlife Refuge for a book on shorebird and wetland conservation. He captured images of godwits displaying, courting and fighting. The book was released at the 10th Meeting of the Conference of Contracting Parties to the Ramsar Convention on Wetlands.

Wilderness Policy Updated and Revised

For the first time since 1986, the U.S. Fish and Wildlife Service has updated and revised its Wilderness Stewardship Policy. The changes are designed to improve the National Wildlife Refuge System's management of designated wilderness lands – more than 20 million acres on 63 refuges – under the Wilderness Act of 1964.

The revised policy for the first time provides Service managers with guidelines for determining if Refuge System lands should be recommended for wilderness designation. It also clarifies that refuge visitors may use only non-motorized and non-mechanized equipment in designated wilderness areas while hunting, fishing or enjoying other appropriate wildlife-dependent recreational opportunities.

“Our Wilderness Stewardship Policy reconfirms the Service’s commitment to protecting and preserving the wilderness resource while accomplishing the mission of the Refuge System,” said Fish and Wildlife Service Director H. Dale Hall. “This policy will preserve the wild and natural character of wilderness within the Refuge System while providing opportunities for the public to enjoy the solitude of these special areas.”

The new Wilderness Policy is on the Web: <http://www.fws.gov/refuges/whm/wilderness.html>.

The Wilderness Act of 1964 created the National Wilderness Preservation System and a process for federal land management agencies – including the Service – to recommend wilderness areas to Congress. Only Congress has the authority to designate lands and water as wilderness.

The Service published a proposed Wilderness Stewardship Policy in January 2001. That version elicited more than 4,100 comments. The Service also sought input from state fish and wildlife agencies.

The updated policies are designed to ensure consistency with several new management policies established in recent years as well as the Wilderness Act of 1964 and the National Wildlife Refuge System Administration Act of 1966, which was amended by the National Wildlife Refuge System Improvement Act. It also reflects other developments in the policy and science of managing the Refuge System and wilderness.

About 90 per cent – or 18.6 million acres – of Refuge System wilderness is in Alaska. The remaining 2.5 million wilderness acres are in the lower 48 states.

Some specifics about Service’s revised policy:

It affirms that the Refuge System generally will not modify ecosystems, such as creating new impoundments, species population levels or natural processes, in refuge wilderness unless doing so maintains or restores biological integrity, diversity or environmental health that has been degraded or is necessary to protect or recover threatened or endangered species.

It guides the determination of whether a proposed refuge management activity, such as protecting habitat for



For the first time since 1986, the U.S. Fish and Wildlife Service has updated and revised its Wilderness Stewardship Policy. The changes are designed to improve the National Wildlife Refuge System’s management of designated wilderness lands – more than 20 million acres on 63 refuges – under the Wilderness Act of 1964. (USFWS)

a threatened or endangered species, constitutes the minimum requirement for managing a refuge as wilderness.

It describes the process that the Refuge System follows in conducting wilderness reviews in accordance with the refuge planning process as outlined in the planning policy.

It addresses special provisions of the Alaska National Interest Lands Conservation Act for wilderness stewardship in Alaska. ♦

Around the Refuge System



A \$2 million expansion of the Prairie Wetlands Learning Center in Fergus Falls added classroom space for local grade-school students. (USFWS)

Minnesota

Work has been completed on a \$2 million expansion of the Prairie Wetlands Learning Center, which focuses on the ecology of North America's prairie pothole region. The center added four new classrooms, teacher offices, gathering areas and a conference room. The Learning Center is a unit of Fergus Falls Wetland Management District. The expansion was underwritten by a state grant obtained by the town of Fergus Falls.

About 240 fourth and fifth grade students are attending Learning Center classes, thanks to a partnership with the Fergus Falls school district. Much of the time is spent in the center's 30 acres of native and restored prairie, 28 acres of wetlands and four miles of trails. "A portion of every day, no matter how hot or cold, is spent outside," says Learning Center director Ken Garrahan. "We use the prairie wetlands as the context for their learning. They use what they see outside for writing assignments. With

math, when they're learning fractions and percentages, we can ask them, 'What percentage of the grass in this plot is big blue stem?'"

