



Department of Interior Agency Updates

May 2012

Bureau of Indian Affairs

- Bureau budget specific to invasive species has been about \$3,000,000 in the last few years.
- Funding is dedicated nearly 100% to on-the-ground control of noxious weeds. Some funding is provided to support for biological control research.
- Projects are supported by at least 50% cost-share from other sources.
- In 2010, BIA cooperated with 65 tribes to implement more than 350 projects on over 200,000 acres, in 2011, BIA cooperated with 68 tribes to implement 390 projects on 195,448 acres, and in 2012, BIA cooperated with 78 tribes to implement 403 projects on 161,185 acres.
- A recent estimate states that there are over 13,000,000 acres of Indian trust lands affected by noxious weed species.
- The Bureau cooperated with the FICMNEW committee to help provide speakers for Weeds Across Borders, Northern Rockies Invasive Plant Council, DoD Legacy Grant Program, Society of Range Management and several other conferences.
- The Bureau did participate on the Center for Invasive Plant Management's steering committee to promote weed education and cooperative opportunities for tribes. As of Fall 2012, a tribal member sits on the steering committee.
- The Bureau cooperates with the University of Idaho in their Biological Control program in the Western US and the APHIS biological control center located on the Nez Perce Reservation near Lapwai, ID.
- Reductions in weed control funding results in loss of grazing and agricultural revenues for tribes and tribal members. Seasonal jobs will be lost to local tribal members and contracting pesticide applicators which impact the local tribal economy.
- The limited amount of funds available each year, the cost of contracting services and the increasing costs of pesticide and herbicide diminish the amount of acres treated per year.
- Tribes continue to pursue grant funding sources from State and Cooperative Weed Management Areas throughout the US to supplement their weed programs through various Memorandums of Agreement or Memorandums of Understanding.

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Bureau of Land Management – www.blm.gov/weeds

- The BLM has entered the third quarter of the fiscal year and most BLM field offices have started or are gearing up for their field season and are coordinating with their private, county, and state partners. The BLM is expecting to complete a combination of weed and invasive species inventory (6.6 million acres), weed treatments (240,000 acres), invasive species treatments and restoration

(150,000 acres), and monitoring (1 million acres) that include fuels reductions, emergency fire stabilization, and coordinated weed treatments with private, state and county cooperators. These projects will contribute in part to landscape level initiatives and habitat improvement to priority designated Sagegrouse areas.

- The BLM is providing training to staff and external partners collecting infestation, treatment, and monitoring data as part of the Phase I deployment of the National Invasive Species Information Management System (NISIMS), a web-based spatial database for all invasive species on BLM lands. Upon full deployment, the BLM will be working with Bugwood to develop a Memorandum of Understanding (MOU) to exchange BLM invasive species information.
- BLM has completed the ecological and human health risk assessments for three proposed active ingredients (Aminopyralid, Fluroxypyr and Rimsulfuron) and two currently approved active ingredients (Clopyralid and 2, 4-D). BLM is also preparing the Biological Assessment and will consult with the USFWS and NOAA in pursuant to Section 7 of the Endangered Species Act, this information will be used as part of the analysis for the Supplemental to the Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement. The Notice of Intent (NOI) will be published in the Federal Register later this summer.
- BLM, with FICMNEW, Mexico's National Commission for Knowledge and Use of Biodiversity (CONABIO), and the Canadian Food Inspection Agency, co-sponsored a highly successful Weeds Across Borders (WAB), a biennial trilateral conference being held this year in Cancun, Mexico April 24-27, 2012 with participants from as far as Brazil and South Africa. BLM was recognized by Canada, Mexico and the United States for its leadership and contributions to the 2012 Weeds Across Borders.
- BLM issued policy on the NPDES permitting system for pesticide use near water for the EPA permitted states of Colorado, Idaho, New Mexico, and Washington and coordinated with the remaining state permitting systems for consistent policy implementation.
- The National Fish and Wildlife Foundation awarded \$275,000 through the BLM and the Pulling Together Initiative (PTI) for the development of new Coordinated Weed Management Areas.
- In FY11, the BLM began collecting data for the performance measure identified in the Department of Interior Strategic Plan 2012-2016: Percent Animal Species Controlled. The data gathered indicate that there is a wide variety of invasive animal species identified on BLM lands, from feral pigs to Quagga mussels. The most common species reported are crayfishes, such as northern crayfish, Asian clam, and nonnative fishes, such as brown trout. Over 20 percent of the identified invasive animal populations on BLM lands do receive management action. In FY11, 15 of 182 invasive animal populations on BLM lands, or 8 percent, were reported as controlled under the measure (eradicated). This number is expected to decrease in future years. As more field units begin reporting, the number of populations identified will increase; yet without additional funding and new methods, control efforts will remain stable.
- In FY12, \$243K was distributed to BLM State Offices for aquatic invasive species work (about \$20k/state). Projects included working with state agencies to fund inspection and decontamination staff, designing and distributing educational materials, and nonnative species control projects, such as bullfrog eradication in the upper Missouri River. This money is highly valued by the state agencies.
- FY12, BLM in partnership with Wildlife Forever, placed invasive species education ads in state fishing regulations and recreational publications, totaling nearly 5 million impressions across the west.

