



US Army Corps  
of Engineers

# The Corps Environment

January 2009

Vol. 10, No. 1

## Cleanup of Drury Gulch landfill complete

By Alaska District

The U.S. Army Corps of Engineers, Alaska District, has completed the Remedial Action for the \$23 million Drury Gulch Formerly Used Defense Site (FUDS) cleanup project on Kodiak Island.

The six-acre site was used as an unregulated dump by the U.S. military after World War II. Metal debris including wrecked aircraft engines and fractured electrical equipment had been

reburied over many years. The undocumented history combined with the naturally complex soil and bedrock structure made site investigation and remediation challenging.

Since 2003, the Corps of Engineers has removed more than 19,000 tons of polychlorinated biphenyls (PCB)-contaminated soil and 450 tons of trichloroethylene (TCE)-contaminated soil from land now owned by the U.S. Coast Guard. The containerized soils were transported to the Columbia Ridge landfill in Arlington, Ore., for final disposal. The site was then covered with a minimum of 2-1/2 feet of clean soil, graded to blend with the natural ground contours.

The project also realigned a drainage channel to minimize drainage through the site. In accordance with the 2003 Decision Document, the Corps of Engineers will monitor the site for five years and then turn over long term



The completed cleanup project at Drury Gulch landfill on Kodiak Island. (Photo by Valerie Palmer, Alaska District)



The FUDS clean up team takes samples of contaminated soil at Drury Gulch. (Photo by Charley Peyton, Alaska District)

monitoring to the Coast Guard.

The FUDS cleanup team included the Corps of Engineers and its contractors, Jacobs Engineering and BC Contractors/ Jacobs Engineering, Joint Venture; the U.S. Coast Guard; the U.S. Environmental Protection Agency; the Alaska Department of Environmental Conservation; and consultants for the environmental agencies. Site investigations began at Drury Gulch in the mid-1990s and excavation of contaminated soil began in 2003.

## Clean and Green environmentally impacts Gardez

By Brenda L. Beasley  
Afghanistan

Few trees are on the valley floor. Rugged mountains make travel difficult. The city, at an elevation of about 7,600 feet, nearly a half-mile higher than Denver is about the size of South Carolina. The terrain looks like a cross between the Badlands of South Dakota and the Painted Desert of Arizona. This is the city of Gardez, the capital of the Paktia Province in Afghanistan, where the U.S. Army Corps of Engineers, Afghanistan Engineer District (AED), has established a successful Clean and Green program that is helping to sustain the environment, with a Horticulture

and Re-Forestation Program on the horizon that could help further economic growth.

At the Afghan National Army (ANA) Garrison in Gardez, AED worked with the U.S. Agency for International Development, to collect and treat wastewater on the base for reuse in certain applications and to conserve clean treated groundwater as potable water. Instead of drawing down the aquifer, the current status and health is unknown, recycled water is now used repeatedly for watering gardens, washing vehicles and flushing toilets. "Fresh water in Afghanistan is like gold," said Jon C. Allen, the AED operations and

See Gardez page 12

Inside this issue:

Cleanup of Drury Gulch landfill complete	1
Clean and Green environmentally impacts Gardez	1
Australia's International Riverfoundation honors Jacksonville District for Upper St. Johns River Basin	2
Washington's first wetland bank celebrates success	3
Army Corps leads offensive strategy against invasive foe	4
Bulletin offers guidance to map, monitor invasive species	5
National Water Team delivers water relief to hurricane victims	6
How do you spell cooperation? "RRAT!"	8
Special event commemorates Buffumville's 50 years of flood risk management	10
Corps helps open possibilities on Davids Island	11
Environmental Restoration Project of Wolf River holds dedication ceremony	14
Awards	15
Fight the frost this winter: Tips to keep warm, save energy and help the environment	16

# Australia's International Riverfoundation honors Jacksonville District for Upper St. Johns River Basin

By Barry Vorse  
*Jacksonville District*

A project engineered by the of the U.S. Army Corps of Engineers, Jacksonville District has won the Australian based International Riverfoundation's International Thiess Riverprize for 2008.

The river advocacy organization honored the project co-sponsors, the St. Johns River Water Management District (SJRWMD) and the Corps' Jacksonville District for the Upper St. Johns River Basin

Project earlier this fall. Jacksonville Deputy District Engineer for Project Management, David Hobbie, accepted the award for the Corps.

"Maurice Sterling (SJRWMD project management director) and I agreed that we know we both do some great work," Hobbie said. "But when an international body recognizes that fact on a major stage, it really means a great deal to our organizations and to all of the many individual experts involved from both agencies."

"The St. Johns River Basin

Project is a large wetlands restoration initiative which addresses environmental degradation and flood control in the headwater region of the St. Johns River," said Professor Paul Greenfield, the Riverprize judging panel Chair. "It is one of the largest river restoration projects in the

counted 60 Ospreys, fish-eating hawks, during a 90-minute airboat tour of the project in an area where none had existed prior to the project. The results were so positive that the project was used as an example of success when other efforts toward restoration, such as the Kissimmee River and

the Everglades were being championed.

This is the 10<sup>th</sup> year of the International Thiess Riverprize, which began as an initiative to award best practices for restoration and the sustainable preservation of rivers and waterways. More than \$2 million has been awarded in

river restoration work.

"It's inspiring to see such dynamic projects across the world improving our waterways' ecological sustainability," Greenfield said. "The inspirational outcomes of this initiative exemplify the spirit of the prize and it's an honor to reward a project that has done such a brilliant job delivering such exceptional results."

Jacksonville District personnel who have served as project managers for the project include Mike Ornella, Pete Milam and Steven Robinson.



Jacksonville District Deputy Engineer for Project Management David Hobbie, second from right, traveled to Brisbane, Australia to accept the Thiess Riverprize on behalf of the St. Johns River Water Management District. (Courtesy Photo)

U.S. and represents a 30-year collaboration between state and federal water managers. The project uses innovative approaches in design and management to combine environmental benefits with flood risk mitigation over 60 kilometers of river length and thousands of acres of floodplain.