Tennessee

Reelfoot National Wildlife Refuge, a major stopover and wintering ground for migratory waterfowl and bald eagles, is offering three-hour eagle-spotting tours. As many as 200 eagles spend the majority of their winter on and around Reelfoot Lake. Tours will be offered daily through mid-February.

The tours take visitors on both units of Reelfoot Refuge, Grassy Island and Long Point, which have observation towers. Grassy Island, outfitted with a boardwalk, provides photogenic views of Reelfoot Lake while Long Point provides excellent viewing opportunities for eagles, deer, turkey, mink, bobcat and abundant waterfowl.

Sense of Wonder

Donna Stanek, former chief of visitor services and outreach in the Midwest Region, has won the U.S. Fish and Wildlife Service's 2008 Sense of Wonder Award. The award is the agency's highest honor for achievement in environmental education and interpretation.

She was cited for, among other accomplishments, "a long career of significant and extraordinary accomplishments in the Service's visitor services profession which recently include the successful completion of the Ottawa National Wildlife Refuge Visitor Center."

During the past seven years, she coordinated the design, procurement and installation of interpretive exhibits at more than 30 national wildlife refuges.

New York

The Friends of the Montezuma Wetlands Complex organized a fundraising tree sale – a buy one, get one free affair – to assist Montezuma National Wildlife Refuge with reforestation projects. For every tree an individual purchased by October 1 from a local native plant nursery, the business allowed the refuge to buy two trees. The refuge will plant trees along the Cayuga-Seneca Barge Canal to benefit cerulean warblers, bald eagles, wood ducks and other wildlife.

"Our restoration is a long process dictated by the growth rate of the trees," says Montezuma Refuge visitor services manager Andrea VanBeusichem, "so the benefits to the birds will come in about 20 years. However, the outreach potential and volunteer involvement when we plant the trees is a more immediate benefit."

California

San Luis National Wildlife Refuge Complex is included in the National Park Foundation's latest "Top Ten Parks and Public Lands Photo Tips," a guide that highlights the best places to go this fall and winter to see – and

photograph – America’s public lands at their seasonal best. The San Luis Complex is specifically recommended for its “spectacular birding.” The list was developed by the foundation and Olympus, which manufacturers cameras.

Composed of San Luis Refuge, Merced Refuge, San Joaquin River Refuge and a Grasslands Wildlife Management Area, the complex includes nearly 45,000 acres of wetlands, grasslands and riparian habitats, as well as more than 90,000 acres of conservation easements on private lands. The northern San Joaquin Valley complex is in an area whose concentrations of wetlands have been designated as a Ramsar Wetland of International Importance, an Audubon Important Bird Area and a Western Hemisphere Shorebird Reserve Network site.

Alternative Transportation Projects

The U.S. Fish and Wildlife Service received a go-ahead for transit projects worth \$3.25 million in the latest Paul Sarbanes Transit in Parks Program awards. Among the Service projects, \$2 million was awarded to complete a multi-use pathway that will connect Jackson Hole with National Elk Refuge in Wyoming and completing a pathway linking the town to Grand Teton National Park. Other projects include:

Chincoteague National Wildlife Refuge on the Eastern Shore of Virginia gets \$1 million to reduce congestion at the refuge’s fee booths during peak visitor months. One project will connect the refuge’s and Town of Chincoteague’s bike trails.

Bosque del Apache Refuge in New Mexico will receive \$126,000 to replace an aging school bus used for tours and environmental education with an alternatively fueled bus.

San Diego Bay National Wildlife Refuge in California was allotted \$45,000 for an alternative transportation study.

For information on grants, contact the Service’s alternative transportation coordinator, Nathan Caldwell, at 703-358-2205 or nathan_caldwell@fws.gov.

Missouri

Wal-Mart employees from several stores in the Kansas City area have been pitching in to help make a unit of Big Muddy National Fish and Wildlife Refuge a greener and cleaner place.

