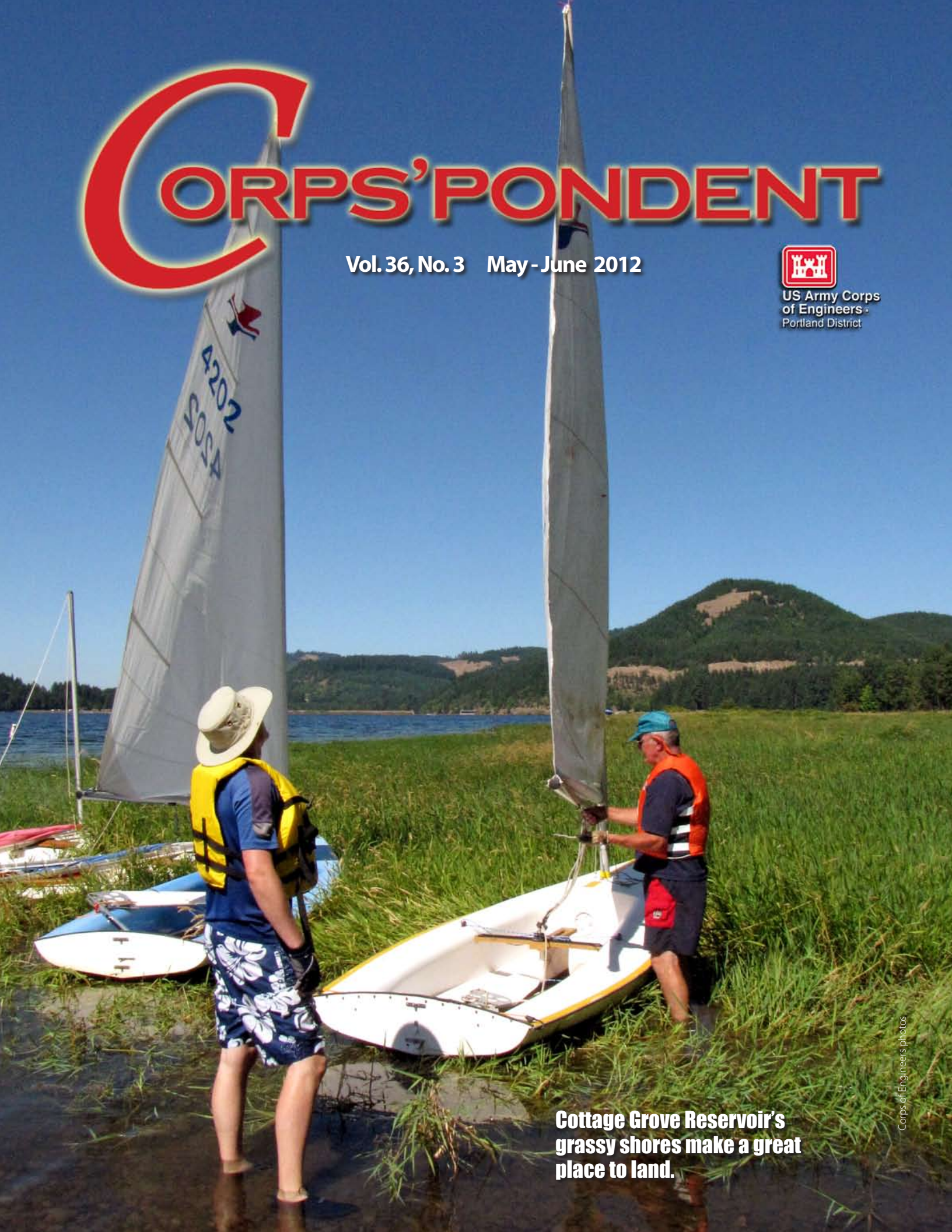


# CORPS' PONDENT

Vol. 36, No. 3 May - June 2012



US Army Corps  
of Engineers  
Portland District



**Cottage Grove Reservoir's  
grassy shores make a great  
place to land.**



# CONTENTS



May - June 2012

### INSIDE THIS ISSUE:



pg. 12



pg. 14

- 3 Commander's Column
- 4 Portland District People
- 5 You can't use what you can't find: the quest for knowledge ... management
- 6 District looks to rename spillway gate "Pool Restrictions"
- 8 Engineers seek answers to why rocks march up Bonneville spillway
- 10 Portland District employees celebrate Take Your Child to Work Day
- 12 Travel promotion goes international
- 14 Trips to Pine Meadows Campground are a family tradition
- 16 Corps wages ongoing war against invasive species
- 18 Improving recreation at Green Peter Reservoir
- 20 Sharing the Corps message



Portland District Commander Col. John W. Eisenhauer, P.E., is pleased to announce the selection of the late Mr. Darrell Hunt, formerly of The Dalles Lock and Dam, as the 2012 Distinguished Civilian Employee.

Spanning a career of more than 35 years, Hunt's knowledge and experience spanned all facets of electrical, mechanical, operations, fish passage and hydropower generation systems, making him a tremendous asset to successful execution of the Corps' hydropower mission.

Generous in all aspects of his life, Hunt supported programs for children in need in the community. He was generous with donations and thoughtful gifts, and seen as a mentor to many.

Now deceased, Mr. Hunt's accomplishments – locally, regionally and nationally – make him a natural choice as this year's distinguished honoree.

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Commander: Col. John Eisenhauer, P.E.  
Chief, Public Affairs: Matt Rabe  
Editor: Erica Jensen

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## Changes ahead for the Portland District recreation program

As a child, I have many fond memories of spending my summer months at my Grandma and Grandpa Wilson's home on Sterling Pond in the Adirondack Mountains of New York State. These memories include time spent with family fishing, swimming, boating, and pulling leeches off my ankles! They will last a lifetime.

I'm sure many of you, like me, have your own childhood memories – of family reunions at a particular campground or of fishing with a grandparent or other relative along a river or lake somewhere. Sometimes ... just hearing the name of a certain place takes us back to these special times.