Located at the headwaters of the St. Johns River and originally designed as a flood risk mitigation effort, the project became an example of habitat restoration. In 1999 following the completion of one phase of the project, Corps personnel



US Army Corps  
of Engineers

*The Corps*  
**Environment**

is printed quarterly by the U.S. Army Corps of Engineers as an unofficial newsletter published under the provisions of AR 360-1. The purpose of this newsletter is to provide information about Corps environmental actions, issues, policies and technologies. Opinions expressed are not necessarily those of the U.S. Army. Inquiries can be addressed to U.S. Army Corps of Engineers, Attn: CEHNC-PA, P.O. Box 1600, Huntsville, AL 35807-4301. Phone: 256-895-1694 or fax 256-895-1689.

**Lt. Gen. Robert L. Van Antwerp**  
Chief of Engineers

Publisher

**Suzanne Fournier**

Chief of Public Affairs

**Stacey Hirata**

Executive Editor

**Nancy Sticht**

Acting Managing Editor

**Jenny Stripling**

Acting Editor

## Submissions

*The Corps Environment* welcomes submissions. Please send your articles, photos, events, letters or questions via e-mail to:  
[debra.valine@usace.army.mil](mailto:debra.valine@usace.army.mil).

Deadline for submissions:

Feb. 15 (April issue)

May 15 (July issue)

Aug. 15 (October issue)

Nov. 15 (January issue)

All submissions are subject to editing.

*The Corps Environment* is available on the World Wide Web at: <https://environment.usace.army.mil>

Printed on recycled paper

50 percent post-consumer



# Washington's first wetland bank celebrates success

**F**rogs and birds rustle in the undergrowth hidden by thick young alders in a wetland laboratory of a sort in south Everett, Wash., while dignitaries and volunteers gather nearby to celebrate the creatures' soggy home.

The Paine Field mitigation bank was the first bank ever approved by the regulatory agencies in the state of Washington.

In April, regulatory agencies determined the bank sites had matured enough to be considered an ecological success, allowing the entire site to be made available for mitigation. Agency officials, community leaders and volunteers gathered Sept. 25 to celebrate the final approval.

"This bank was only possible through the collaborative efforts of the federal and state agencies, Snohomish County and the airport nearly a decade ago," said Col. Anthony Wright, commander of the Seattle District.

In 1996, Snohomish County began developing a wetland mitigation bank with the help of the Department of Ecology, the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers

and the Federal Aviation Administration. Evan Lewis and Gail Terzi were the Corps' key players in the effort, along with Snohomish County Airport's Bill

Lewallan (also known to local volunteers as the "Frogfather") and a multi-agency team.

As a regulatory agency, the Corps must balance the need for development and protection of the environment. Mitigation banking is a product of that need for balance, providing wetland functions in advance of impacts and improving the certainty of mitigation success.

The bank is actually two separate sites, Swanson and Narbeck—that provide 58

acres of wetlands and buffers—13 and 45 acres respectively. The sites provide storm and floodwater storage, wildlife habitat for small mammals, amphibians, and aquatic insects, and environmental education with a shelter, nature trail, interpretive signs and greenhouse for the public.

Built in 1998, this project came a decade before the enactment of the federal government's mitigation rule, which encouraged mitigation banking this summer.

*continued on page 7*



**Krista Rave with the Environmental Protection Agency shares information about mitigation features with Everett Herald reporter Bill Sheets** (Photo by Patricia Graesser)

## More stories available online

Internet exclusive stories for this issue are:

- Emerald Ash Borer found at Wappapello Lake
- Regulatory Field Office keeps tabs on Western North Carolina water quality
- Land renewal program assesses, cleans

former defense sites across Alaska

- Funding available for environmental research and development
- Engineering graduates in demand

Online exclusives can be found at:

<https://environment.usace.army.mil>

# Army Corps leads offensive strategy against invasive foe

## *Defending the countryside to restore an ecosystem*

By Amy Echols  
Portland District

A ring of trees surrounds Fall Creek Dam in Oregon's Willamette Valley. This ring of forested land starts at the lake shore on Corps of Engineers property and ends several hundred yards back on private land, clear cut years ago by timber companies.

The clear-cut area looks something like a playing field, with the trees acting as spectators on a game with very high stakes.

"People don't realize that the cleared land outside the ring provides the ideal setting for millions of seeds from invasive, noxious plants to take root," said Wes Messinger, a botanist with the Willamette Valley Project. "If they get even a small foothold, these players can ruin playing fields everywhere," he said.

Invasives wreak havoc, acre by acre, on natural ecosystems, Messinger said. Seeds know no boundaries and move across the Willamette Valley, along the Columbia River.

While people are beguiled by the seeming benefits of certain invasive plants — think the juicy summer fruit of the Himalayan blackberry — weeds hurt everyone. They suffocate the natural habitat of animals and wildlife, degrade agriculture and timber production and impact recreation opportunities.

Soil disturbances at Corps projects, from the construction of dams, campgrounds, parking lots and boat ramps left the land vulnerable to invasion by reed canary grass and other species. Add to that the impact of altered hydrological regimes and

millions of visitors to Corps lands every year, and the problem becomes clear.

"Although we didn't clear-cut trees around our reservoirs in the Willamette Valley, we remain responsible for restoring our property," Messinger said.

Since the 1970s, the Corps has been working to hold a defensive line on the environmental integrity of its property.

However, the value of Corps lands to the environment and the ultimate success of invasive plant eradication depend largely on the behavior of its neighbors.

Natural resource planners like Messinger are developing an offensive playbook to make it easier for land-owning neighbors and public agencies to balance the quality of land management together, so everyone scores more points in the game.

Today, the Corps is a first-string player in an offensive play in the Fall Creek area of the Middle Fork Willamette River watershed. The opposition's roster includes some bad characters, but one in particular stands out: false-brome.

False-brome is an aggressive Eurasian grass that is encroaching on native woodlands, meadows and forests near Eugene, Ore. In addition to suffocating native flora, dense growths of false-



Crews apply super-heated foam along a Willamette Valley roadside as an experimental method for controlling false-brome. (Photo by Matt Blakely-Smith)

brome may alter fire regimes and increase the risk and rate of spread posed by wildfires. The species itself appears to be fire tolerant, resprouting within two weeks of a burn. Appearing to thrive in clear-cut areas, false-brome is clearly a pernicious weed that likes its new playing field.

The Corps is a veteran player on the False-Brome Working Group, a team of academic institutions, public land management agencies, timber interests and environmental groups. Teamwork during early detection periods builds biological knowledge and momentum for weed control and eradication that covers more territory than any one agency or volunteer group could touch on their own.