In late October, some 60 Wal-Mart associates planted 1,900 prairie cordgrass plants and 100 oak and pecan trees on the refuge’s 1,626-acre Baltimore Bottoms Unit. The Wal-Mart associates, who went to work at about 9 in the morning, completed the planting by noon. Wal-Mart provided pastries, juice and coffee and, once the work was done, ingredients for a hamburger and hot-dog cook-out.

a Wal-Mart marketing specialist, first noticed the trash when he went hunting on the refuge. The store, which has launched an environmental initiative, provided a dumpster (eventually loaded with eight tons of trash) and a truck that held a half-ton of material to be recycled. Friends of Big Muddy provided t-shirts and work gloves.

Signs have been posted along the refuge unit boundary designating areas that have been adopted by Wal-Mart.



Earlier in the year, about 75 store employees turned out to pick up and haul out trash washed up on the banks of the Missouri River. Among the mix of rubbish: 2,123 plastic bottles and two refrigerators. Steve Dowler,

Wal-Mart employees in the Kansas City area pitched in to plant cordgrass and oak and pecan trees and, on a later trip to a unit of Big Muddy National Fish and Wildlife Refuge pick up river-side trash. (Tim Haller/USFWS)

Take Pride in America. Refuges Do.

Charles Holbrook, a former project leader at Aransas/Matagorda Island National Wildlife Refuge Complex in Texas, and refuge super-volunteer John “Jack” Webb have won 2008 Take Pride in America national awards. They were recognized by the Department of the Interior for their outstanding contributions to local, state and federal public lands.

Holbrook, who retired from the U.S. Fish and Wildlife Service in June, served at Aransas Refuge for more than eight years. He now lives in his hometown, Port Clinton, OH, on the shore of Lake Erie, not too far from Ottawa Refuge, where Holbrook began his 29 years with the Service – and where, for nearly 15 years, his father was an equipment operator.

Holbrook took a round-about path to the Service. After high school came a four-year-hitch in the Navy; he was a member of the nuclear submarine USS Sam Rayburn’s crew and, along the way, qualified as a Navy diver. Next came college. He took a degree from Ohio State University’s school of natural resources.

Holbrook needed a job to cover his tuition and living expenses, so he signed up with the Columbus police department. “I was cop for almost three and a half years. I worked the 3 to 11 night shift so I could go to classes,” he says. “One weekend, I took a long weekend to visit my dad at Ottawa. While I was there, I asked the refuge manager if he had any jobs. He had an opening, and, after I finished college, I took it.”

For four years, he ran bulldozers, maintained wetlands and participated in an education program or two before taking up new duties at Arthur R. Marshall Loxahatchee National Wildlife Refuge in Florida. Then followed assignments at several other refuges (where *his* kids grew up) and duty in Washington Office’s natural resources division.

At Aransas Refuge, he is remembered especially for his non-stop efforts to engage the public. “He wanted to get kids out to the refuge, and he did,” says Susana Perez, Aransas Refuge’s administrative officer. And they brought their parents. Charlie was one of a kind.”



Charles Holbrook, a former project leader at Aransas/Matagorda Island National Wildlife Refuge Complex in Texas (and a one-time Navy diver; big-city cop and refuge bulldozer operator) won a 2008 Take Pride in America award (USFWS).

Jack Webb

The same might be said of volunteer Jack Webb, who has been a stalwart at Okefenokee Refuge in Georgia since he and his wife made a vacation stop there nearly 20 years ago. Altogether, he has donated more than 10,000 hours. Take Pride in America pegged the value of Webb’s volunteer efforts at more than \$500,000.

The Webbs spend their summers at West Rockhill, PA. During the cold weather, they live near Okefenokee. Initially, the refuge provided them with a trailer home; they soon bought a house not far from the station.

Webb, who ran a landscaping company before retiring, can do a lot of almost anything. He has designed and built a mobile educational exhibit. He’s also pumped out toilets. When Okefenokee Refuge was hard hit by wildfires in 2007, he designed souvenir T-shirts for firefighters and their families that brought in nearly \$25,000 for the refuge. ♦



Super-volunteer Jack Webb (left) on the job at Okefenokee National Wildlife Refuge. Webb, another 2008 Take Pride in America award winner, has been a stalwart there ever since a vacation stop at the refuge nearly 20 years ago. (USFWS)

Using Wildlife to Teach English

by Lori Iverson

An earlier-than-expected snowfall added to the excitement for a group of Jackson Hole High School English Language Learners (ELL) making the first of several trips to Wyoming's National Elk Refuge as part of this year's school curriculum. A new environmental education program, funded in part by the National Fish and Wildlife Foundation, builds on experiences at the refuge and surrounding federal lands to raise the students' proficiency in English and awareness of the natural treasures all around them.