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Bureau of Reclamation - www.usbr.gov/mussels/

Overall:

- The 2012 update is in progress for the Reclamation *Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species*. This manual covers five classes of equipment for both aquatic and terrestrial invasive species prevention, see link: www.usbr.gov/mussels/prevention
- Reclamation partnered with Marrone Bio Innovations to develop the bio-pesticide product Zequanox™ to control invasive mussels in hydropower facilities.
- In addition to Zequanox™, Reclamation is evaluating the aquatic herbicide endothall as a possible chemical control for zebra/quagga mussels.
- Reclamation's Technical Service Center (TSC) completed invasive species mapping and restoration planning for invasive weed management at 3 reservoirs as part of dam removal planning on the Klamath River.
- Conducted zebra/quagga mussel monitoring at nearly 400 water bodies through 2011.
- Reclamation participated in a recent Government Accountability Office review of the invasive species program.
- Pesticide Discharge Management Plans and permit applications are being developed throughout Reclamation Offices to comply with the requirements of the Clean Water Act National Pollutant Discharge Elimination System (NPDES) for aquatic pesticide uses.
- Reclamation is developing or revising a number of Integrated Pest Management Plans.
- Throughout Reclamation, there are extensive outreach efforts toward zebra and quagga mussel awareness, such as participation in public events, educational venues, and funding signage and billboard placement.
- Reclamation facilities are developing Facility Vulnerability Assessments to assist in long term planning for potential quagga/zebra mussel infestations.
- Reclamation has developed partnerships and continues to work with other agencies, associations, NGO's, states and tribes on aquatic nuisance species. For example, Reclamation is working with the Colorado Division of Parks and Wildlife for fish rinsing, and fish egg treatments to help prevent transport of quagga mussels during fish hauling. In addition, Reclamation participates through the 100th Meridian, Columbia River Basin Team, other Teams, the ANSTF, the Western Regional Panel, and other organizations.

Aquatic Plant Management Efforts:

- The Mid Pacific Regional Office has an on-going contract with California Department of Food and Agriculture to support their Hydrilla program.
- The Lower Colorado Regional Office treated and controlled 25 acres of Giant Salvinia and participates in the LCR ANS Task Force.

Quagga and Zebra Mussel Efforts:

- Reclamation's TSC completed a research report based on field and laboratory testing of various mussel control coatings to protect underwater structures.
- The TSC, the Lower Colorado Regional Office, and the Lower Colorado Dams Office are planning and conducting a number of research activities, such as Pulsed Pressure testing for quagga mussel control, assessment of UV treatment of quagga mussels at Hoover Dam, and assessment of turbulence treatment of quagga mussel at Davis Dam. In addition, the TSC has developed an agreement for imaging cytometry (FlowCAM) auto-detection and quantification of invasive mussel larvae with Fluid Imaging.
- The Mid Pacific Region has developed a pilot watercraft self-inspection program patterned after the State of Utah's program. In addition, the Region hosted a Water Agency Risk Analysis and Planning Workshop for the Sacramento San Joaquin Delta. The Region also funded a Water Risk Analysis to assess prioritized water body infestation by quagga and zebra mussels, and provided grant funding to address mussel decontamination needs for the Upper Tahoe and Northern Nevada Working Groups.