"With the early detection of the

See Foe page 5

continued from page 4

false-brome, we have a chance to play offensively, saving us time and money later,” Messinger said.

More recently, neighbors in the watershed established a local partnership to put Working Group knowledge into action. Land managers, including the Corps, selected the Middle Fork Watershed Council to quarterback an on-the-ground game to combat false-brome.

“This group sent 2,000 letters to private land owners, and in response, several dozen will begin treatment soon,” Messinger said. “This means we will hit the ground running with treatment and restoration.” Partners like the Willamette National Forest, Bureau of Land Management, Oregon Department of Agriculture and private timber companies are key to gaining this momentum, he said.

Controlling the spread of invasive plant species is like managing a wildfire: you don’t go into the center

— you surround it, Messinger explained. Control efforts can extinguish plant “hot spots” outside the main infestation area, and control spread by treating along trails, roadsides and in parks.

“Once an area is clear of an invasive plant, native species must be planted to help re-establish the native ecosystem,” he said.

A good defense means keeping the opposition contained. Interpretive signs at public facilities can educate the public about how to prevent tracking noxious weed seeds outside the area. Information posted around work sites reminds workers and field maintenance crews to remain alert. Keeping the Corps’ own house clean by treating infestations on its land, distributing weed field guides and replanting cleared areas with native species is an ongoing task for the Portland District’s environmental



**A Willamette Project employee uses heavy farm equipment to knock down an invasive and suffocating stand of Himalayan blackberry.** (Photo by Wes Messinger)

stewardship teams.

“It’s a hundred times easier to fight the opponent while we’re still in the game than it is to fumble, lose ground or sit on the sidelines,” Messinger said. “With strong teams and a wider understanding of the impacts of invasive species on our ecosystem, we’re rewriting the playbook and stand a good chance at returning our ecosystem to a functioning state.”

## Bulletin offers guidance to map, monitor invasive species

By Pat Guertin

**A** new Public Works Technical Bulletin (PWTB), “General Mapping Guidelines for Terrestrial Invasive Plant Species,” provides an overview of strategies for mapping and monitoring invasive plant species on Army installations.

Military training and testing create unique challenges for sustainable land management. These activities often create disturbances that affect the functioning and sustainability of the training landscape. Vehicle traffic, munitions impacts and similar occurrences that disturb soils and plant life can facilitate the establishment and spread of invasive plant species.

These plants are of concern to the military land manager as they can adversely impact soil stability, water quality, Soldier safety and threatened and endangered

species habitat. To effectively manage the occurrence and spread of invasive plants, land managers need a practical system to survey and map the distribution of invasive species populations.

This PWTB discusses mapping and monitoring methodologies that provide military land managers with comprehensive, objective data on plant distribution and spread to establish priorities and measure outcomes of a weed management program. Topics covered include survey methods, data collection/quantitative methods, information on remote sensing and useful information links to applicable federal, state, and academic agencies.

PWTB 200-1-54 can be downloaded from [http://www.wbdg.org/ccb/ARMYCOE/PWTB/pwtb\\_200\\_1\\_54.pdf](http://www.wbdg.org/ccb/ARMYCOE/PWTB/pwtb_200_1_54.pdf)

POC is Pat Guertin, 217-373-5857, [Patrick.J.Guertin@usace.army.mil](mailto:Patrick.J.Guertin@usace.army.mil)

# National Water Team delivers water relief to hurricane victims

By Ann Marie R. Harvie  
New England District

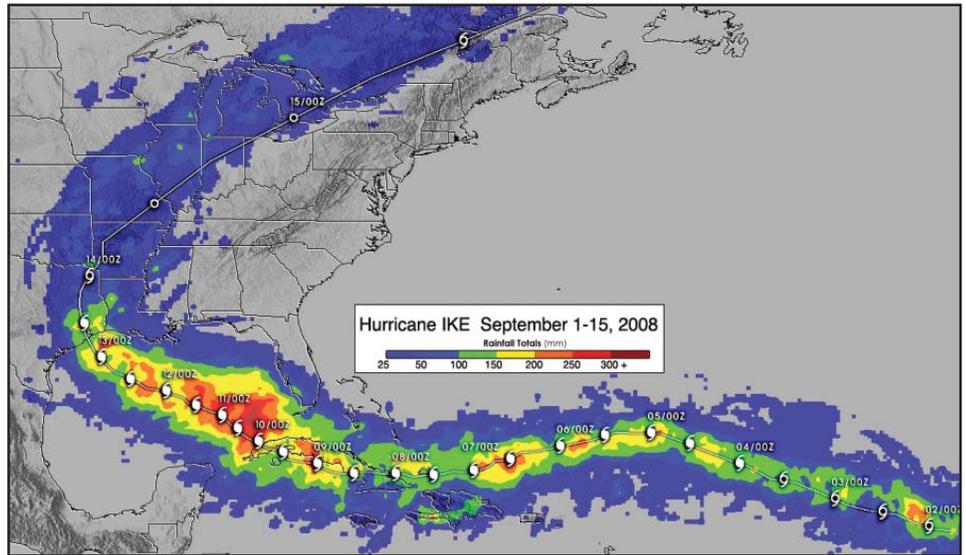
When Hurricane Ike slammed into the U.S., Sept. 13, it left a trail of devastation in Texas that flattened hundreds of homes, flooded barrier islands, knocked out power and eliminated other human necessities, including clean drinking water.

While the Corps of Engineers is heavily involved with the Federal Response Team in all recovery efforts, its National Water Team, based out of New England District's Emergency Operations Center (EOC) in Concord, Mass., brings relief to individual hurricane victims by the truckload — delivering bottled water to The Federal Emergency Management Agency emergency points of distribution (PODs) every day. Three days after the storm made landfall, more than 5 million bottles of water from as far away as Florida were delivered to hurricane victims.

The massive effort to move



In this NASA satellite photo, Hurricane Ike barrels toward Texas as a Category 2 storm. (Courtesy Photo)



NASA's Tropical Rainfall Measuring Mission satellite assesses Hurricane Ike's rainfall. (Courtesy Photo)

hundreds of trucks filled with the life-saving water on a daily basis was carefully coordinated by the Water Team, FEMA, and the Corps' water contractor, IAP, Inc., of Irmo, S.C.