The Jackson Hole Wildlife Film Festival and National Elk Refuge staffs partnered to create a unique bilingual program that targets first-generation Hispanics, whose population has risen exponentially in Teton County in the past 10 years. Under the program, students first learn the names and concepts of wildlife and public land stewardship in the classroom, and then come to National Elk Refuge – with field guides and digital cameras in hand – to see firsthand what they've previously learned only from books.

In late October, the students, along with their teacher, a bilingual translator and staff members from the refuge and the Wildlife Film Festival, embarked on a photography excursion that also let them observe wildlife in the wild. "It was great because we had never seen wild animals in the United States," exclaimed students Erick and Israel. "We saw elk, moose, bison and antelope!"

"It was wonderful to see the students so excited about being outdoors and taking pictures," said teacher Ellen Kappus. "We had just learned the names of some of the animals, and there they were taking pictures of them." Carrie Noel, education coordinator for the Jackson Hole Wildlife Film Festival, was struck by the students' keen interest in emailing their photos to friends and family in Mexico. "They're genuinely interested in sharing their new experiences."

Back in class, the students drew a basic map of the area, noted important place names and viewed their route on Google Earth.

Additional excursions will expose the students to migration routes and wintering wildlife. In January, they will explore National Elk Refuge during a sleigh ride onto wintering grounds, when they can closely observe elk and document their experiences with digital



National Elk Refuge is involved in a ground-breaking language and environmental education program aimed at Hispanic high school students. (USFWS)

cameras and English language entries in their journals. The program will be expanded into a family excursion the following weekend when students can return with their families to share the experience. Eventually, the students will work with refuge staff to prepare Spanish versions of interpretive materials in the Jackson Hole & Greater Yellowstone Visitor Center to share with Spanish-speaking visitors. Their photographs will be displayed at the visitor center in spring 2009. ♦

Lori Iverson, a former teacher, is an outdoor recreation planner at National Elk Refuge in Wyoming.

Big Birds Connect the Americas – continued from pg 9

partnership is designed to promote a free flow of technical information and ideas, and hopefully at some point, even personnel exchanges.

"For Service employees, involvement with international projects is a career

enriching, big picture experience," says Weitzel. "You take your career to a new level, you work outside your traditional comfort zone and adapt and apply your extensive technical expertise to a different political, cultural, and economic landscape. You give a lot of yourself on

these assignments, but you grow a lot in the process -- a very satisfying scenario. You can actively be part of the solution to some of the most pressing conservation issues facing the international community." ♦

Refuge System Funding Did Not Keep Pace, GAO Reports – continued from pg 1

“Already, the Fish and Wildlife Service has had to make trade-offs among refuges with regard to which habitat will be monitored and maintained, which visitor services will be offered, and which refuges will receive adequate law enforcement coverage,” the report stated.

Management Systems International, an independent consultant, came to much the same conclusion in its July report, which found that the Refuge System experienced an 11 percent decline in real purchasing power between FY 2003 and the FY 2008 requested budget.

RONs Backlog

GAO investigators found that the total value of RONs (Refuge Operating Needs System) projects – often called the “backlog” and includes needs for staff, equipment and planned projects – totaled more than \$1 billion by the end of FY 2007. At that time, Tier 1, or mission-critical projects that were considered “behind schedule,” covered about 2,300 unfunded projects totaling about \$300 million.

GAO specifically pointed to the impact of development, including the conversion to agricultural or industrial use of lands near refuges, as contributing to habitat

problems at nearly half the nation’s wildlife refuges. The report found that invasive plants and habitat fragmentation were the Refuge System’s leading problems, and both were increasing on more than half the wildlife refuges – even as managers reported more time spent on habitat management.