Riparian/Terrestrial Plant Management Efforts:

- Reclamation participated in the Western Weed Coordinating Committee winter meeting.
- Reclamation's TSC completed a study to estimate evapo-transpiration and associated water-loss costs by saltcedar on the Mojave River.
- The Upper Colorado Region maintained approximately 2,800 acres of saltcedar and conducted Russian knapweed treatments.
- The Great Plains Region developed a new agreement with Larimer County Colorado Department of Natural Resources to control weeds on Reclamation lands. In addition, various weed treatments of approximately 1200 acres completed, a survey and spot treatment of over 5,000 acres of terrestrial weeds was conducted, and 2 purchase orders to control noxious weeds on terrestrial sites were awarded.
- The Lower Colorado Region continues vegetative invasive species monitoring, and spot removal of tamarisk, Arundo, phragmites and other invasive species at Multi-Species Conservation Program Conservation Areas. The Region continued tamarisk removal on more than 1,200 acres with habitat restoration to a mix of upland native vegetation, open water, and marsh habitat. In addition, conducted buffelgrass control at the Beal Lake Conservation Area, and the Region funded a project investigating impacts to southwestern willow flycatcher habitat from defoliation of tamarisk by the tamarisk beetle.

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U.S. Fish and Wildlife Service - www.fws.gov/invasives
Invasive Species Program, National Wildlife Refuge System

- Background

- Invasive plants are the number one problem influencing habitat trends on refuges, according to a 2008 Government Accountability Office (GAO) study, and the amount of time spent on refuges addressing invasive plant issues continues to increase.
- More than 5,600 volunteers have participated in invasive species management activities, such as treatment, inventory, and restoration, on over 415,000 acres of refuge land through the Invasives and Volunteers program since 2003.
- Capacity building for NWRS staff and volunteers has increased with the development of online training programs for staff and volunteers (www.fws.gov/invasives) to supplement the well attended and highly successful NCTC course, Field Techniques for Invasive Plant Management.
- NWRS coordination with the FWS Migratory Bird Program was initiated in 2008 to identify specific islands for removal of invasive species. See accompanying fact sheet.
- Current Status
 - Rats were removed from Desecheo Island National Wildlife Refuge in March 2012. This Caribbean island was once a major seabird rookery and formerly home to one of the largest brown booby (*Sula leucogaster*) breeding populations in the world. Goats, rats, and monkeys have also been removed from the island in recent years.
 - The USFWS Science Advisor and former ISAC member, Gabriela Chavarria, participated in a session on climate change and invasive species at the Weeds Across Borders 2012 meeting sponsored by CONABIO, FICMNEW, and others.
 - Invasive species have been identified as the single most important threat to the NWRS creating numerous ecological and financial challenges. In FY 2011, nearly 2.5 million acres of NWRS lands were infested with invasive plants and approximately 3,000 invasive animal and insect populations were reported. In the same year, the NWRS spent \$15.8 million of base funding to combat invasive species.
 - In June 2011, the Palmyra Atoll National Wildlife Refuge rat eradication project was implemented through a partnership between the US Fish and Wildlife Service, The Nature Conservancy, and Island Conservation. Monitoring efforts over the coming two years will determine the ultimate outcome of the eradication of the estimated 30,000 rats living on the 1 square-mile of land.
 - Rat Island, located in the Alaska Maritime NWR, was declared rat-free in August 2010. Preying on eggs and chicks, invasive rats decimated native bird populations on the island for 220 years. The Rat Island restoration project is the largest rat eradication ever undertaken in the Northern Hemisphere and the first in Alaska.
 - Five Invasive Species Strike Teams, supported by \$2.5 million in annual base funding, and located in key geographic areas throughout the NWRS, provide rapid response to new and existing infestations on refuge lands.

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Branch of Aquatic Invasive Species [project contact]

- The USFWS Aquatic Invasive Species Program has a Regional AIS Coordinator in each of its regions. The Region 7 (Alaska) Coordinator position was recently vacated and has now been filled by Dr. Cecil Rich, who most recently worked as a research supervisor with the Alaska Department of Fish and Game for 4 years prior to starting with the Service overseeing a range of fish and habitat studies. [Don MacLean]