Even before Ike entered the Gulf of Mexico, New England District's

EOC and the National Water Team prepared to provide any assistance requested by FEMA on behalf of hurricane victims. The National Water Team's Action Officer, Mike Keegan, traveled to the National Response and Coordination Center in Washington, D.C.

Sept. 2 in response to Hurricane Gustav,

which had impacted the coast of Louisiana, about a week prior to Ike. His role is to serve as liaison between the Corps and FEMA headquarters officials.

"Mike has been working diligently to relay requests and orders for water to the team members working out of the EOC," said Dave Schafer, chief of the district's EOC.

A 16-member water team of New England District and Kansas City District volunteers performed quality assurance on the ground.

"When the trucks would come into the site, the team members received the product, filled out paperwork for tracking purposes so the contractor could be paid properly and tracks the water as it left the warehouse area to go to the FEMA POD's," Schafer said. "They open up the trucks, inspect them to make sure nothing was damaged during delivery and ensure packaging according to FEMA specifications."

Mission Managers Heather Sullivan and Dave Goodrich maintained

See Hurricane page 7

## Hurricane

continued from page 6

constant contact with Keegan in Washington as well as the Water Teams on the ground at the disaster locations. They relayed updated requests, water orders and locations to contracting officers Sheila Winston-Vincuilla and Rachael Raposa.

“When Mike received word from FEMA on their needs, I called the contractor and gave a verbal notification, and we worked with Mike to get the funding and place the order,” Raposa said. “We came up with a delivery schedule that the contractor could meet and coordinated the product delivery.”

Plans often change in a disaster recovery mission, and often the location of the water delivery must be altered to meet the needs of the victims receiving it. When that happens, the Water Team in Concord coordinates with the contractor to contact each driver by cell phone to give them the new location. Sullivan and Goodrich also track how many trucks of water have been delivered against what has been ordered for that day and relay that information to Keegan to ensure that FEMA is getting all it needs to help the victims.

Schafer and Rachel Fisher of the district EOC ensured that the team was staffed with adequate support in the field and in the Concord Office and

performed logistical duties for the team such as travel orders and funding.

The National Water Team and the EOC worked 12- to 16-hour days, seven days a week to make sure that hurricane victims had enough to drink.

“Obviously we’ll stay in place as long as we’re needed,” Schafer said.

Water Team members on the ground were: Steve Patchkofsky, Brett Markure, Duban Montoya, Phil Morrison, Reese Piper, Jeff Mangum, Dale Berkness, Jay Mackay, Darrell Moore and Jim Hachigian from New England District; and John Skelton, Willem Helms, Dereck Wansing, Jared Mewmaw, Josh Marx, Mike Daro, and Dennis Wallace from Kansas City District.

## Wetland

continued from page 3

The EPA and the Corps issued new federal rules regarding mitigation in June 2008. To reduce risk and uncertainty and help ensure that the required compensation is provided for wetland impacts, the rule established a preference hierarchy for mitigation options. The most preferred option is mitigation bank credits, which are usually in place before the activity is permitted. However, the mitigation sequence (first avoid, then reduce, then mitigate impacts) is retained in this rule.

“The future of wetland mitigation will look like the Paine Field bank,” said Jay Manning, director of the Department of Ecology. “We can use this project as a model, applying the lessons learned from this banking approach to future projects throughout the state.”



Seattle District Commander Col. Anthony Wright discusses mitigation banking with Snohomish County Airport Director Dave Waggoner and Pete Mills, of Congressman Jay Inslee’s office. (Photo by Pamela Graesser)

“Our region’s wetlands and small streams are not only home to salmon and other threatened and endangered wildlife, but they also prevent flooding and protect us from storm damage,”

said Elin Miller, EPA’s region 10 administrator. “Our new wetland mitigation rule will help ensure ecological success, while providing greater consistency and predictability for property owners and developers.”

Thanks to Lewallen, and a host of forward-thinking individuals at all levels of government, future county airport projects can tap into the bank’s credits to offset wetland losses that cannot be avoided, and community members — people, birds, frogs and bugs — can enjoy a peaceful retreat in the heart of south Everett.

*The U.S. Army Corps of Engineers, Washington State Department of Ecology, U.S. Environmental Protection Agency and Snohomish County all contributed to this story.*

# How do you spell coc

By Alan Dooley  
St. Louis District

Each summer, the River Resources Action Team (RRAT) quietly meets on the Mississippi River, in the U.S. Army Corps of Engineers, St. Louis District's stretch of the river.

This year the group met for two days, moving downriver from the northernmost extent of the District, just below Lock and Dam 22 at Saverton, Mo., to the Corps' service base in St. Louis. Next year they will start in St. Louis and travel to the end of St. Louis' area of responsibility, almost 200 miles away, at the confluence with the Ohio River. Then they will return to the northern half of the District a third year. And so on.

During the journey, about 50 representatives of the Corps, other federal agencies, state agencies from both sides of the Mississippi River and non-governmental organizations like The Nature Conservancy and the American Land Conservancy, along with the occasional news reporter, focused their attention on the state of the Mississippi River and its future.

This year, as in many recent years, the journey was made via Barge 53, a flat barge with a weather cover at one end, pushed by a Corps tow boat.

"It wasn't always an endeavor this size," said Claude Strauser, a retired river engineer who made the trip again this year. "The first time we did this was in June of 1972. It involved about six people who went out onto the river to view results of our first attempt to modify traditional river engineering structures to accommodate environmental goals. We went to see how a series of dikes that were notched to create islands were performing," Strauser recalled.



This arch-shaped structure, called a chevron serves navigation by directing the river's energy into the channel to scour its bottom. At the same time it diverts energy to maintain a side channel and protects the upstream end of a nearby island. Finally, careful examination of the left end of the structure will reveal fishermen, attracted to the deep hole and trailing sand bar that has built up downstream of the structure. (Photos by Alan Dooley)

On that occasion, someone commented that it was valuable to get out of the office to be able to focus on the river. On the return trip the discussion drifted to how this might be a good thing to do again.

And the "Annual Mississippi River Coordination Trip" was born. But that name didn't really lend itself to a catchy, easily-remembered acronym, so eventually the RRAT emerged.

During the trip there's a lively interchange and exchange of information between many agencies and groups that at best had ignored each other and at worst opposed each other.

"In the early years we did a lot of scowling at each other, but that takes more muscles than smiling; finally we gradually broke down and agreed to see if we had any goals in common," retired Corps veteran Strauser said.