Ninety-three percent of refuge managers pointed to increases in administrative workload that took staff time away from habitat management work. Many refuge managers were concerned about their long-term ability to maintain high-quality habitat in the face of decreasing permanent staff levels.

Among other GAO findings:

Between seven percent and 20 percent of habitats on national wildlife refuges were in “poor” quality in 2007.

Managers said that staff was working longer hours without extra pay to get work done, and they were concerned about their ability to sustain habitat conditions.

The quality of visitor services generally scored high. GAO found that four of the six wildlife-dependent recreational uses were provided at “moderate or



In its report, the Government Accountability Office stated that development near refuges, including the conversion of land to agricultural and industrial uses, threatened habitat at half of the nation’s national wildlife refuges. (USFWS)

better quality” levels in FY 2007, but environmental education and interpretation were considered “poor” at about a third of refuges.

Methodology

GAO met with Refuge System staff at the Washington Office and four of the U.S. Fish and Wildlife Service regions, and conducted phone interviews with the remaining four regions. Additionally, GAO met with officials from 19 refuges, used a questionnaire to survey all 585 units within the Refuge System, and selected some refuges for site visits. ♦

Rekindled Memories

The tribute to Wheeler National Wildlife Refuge manager Tom Atkeson in the September-October *Refuge Update* rekindled a lot of memories of this unique personality.

Few but a handful of local Alabamians may recall that in addition to being one of the system’s most astute and intuitive leaders, Atkeson was also the refuge system’s most accomplished self-taught poet. When *Fish and Wildlife News* celebrated its 75th anniversary in 1978, Atkeson contributed this little ditty, among others, to our special edition ...

The Fisherman

With fancy rod and shiny reel,
Boat, motor, trailer, automobile,
And all the gadgets in the book,
From scented lures to gilded hooks,
He doesn’t spare time or expense,
To catch a fish worth fifteen cents.
– Thomas Z. Atkeson

In 1984, Atkeson was the subject of a television homage by veteran newscaster Charles Kuralt on CBS’

“Sunday Morning.” It was the perfect marriage of subject to prose by these two venerable poets, from an era in that long-running show’s history when refuges and wildlife formed a deliciously large portion of its weekly content.

We had the good sense to preserve this touching piece on videotape; ask to see it the next time you are at NCTC or Wheeler Refuge.

David Klinger
Senior Writer-Editor
National Conservation Training Center

A Day in the Life of a Refuge Manager

by Karen Leggett

Tom Jasikoff's e-mails are prompt and brief. After spending a day following in his footsteps and tire tracks, it's easy to see why. He spends little time at his desk, like a bee alighting on one flower before hastening on to dozens more. For the past 11 years, Jasikoff has been refuge manager at Montezuma National Wildlife Refuge, just off the New York Thruway between Buffalo and Rochester.

The Thruway is important. Jasikoff is constantly balancing the need to make the refuge a welcoming place for both wildlife and humans. He has obtained \$2.7 million from the SAFETEA-LU Transportation Bill and the New York State Thruway Authority to create a scenic overlook along the Thruway where he plans to have a kiosk explaining what the refuge is all about. Jasikoff expects to begin construction in 2010.

On this day when I am shadowing him through a typical day, Jasikoff takes pride in the native wildflowers that have been planted on median strips and other grassy areas and points to the water that is being released into a large flat basin. There's a small observation platform and telescope overlooking the basin. Jasikoff is determined to make it a scene worth looking at. "We'll have a watchable wildlife project instead of a weedy meadow," says Jasikoff.

Jasikoff is eager to get moving. We walk along a path to the shores of the New York State Barge Canal, which traverses the refuge, and then climb into a truck to view more of the sprawling refuge. The refuge is part of the Montezuma Wetlands Complex, a 50,000-acre conservation and management project that also includes the state-owned Northern Montezuma Wildlife Management Area as well as land owned

by private conservation organizations and private citizens.