- As part of Congressional appropriations language, the FWS' Southwest Region is working closely with numerous partners including NPS, BLM, and BOR along with the States of AZ and NV to prevent spread of invasive mussels in the lower Colorado River. [Mike Oetker and David Britton]
- As directed by Bureau and Departmental leadership, the FWS continues to work toward "[M]aking the Lacey Act a tool for 21st Century Conservation: One that is effective in controlling import and interstate commerce in injurious species, preventing exotic invasive species from establishing naturally reproducing populations." The agency is working toward this end by more efficiently and effectively promulgating regulations, enhancing rapid screening and risk assessment capabilities, and combining regulatory and voluntary approaches within a comprehensive framework. We look forward to engaging partners and stakeholders as part of the important public dialogue on this issue. [Jason Goldberg]
- On January 23, 2012, the Department, through the Fish and Wildlife Service, listed four species of large constrictor snakes as injurious--the Burmese python, the Northern African python, the Southern African python, and the yellow anaconda. Five other species are still under consideration for listing. The rule took effect on March 23, 2012, when the importation and interstate transportation of live snakes of these species will be prohibited, except as authorized by permit. [Susan Jewell]
- Amphibian Bd petition: In 2009, we received a petition from the Defenders of Wildlife to list all amphibians as injurious under the Lacey Act unless they are certified as free of amphibian chytrid fungus ("Bd"). In September 2010, we published a notice of inquiry in the Federal Register soliciting more information from the public. We received approximately 450 comments. We reviewed this information and are currently examining possible alternatives. The issue is not as straightforward as proposing to list a species--it's extremely complex. For example, if we require importers to provide certification that their shipment is free of Bd, we have to set up the certification program, decide on standards, and then apply it to an entire class of animals coming from dozens of countries. This petition is still under consideration by the FWS. [Susan Jewell]
- CMS development: The Branch of Aquatic Invasive Species has initiated a Comprehensive Management System (CMS) process. The purpose of the CMS is to assess the current program and develop a strategy that will effectively address AIS issues and provide national leadership for our partners and stakeholders. This process will also address the two AIS recommendations of the Sportfishing and Boating Partnership Council and inform the forthcoming Fisheries Strategic Plan update. We have contracted with the Organization of Wildlife Planners to help facilitate the CMS process and expect it to be completed at the end of 2012. [Laura Norcutt]
- Voluntary no-trade agreement: A non-regulatory risk management approach is being developed by industry, State, and Federal partners to voluntarily preclude the importation and trade of highly invasive plant and animal species not already in the U.S. under a Memorandum of Understanding. An ecological risk screening will be used to select the group of risky nonnative species. Such an agreement will facilitate subsequent listing of the species as injurious. [Mike Hoff]

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National Park Service

- The National Park Service (NPS) is an active partner in quagga and zebra mussel management efforts nationwide. Boat inspections, education and outreach efforts are ongoing in many

western parks. Lake Mead National Recreation Area (NRA) continues to require the inspection and cleaning of all slipped and moored boats that are leaving the park. To date, it is the only facility with such a requirement in place. Inspection/decontamination forms are provided to the states of Arizona and Nevada for dissemination to other western states. Efforts at Lake Mead NRA will be enhanced this year, supported by funding from the U.S. Fish and Wildlife Service. In 2011, NPS spent over 2 million dollars on zebra/quagga mussel prevention and containment in 18 units; with the majority of funds expended at Glen Canyon National Recreation Area (NRA) and Lake Mead NRA.

- NPS continues to make progress on the management and control of invasive plants. More than 54,000 acres were treated in 2011.
- The National Park Service is exploring mechanisms to reduce pesticide use for lawn and turf management in parks. NPS maintains extensive lawns such as the National Mall, national historic sites, lawns around visitor centers and even several golf courses. Several pilot parks are cooperating with Beyond Pesticides, a private non-profit organization, to transition from conventional, to sustained turf management. This includes soil management, species selection and organic soil supplements trying to move to more sustainable turf that requires fewer artificial supplements and less maintenance.
- Yellowstone National Park continues its efforts to manage lake trout populations. Illegally introduced into Lake Yellowstone, they were first detected in 1994. Since 1995 fisheries staff in the park have been netting and removing lake trout, in an effort to preserve native Yellowstone cutthroat populations. In 2011, approximately 225,000 lake trout were removed. The park has enlisted anglers to help with control efforts, with fisherman often successful at catching larger and older fish. In 2012 the park will be assisted by a one million grant from the Yellowstone Park Foundation resulting in almost two million for Lake Trout removal. The foundation is working on continuing this support for the next five years.
- NPS is focusing on systematically managing invasive plant populations. Long term planning and invasive plant management plans was completed for Yosemite and ten parks in the northern Rockies this year. Yellowstone and the Great Lakes parks will complete planning efforts by the end of year. In addition national guidance is being prepared to assist parks with invasive plant planning efforts.
- On September 15th, 2011 the Olympic National Park in partnership with the Bureau of Reclamation, and the Lower Elwha Klallam Tribe, and local and state governments and outside public interest groups began dismantling the Elwah and Glines Canyon Dams on the Elwah River in Northwest Washington State. This is the largest dam removal project in U.S. history is intended to restore the river system and native salmon populations in the areas. The removal of the dam will expose miles of bare soil vulnerable to plant invasions. In preparation known populations were treated. Restoration plans include monitoring and treatment for invasive plants if they should emerge. The remoteness of the site and few invasive plant populations in the vicinity will make large scale invasion less likely.
- With funds provided from the Environmental Protection Agency for the Great Lakes Restoration Initiative, NPS has been able to take a leadership role in invasive species management in the area. In cooperation with the University of Wisconsin created the Great Lakes Early Detection Network; doubled on-the-ground invasive species control in six parks; added a Sea Grant partner and seasonal interpretive staff to nine parks reaching over 100,000 individuals directly in the parks, schools and at public outreach events, and; in cooperation with local groups placed 59