"Today, while we may not start everything together, we are all honestly determined to seek what we refer to as 'and' answers to challenges," Strauser said.

"We want to identify ideas that will make navigation safer and more efficient, avoid causing problems for water users and provide environmental benefits," Strauser said.

"We definitely don't want to find 'or' answers. If we define an answer that will do one thing 'or' another, then we are picking a winner and appointing a loser," he said.

In the course of RRAT trips, discussion topics cover a gamut of concerns. This year for example, they included: proposed fish passages at Locks and Dams 22 and Mel Price, an update of the Navigation Ecosystem Sustainability Program, dredged material placement, the Mississippi River Water Trail and the status of levee repairs following the floods of 2008. Rather than simply something for everyone, there was a lot of things for a lot of people.

The agenda, distributed in advance, allows for instant interjection of passing sights.

"There! Those are Asian Carp.

# Operation? 'RRAT!'

There's a whole school of them."

"If you look to the right, that's where the levee at Winfield, Mo., was overtopped and breached this summer," another person announced as the barge passed.

Brian Johnson, who headed this year's program for St. Louis District, told of the many unforeseen benefits of such gatherings.

"It is amazing to bring people together who are separated by geographic boundaries and agencies that may not have had a history of working with each other. The sense of partnership that arises is really remarkable," Johnson said.

"A lot of times we suddenly realize that we have common or complementary interests. One group may want to get rid of water while a neighboring interest desperately wants water. You see it now in our PL-84-99 levee repair work. We are working hard to repair the damaged levees but also striving to find ways to improve the environment at the same time," he said.

Johnson, the ecosystem restoration business line manager, says he never ceases to be amazed what people can achieve if they collaborate without concern for who gets credit or whose name will be attached to a project.

Business line managers are a relatively new entity in the Corps. They seek to bridge areas of interest, such as planning, engineering, environmental, contracting and resource management to make things happen.

"You have to be willing to be truly collaborative and understand that success comes from getting projects on the ground that improve habitat and the environment. No single agency or individual can make it happen alone," Johnson said, discussing the recent success of more than 20 agencies working together on a watershed

planning study aimed at improving the middle Mississippi River.

A key element of success of the RRAT trip is a willingness to give anyone the floor to present their ideas. Questions are asked in an unfettered environment. Nobody seeks gain over other participants.

Craig Uyeda from the Arkansas Game and Fish Commission was onboard for this year's trip.

"We have held cooperative meetings of this type in Arkansas, but this takes it to a whole new level. I'm going to take some of these ideas back and see if we can form a group like this."

Another representative told how important it is to openly share plans and propose solutions, such as was being done on the trip. He admitted that failure to do so had subjected his agency to criticism and court intervention at several junctures in recent years.

Another key to the success of the RRAT trips seems to be their somewhat primitive nature. For example, the participants are largely exposed to the weather, at the mercy of Mother Nature.

The forward part of the barge is covered with an open shelter, similar to a carport. The RRAT trip normally takes place in July, and the cover provides relief from the sun. But this year, due to flooding on the Mississippi River, the trip was delayed until September.

St. Louis District river engineer Leonard Hopkins said, "One year we borrowed the enclosed barge from the Vicksburg District. It was fully enclosed, with wonderful panoramic

windows, air conditioning and flush toilets. But when we were finished, everyone said they hated it. They felt cut off from the river, its sounds, its smells, the wind. So we've been outside ever since."

The environment is changing. In the early days, participants were cut off from the rest of the world once the barge pulled away from the shore. Today, cell phones and BlackBerries have several people wandering away to make calls or reply to e-mails. But the serenity of the journey, where the pace is dictated largely by the scenery and the discussion topics pull most of them back into the group during carefully interjected breaks.

"You have to plan carefully," said trip coordinator Dawn Lamm, St. Louis District. "There are meals, overnight accommodations, pick ups and drop offs to be arranged, lunches on the river and a steady stream of snacks and beverages to be planned and provided," she said.

But in the end, the ability of the barge to be slowed to discuss a specific

See RRAT page 13



Art Lippoldt, left, a member of The American Land Conservancy's (ALC) Board of Directors listens as the ALC's Mississippi River Program Director Jenny Frazier, center, and Craig Uyeda from the Arkansas Game and Fish Commission engage in an animated conversation during the St. Louis District's RRAT barge trip. (Photo by Alan Dooley)

# Special event commemorates Buffumville's 50 years of flood risk management

By Ann Marie R. Harvie  
New England District

New England District and local officials joined private citizens to commemorate the 50th Anniversary of Buffumville Lake Dam during a ceremony held at the Charlton, Mass., project, Aug. 9. More than 150 people attended the event.

Col. Philip T. Feir, New England District commander, joined speakers who discussed Buffumville Dam past and present.

"This is a significant and important milestone," he said. "This flood risk management project has been protecting the citizens of this community, the region and the Commonwealth of Massachusetts for 50 years. That's quite an accomplishment."

Park Ranger Jamie Kordack served as mistress of ceremonies. She introduced Tim Russell, Buffumville Lake project manager, who talked about the project's present operations. Bill Hultgren, the official Charlton historian, discussed the area history and the devastating floods that justified Buffumville's construction.

Construction/Operations retiree Bernard Manor talked about the Corps of Engineers and Buffumville Lake from 1958 through the 1970s.

Col. Feir discussed the positive impact that the dam has had on the community since it was built 50 years ago.



Commemoration attendees line up for cake and punch. (Photo by C.J. Allen)

"Buffumville Dam, on the Little River, was completed in 1958 at a cost of \$3 million," he said. "Although it cost \$3 million to build, Buffumville Dam has prevented nearly \$89 million in flood damages since it was built. That's quite a cost benefit return in my estimation. Additionally, besides the flood risk management, it has offered the local community and residents of this state a wonderful opportunity for diverse recreational pursuits."

Attendees viewed displays of historic photos of Buffumville. Tables held New England District safety giveaways and temporary tattoos for the kids. Buffumville employees invited guests to donate items for a time capsule as well as a register for people to write about the past and leave a message for the future. A working dam model showing how a dam operates educated young and old. Attendees also played with hula hoops, which were also created in 1958, while listening to the hits of that year.

Tours of the dam for those interested in seeing Buffumville inside and out.