Migration Route for Waterfowl

More than a million waterfowl pass through the complex along with a variety of shorebirds and songbirds. More than



Like many of his counterparts, Tom Jasikoff, manager of Montezuma National Wildlife Refuge, is nearly always in motion, balancing the needs to make the refuge a welcoming place for both wildlife and humans. (USFWS)

250 species of fish and wildlife breed in the area. This wetland complex is one of the most active waterfowl staging and migration areas in the Atlantic Flyway and Jasikoff is eager to expand and protect the most attractive habitat.

Jasikoff stops to show me an earthen berm being built to contain the water that will be released to create another wetland area. "This land wants to be a swamp," says Jasikoff, recalling the land's origins before it was cleared and drained for farmland. Jasikoff is managing the gradual restoration of lands on the refuge, but he is also busy

watching for acquisition opportunities and nurturing partnerships.

We pass the Montezuma Winery along the edge of the refuge and he excitedly describes the partnership that is behind the refuge's annual Wildflowers and Wine Festival. For 2008, the winery unveiled a new wine called the Monarch, with a portion of the proceeds destined for the Friends of the Montezuma Wetlands Complex.

Jasikoff is working with a coalition of community groups and refuge Friends to provide a network of tourism destinations in the Montezuma Complex, including the refuge and the new Environmental Education Center build by Seneca Meadows. Ultimately, all the stops would be accessible from an environmentally-friendly mode of transportation, such as a solar or electricity-powered tram. In fact, the Environmental Education Center already includes a few parking spaces specifically designated for "low emitting fuel efficient cars only."

Back on the refuge, we stop at the visitor center to view the *Wildflowers of Montezuma in Art Form* show, in which local artists sell their work and donate a portion of the proceeds to the Friends and another partner – the Ludovico Sculpture Trail in nearby Seneca Falls, NY. Jasikoff chats with the Friends couple who are running the book store and then with the heavy equipment operator, a resident volunteer living in his RV on the refuge.

Then it's back at the computer, where plans for this visit began weeks ago with, "I'm flexible, but usually in the office by 8 a.m. If you get there before I do, just relax and enjoy the scenery and wildlife."

Karen Leggett is a writer-editor at Refuge System headquarters in Arlington, VA. ♦

A Look Back . . . Rudolf Dieffenbach



Rudolph Dieffenbach (USFWS)

Rudolph Dieffenbach acquired more land for American wildlife than any other figure before or after his era. Born in 1884 in Westminster, MD, Dieffenbach spent 44 years working for the federal government, 27 of them for the U.S. Fish and Wildlife Service. “Dief,” as associates called him, began his career as a junior forester with the Forest Service. In 1925, he was asked

to organize the acquisition of land for the newly authorized Upper Mississippi River Wildlife and Fish Refuge.

After Congress enacted the Migratory Bird Conservation Act in 1929, Dieffenbach took over the new Branch of Lands, where he oversaw the appraisal and acquisition of land for 272 national wildlife refuges. He also became the first Secretary of the Migratory Bird Commission, which one of his associates called “an exacting job at no pay which he handled ably for 18 years.”

An extraordinarily energetic and efficient public servant, Dieffenbach was selected in 1945 to head the new Office of River Basin Studies, created when it became evident that protecting fish and wildlife resources required coordination with the Corps of Engineers and the Bureau of Reclamation on flood control, hydroelectric and irrigation projects. Shortly before his retirement in 1952, Dieffenbach was a delegate to the International Union for the Protection of

Nature in Caracas, Venezuela, where he presented a paper on the effects of dams on fish and wildlife resources.

Rudolph Dieffenbach was honored with the Department of the Interior’s Distinguished Service Award and an impoundment at the Blackwater National Wildlife Refuge in Maryland bears his name. The Refuge System’s Division of Realty presents an annual Rudolph Dieffenbach Award to honor employees who make outstanding contributions to the Refuge System’s land protection mission. When “Dief” died in 1968, he left his wife Anne, five children and 15 grandchildren, and colleagues who said he was “kindly and gentle, fond of people and possessed of a keen wit.” ♦

Send Us Your Comments

Letters to the Editor or suggestions about *Refuge Update* can be e-mailed to RefugeUpdate@fws.gov or mailed to *Refuge Update*, USFWS-NWRS, 4401 North Fairfax Dr., Room 634C, Arlington, VA 22203-1610.



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