Stop Aquatic Hitchhiker billboards along high traffic roads en route to parks and other natural areas.

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US Geological Survey (USGS)

- The USGS 2012 budget terminated the National Biological Information Infrastructure (NBII). All resources, databases, tools, and applications on nbii.gov were removed on January 15, 2012. For more information, please refer to the NBII Program Termination page, accessible from www.nbii.gov Invasive species partner products are not affected directly: Global Invasive Species Information Network, Global Invasive Species Database, Nonindigenous Aquatic Species Database, Invasive Plant Atlas of New England, and Invasive Plant Atlas of the Mid-South, Cactus Moth Detection and Monitoring Network, IABIN Invasives Information Network (I3N), NISbase, Discover Life identification guides
- USGS was able to address the shortfall resulting from the termination of NBII for the Nonindigenous Aquatic Species (NAS) database. USGS is committed to maintaining the database. Currently, USGS is undertaking profile reviews, including sending species profiles to specialists for updating, working with museum data to get exact locations and dates, modeling potential distribution with USGS collaborations using maxENT for problem and potential problem species, and adding environmental layers onto maps. Additionally, NAS is working to get information on the Asian tiger shrimp invasion circulated.
- As part of the interagency efforts to prevent Asian carp from becoming established in the Great Lakes, (being led by the White House's Council on Environmental Quality), USGS published a study identifying rivers potentially suitable for spawning of Asian carp in Lake Erie. This will allow targeting monitoring efforts for early detection. USGS scientists are also working closely with private industry to develop a chemical formulation for a new control method that can specifically target control of Asian carp and hope that field testing of the chemical formulation will begin as early as this spring. Additionally, USGS is researching use of seismic technology to contain Asian carp; determining the potential use of pheromones or food cues to herd Asian carp; and developing and improving existing molecular tools to detect Asian carp in areas of low abundance.
- USGS scientists conducted or participated in several studies on Burmese pythons. One study looked at the ability of Burmese pythons hatchlings from the Everglades to tolerate salinity and the findings suggests that open ocean and estuaries are both possible pathways through which pythons could expand their range. These results could help in future control efforts or help to predict potential range expansion. Another recently released study with collaborators from USGS, NPS, and university scientists, linked the decline of mammals in the Everglades National Park to invasive Burmese pythons.
- USGS scientists have been working on the brown treesnake early detection network, new methods of control including arial application of toxins, and using dogs for detection.
- As part of the Great Lakes Restoration Initiative, USGS is developing innovative Phragmites control measures to keep this rapidly spreading invasive plant from further expanding its range into new wetland habitats and to aid in the development of successful restoration strategies. The project seeks to determine if fungi that live within the Phragmites are enabling the plant to take over habitat used

by native plants and examining gene silencing technology to help control the spread of invasive plants by “switching off” a gene that, for example, contributes to the plant’s ability to spread.

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Aquatic Nuisance Species Task Force

The Aquatic Nuisance Species Task Force (ANSTF) held their spring meeting in Annapolis, MD, from May 2-3, 2012. During this meeting, the ANSTF approved their 2013 – 2017 Strategic Plan, the establishment of an ad-hoc committee to address a step-down operational plan, and the establishment of a New Zealand Mud Snail Ad-hoc Committee. The ANSTF co-chairs and Executive Secretary plan to meet with Doug Austen, the National Landscape Cooperatives (LCCs) Coordinator, to explore potential opportunities for the ANSTF to coordinate with LCC efforts. ANSTF members discussed the FY 13 President’s budget, which includes zeroing out FWS funding the state/interstate ANS management plans. Members and Regional Panels voiced concern for this lack of funding, and AFWA reported support for restoring this and additional funding for the plans.

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