The 12,700 acre-feet of storage at Buffumville is equal to 3.9 billion gallons of water and is impounded by a 3,255-foot-long, 66-foot-high earthen dam. Picnicking, swimming, boating, fishing, hunting, 27-hole disc golf course, volleyball, horseshoes, two rental shelters and sight-seeing attract more than 63,000 visitors annually.



Tim Russell, project manager at Buffumville Lake, conducts a dam tour during Buffumville's 50th anniversary. (Photo by C.J. Allen)

# Corps helps open possibilities on Davids Island

By JoAnne Castagna, Ed.D.  
New York District

**D**ecaying homes with blown out windows, overgrown grass lawns and 1950s vintage cars parked in dilapidated garages — that was the scene at Davids Island.

“It looks like a disaster movie could be filmed here,” said Nancy Brighton, lead archaeologist in the Environmental Branch of the U.S. Army Corps of Engineers, New York District. Brighton looked in awe as she walked around. “It’s surreal. It looks like residents of this little village just picked up and left.”

Brighton was describing the abandoned remains of Fort Slocum, a former U.S. military base that at one time occupied Davids Island, an uninhabited 80-acre piece of property located in the Long Island Sound, one half mile off the shore of New Rochelle, N.Y.

The Corps is scheduled to complete work at the site in late December including creating open space by removing the decaying structures. The work is being performed at the request of the Office of Economic Adjustment and the City of New Rochelle, owner of the island, to help revive it and make it accessible and safe for public use. At the same time, the Corps will preserve the island’s wildlife, including threatened animal species, as well as its rich military history.

In 1867, Fort Slocum was established on the island on the site of a former Civil War hospital. For more than a century, it served in various military incarnations, as a military hospital, an artillery mortar battery and a training post. The fort was the most active recruitment center in the U.S. and served as a staging area for troops heading overseas during the two world

wars. The fort was also used by the U.S. Air Force for several years.

The fort’s last military incarnation was in the 1960s, as a missile command base. Since then the island has lain dormant and the public has been denied access.

The island has since been eyed as a possible location for a power plant. In addition, the sanctuary’s wide variety of marine life, birds and more than a mile of beach has made it tempting enough for real estate mogul Donald Trump to consider placing luxury condos on its shores. In more recent years it has been considered as a location for a public



**Oblique aerial photograph of Fort Slocum, Nov. 15, 1961.** (Photo courtesy of Fort Slocum Alumni and Friends Collection, Michael J. Cavanaugh, Los Angeles, Calif., custodian)

park and nature preserve. Regardless of the eventual fate of the island, the Corps is clearing the site to make it clean and safe for public use.

In 2005, prior to demolition and removal of 93 decaying structures from the former Fort Slocum, the project team relocated a large Osprey family nest inland from the island’s pier, in order to protect it during the construction. In New York State, the Osprey is considered a “Species of Concern,” which means the bird’s population has declined in the past and is making a slow recovery. The relocated Osprey family has since grown threefold.

“It’s easy to say that this was an easy project. All you’re doing is demolishing buildings. Bring out the equipment and just start banging away,” said Gregory Goepfert, project manager. “But it’s more than that. There was great interest in preserving some of the rich history of the island.”

The Corps understands this, and as has happened many times in the past, came up with a variety of solutions to preserve the historical aspects of the project.

Goepfert, with the assistance of Brighton and the project contractor, TetraTech, performed extensive

historical research on each of the 93 structures on the island, many of which were of various military architectural styles.

This research included digging up historical data, taking photos and performing archaeological studies. Most of the structures were historically significant as the Fort Slocum Historic and Archaeological District. Of these structures, Brighton said that about one third were identified as having historical or archaeological significance and, if desired, could be restored or

partially restored.

After research was completed on each of the buildings, the structures were demolished if they were determined not restorable. So construction and historical preservation efforts worked in tandem to move the project forward and conserve both time and money.

This fall, one of the key structures on the island was demolished, marking the near completion of the project. The island’s large water tower that has been a sailing “landmark” for more than 78 years, and marks the edge of the island,

See Island page 14

# Gardez

continued from page 1

maintenance manager of region five. “It’s a precious commodity that needs to be protected.”

Completed in October 2007, the program consists of four functioning components — a sand filter, a wastewater retention reservoir, a vehicle wash rack and a recycling station. By reusing the treated wastewater for irrigation of plants and shrubs, the Afghan National Army realized a huge savings. Then reusing it for washing vehicles instead of fresh water that comes from their wells at a finite cost per liter almost doubled their savings.

“Altogether, we conserved 2 million liters of fresh water a month,” Allen said.

First, the sand filter purifies the wastewater generated by the Afghan National Army base. All wastewater flows to a Master Lift Station where it is then pumped into the first stage of a four-stage wastewater treatment

facility consisting of eight large lagoons, said Allen. These lagoons are equipped with aerators that add oxygen to the water and simultaneously accelerate the process of separating solids which go to the bottom of the lagoons.

Secondly, by creating a wastewater retention reservoir to capture the water for storage until needed, they were able to further develop a valuable resource in the arid Gardez, where wastewater evaporates quickly, Allen said.

Previously the water simply exited the last stage of the wastewater lagoons, entered underground piping and flowed outside the base, where it was forgotten.

The third component, a vehicle wash rack, is a closed loop system, where excess water is captured, directed through an oil/water separator and then pumped into the first stage of the wastewater treatment lagoons.

“The closed loop system helps make efficient use of the wastewater by preventing an outlet for evaporation,” said Kathryn A. Carpenter, the program manager for water resources in AED’s Water and Infrastructure Branch.

Located near the water reclamation project is a burn pit that is used by the Afghan National Army to incinerate garbage and other various undesirable materials. They took the program a step further and turned the pit into a recycling center where materials are segregated and then sold to the community in Gardez.

“This not only brings useful materials back to the community, but drastically reduces the amount of materials being incinerated,” Allen said. “It also resulted in a marked decrease in air



The “Gardez Rose Gardens,” which even bloom with ice hanging off of them in the dead of a below-zero Gardez winter, are attracting attention far and wide. (Photo by Jon C. Allen)

pollution.”

With the four components in place and functioning, there is a proposal that focuses on the next step, which is establishing a Horticulture and Reforestation Program, Allen said.

This will require the support of all organizations involved in the ownership and authority of the real estate inside and around Afghan National Army Garrison Base Gardez. Non-government organizations have expressed an active interest in being involved in an agriculture project at Gardez.

If supported, the proposed benefits would include educating University of Gardez students on the complete growing cycle needed from germination to harvest; sustainability of not only food crops but also crops that can be harvested, processed, packaged and sold on the open market to provide a means of income for the community; and turning a brown, desolate piece of land into a lush, nutrient-rich source of food and income-producing agriculture, Allen said.

See Gardez page 13



Jon Allen, pictured with the Sand Filter, an integral part of the Gardez Wastewater Reclamation Project. (Photo by Jon C. Allen)

# Gardez

continued from page 12

Like the rest of Afghanistan, Gardez has suffered from a decade-long drought. Even the heavy rains of the winter have not replenished the water table in this area. Sustainable use of limited natural resources is extremely important to an arid country that only gets 250 millimeters of rain per year on average.

“The most readily available source of water is groundwater,” Carpenter said. “They’ve been in a drought since 1999, and the groundwater levels have been steadily declining.”

Right now there is very little infrastructure to capture and hold water coming from the spring snow melt, which directly affects Afghanistan’s agriculture. About 80 percent of Afghanistan’s economy is based on agriculture, which relies on irrigation. Proper management of water resources supports irrigation, which in turn drives agriculture, which in turn boosts the local economy.

“Water is the base of all life,” Carpenter said. “You’re not going to have a sustainable economy unless you manage your water resources.”



A completed three-cell sand filter. (Photo by Jon C. Allen)

Since Gardez is also a major lumber market, many of its natural forests are being cut down. The proposed reforestation project will result from seedlings and produce forest products that will help provide food, wood, shelter and wildlife habitat. It will also help to raise the aquifer levels and reduce soil erosion.

“Plants hold soil in place and slow water down so it won’t run off as quick,” Carpenter said. “It percolates down into the ground and recharges the groundwater aquifer.”

AED is continually bringing Western technology and ideas to Afghanistan. The Afghans have embraced some, while others are slower to take hold.

Because it’s been a struggle just to survive over the past 30 years, the culture in this country has never really embraced the idea of conserving natural resources. But the concept of treating and reusing wastewater is very low technology which they’ll be able to easily maintain.

“What we’re doing with this wastewater is very simple. They’ll be able to sustain use of this system after we leave,” Allen said. “We’re helping them develop their water resources, which is a cornerstone of living for the future.”

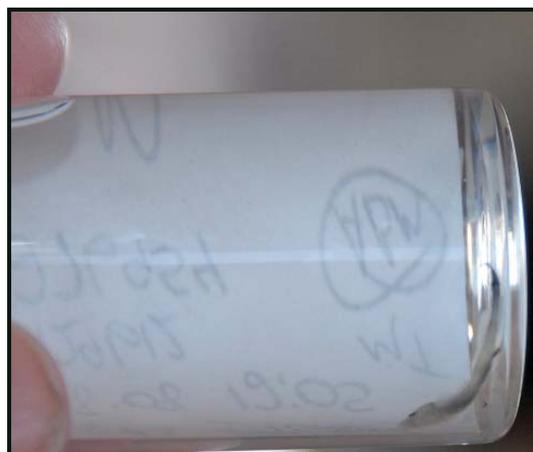
# RRAT

continued from page 9

site, or to hurry down the river, or to take a short side trip up the Illinois River because they are ahead of schedule, is what makes the event move forward without feeling pushed.

Every RRAT trip ends with a “hot wash,” or After Action Review. “What went right? What went wrong? What can we do better?” Brian Johnson asked. “Next year we will go from St. Louis to the Ohio River,” he reminded the group. “If you have any ideas how to make the trip better we would love to hear them.”

As RRAT 2008 participants reached St. Louis, they helped each other carry heavy luggage up the 40 steps



RRAT participants observed larval sturgeon taken during sampling of young fish populations on the Mississippi River. (Photo by Alan Dooley)

from the river bank. Many had made

the RRAT trip together several times before, some for years. For some, though, it was their first trip.

But for all, RRAT spelled “cooperation,” and they had become a talkative, sharing, collegial family. Hand shakes, hugs and looks back to the river are final gestures for the year.

Most will be back when Barge 53 sets sail next year from St. Louis. The Mississippi River is, simultaneously, ever-changing and changeless. For two days the RRAT group was part of it, and the feeling lingers long after the trip ends.

So do the results.

# Environmental Restoration Project of Wolf River holds dedication ceremony

By Stacy Ouellette  
Memphis District

More than 30 people gathered for the Wolf River Environmental Restoration Project dedication ceremony, conducted Oct. 9. The project, aimed at dramatically reducing erosion, also provides hiking trails with more than 2,000 acres of wildlife corridor, said Col. Thomas Smith, Memphis District commander.

“This project was created by state, local and federal agencies working together,” Smith said. “When you can combine recreation and flood risk management, it makes everyone proud.”

The need for this project was identified in the late 1980s. Memphis District completed a two-year

reconnaissance study in 1992, and the 2000 Water Resources Development Act authorized the construction project. Construction began in 2004 and a historic metal foot bridge was recycled into the project.

Spearheading the dedication event was Ted Fox, director of Shelby County Public Works. Fox, a retired U.S. Army colonel, served as the Memphis District commander from 1993-95.

Shelby County Mayor A.C. Wharton, acknowledged the contributions of all parties involved from state, local and federal government offices. Additional speakers included Collierville Mayor Linda Kerley, Shelby County Conservation Committee Chairman Commissioner Mike Carpenter, Chickasaw Basin Authority Chairman Charles Perkins, and Wolf River

Conservancy Director Keith Kirkland.

Other dignitaries who joined the speakers in the ribbon cutting ceremony included Tennessee State Senator and Senate Majority Leader Mark Norris; Shelby County Board of Commissioners Chair Deidre Malone; U.S. Sen. Lamar Alexander’s Field Representative, Josh Thomas; U.S. Sen. Bob Corker’s Field Director, Nick Kistenmacher; U.S. Representative Marsha Blackburn’s Deputy Chief of Staff, Scott Golden; and U.S. Congressman Steve Cohen’s Associate Director, Kristee Bell.

The trail opened to the public Oct. 10. Deputies from the Shelby County Sheriff’s Department will provide mobile security checks on weekends only. Trails are open to pedestrian and non-motorized vehicles only.

## Island

continued from page 11

was brought down.

Much of the material waste from the demolition is being recycled and reused, including a large amount of steel, especially from the water tower. Hazardous materials, such as asbestos, are being removed and taken to licensed facilities.

Brighton worked with a number of interested parties from Westchester County and the City of New Rochelle to determine what should be done with those historic structures that could be preserved. Since the future of the island hasn’t been determined, the City of New Rochelle recently decided not to restore any of the island’s structures. Understandably, the city doesn’t want to fund the maintenance of structures as the use of the island is being determined.

However, remnants of the former fort will be preserved on the island for the public to view, including the fort’s overall landscaped vegetation, a seawall, the flagpole, mortar pits from the late 19<sup>th</sup> century, tennis courts, walkways and



Enlisted Mens’ Barracks, built 1889. (Photo courtesy of TetraTech EC, Inc.)

a cannon used during the Spanish-American War.

Brighton said that if the public wishes to find out more about these historic items as well as other aspects of the fort, the Corps, in collaboration with the Westchester County Historical Society and the City of New Rochelle Public Library, is creating a virtual archive and public exhibit that will be available on the Internet.

This virtual archive and exhibit will include all of the extensive research

gathered by the Corps during this project in both print and audio formats, including the historical data on each of the fort’s structures, photos, maps, videos and oral histories from more than two dozen individuals who used to live and work at Fort Slocum. In addition, various museums will include the Corps reports in their archives.

Although the future use of the island is undecided, it is certain that this historical area, most recently a wildlife sanctuary, will soon be accessible to the public. The thriving relocated Osprey family may well represent an adaptable and prosperous future for Davids Island.

# Awards

## 2008 Stewardship Employee of the Year awarded to Canal Park ranger

By Ann Marie R. Harvie  
New England District

**J**ohn Pribilla, natural resource specialist, Cape Cod Canal, is the U.S. Army Corps of Engineers' Stewardship Employee of the Year for 2008. Pribilla received the award at a ceremony during the Senior Leaders Conference Awards Banquet in Pittsburgh, Pa., Aug. 4.

The award recognizes an individual who has done exceptional work in the field of natural resources stewardship in a district or field office. The award is based on an individual's contribution to managing, supervising, leading and/or administering programs in natural resource management, the protection and enhancement of natural resources at Corps facilities and achievements in the management of land and water resources for natural resources purposes.

According to his nominators, Pribilla achieved many significant and

tangible accomplishments in the areas of land and aquatic management, habitat improvement and planning for the future habitat projects at the Cape Cod Canal during 2007.

Pribilla has been able to impart the Army's value of duty, selfless service and integrity to many groups of people to include volunteers, temporary student employees and interns he has come into contact with while working at the Cape Cod Canal.

"Mr. Pribilla is an excellent interpreter who supports the operation of the Cape Cod Canal Visitor's Center," reads the nomination. "Through innovative projects including the installation of a new Osprey camera at the center, the public will be able to watch Osprey nesting activities from monitors inside."



**John Pribilla cares for a duck at the Cape Cod Canal.**  
(Photo by Kevin Burke)

According to the nomination, Pribilla also brings the Corps' environmental stewardship values to local elementary school classrooms and makes presentations to civic and social groups.

Pribilla, who has 26 years of service with the Corps of Engineers, is also a steward of sorts for human beings. He is a certified emergency medical technician who trains other park rangers and canal personnel in emergency response procedures, including the use of automated external defibrillators and oxygen administration in support of emergency response to land and water medical trauma response situations.

He is on the New England District Emergency Operations Technical Center call out list to respond to natural disasters. His past deployments include Hurricane Fredric in 1979, Hurricane Bob and the Halloween Nor'easter in 1991, Hurricane Georges in 1998, Hurricanes Frances, Ivan and Jean in 2004, and Hurricane Katrina in 2005. Pribilla was also a first responder in the aftermath of the Sept. 11, 2001 terrorist attacks.



**Scott Barr, left, and John Pribilla examine a pair of horseshoe crabs.** (Photo by Kevin Burke)

# Fight the frost this Winter: Tips to keep warm, save energy and help the environment

1. **Know the Facts** — The average family spends \$1,400 a year on energy bills, with nearly half of that spent on heating and cooling. Energy-efficient heating and cooling equipment, sized and installed correctly, with properly sealed ducts, can save homeowners as much as 20 percent on their annual energy costs.

2. **Keep it Clean** — A dirty air filter can increase your energy costs and lead to early equipment failure. Clean or change the air filter in your heating and cooling system monthly. Also, have your equipment checked seasonally to make sure it's operating efficiently and safely — check-ups can identify problems early. Dirt and neglect are the #1 causes of system failure.

3. **Bundle Up Your Home** — Hidden gaps and cracks in a home can add up to as much airflow as an open window. The more heat that escapes, the more cold air enters, causing your system to work harder and use more energy. Home Sealing can improve your home "envelope" — the outer walls, ceiling, windows and floors — and can save up to 10 percent in energy costs. Start by sealing air leaks and adding insulation — pay special attention to your attic and basement, where the biggest gaps and cracks are often found.

4. **Tighten Your Ducts** — If you have a forced air furnace or heat pump, then a duct system is responsible for circulating warm air throughout your home. Leaky

ducts can reduce your system's overall efficiency by 20 percent. Sealing your ducts can save up to \$140 annually on energy bills and help you consistently heat every room.

5. **Don't Oversize** — If you're replacing old equipment, make sure your new equipment is properly sized for your home. An oversized system will cost more to buy and will cycle on and off too frequently, reducing your comfort and leading to early system failures and repair costs. Correct size and proper airflow will ensure that your equipment works efficiently, saves you money and helps protect our environment.

6. **Consult a Professional** — Find an experienced, licensed contractor before embarking on any heating and cooling overhaul. Your contractor should properly size your equipment, test airflow, and perform a quality installation.

7. **Shop Smart** — If your heating equipment has been poorly maintained and is 15 years or older, it's probably time for a more efficient replacement. One in four furnaces in U.S. homes is more than 20 years old. Old furnaces cost more to operate per year than new, qualified models that are 15 percent more efficient than standard models.

For more tips, visit the Web at: <http://www.epa.gov/earthday/tips2.htm>

DEPARTMENT OF THE ARMY  
U.S. ENGINEERING AND SUPPORT CENTER, HUNTSVILLE  
P.O. BOX 1600  
HUNTSVILLE, AL 35807-4301

OFFICIAL BUSINESS