Last year, Portland District recorded a combined 9.8 million visitors, at our recreation areas – in the Willamette Valley, Rogue River area and along the Columbia River, where visitors of all ages enjoy biking, hiking, boating, fishing, camping, hunting, windsurfing and more.

Many of you, like Alan Stokke (*who writes about his own experiences at Pine Meadows Lake in this issue*) have built memories at our recreation areas – something that I'm hopeful that you and your families and friends will continue to do in the future.

Our recreation program is changing, however, because for last three years the Portland District's recreation budget has steadily declined. Because of downward trends in our federal appropriations, the District can no longer afford to operate its recreation

program at the level we have in the past, which will impact our visitors and staff – and possibly you personally.

Our goal is to provide a sustainable recreation program that complies with regulations and our national recreation program strategy, while still meeting the needs of our visitors and operating within our budget. We plan to do this by reviewing our authorities, staffing levels and policies. We'll also apply performance standards to our recreation facilities and services, ensuring they are consistent. We are looking at a variety of ways to meet the standards, such as partnerships and volunteers.

Some of our immediate activities include shifting use in some areas from dispersed camping to day-use, or eliminating dispersed camping altogether.

One example of this can be found in the Green Peter Reservoir Recreation Plan initiated by the Willamette Valley Project in partnership with Linn County Parks. The plan recommends the elimination of dispersed camping on Corps land along the reservoir while enhancing available designated camping in the areas managed by Linn County. Since the Corps is not funded or authorized to provide dispersed camping, these actions will help the Willamette Valley Project operate within budget constraints and align with regulations, as well as meet improved safety and resource management goals for this area. (*You can read more about Green Peter Reservoir in an article written by WVP Park Ranger Christie Johnson on page 18.*)



Col. John Eisenhauer, P.E.

We have planned a number of actions over the next five years to help get us to the place where we can continue to provide sustainable recreation opportunities for our visitors while also meeting our budget limitations and ensuring consistency with requirements and policy.

My goal at Portland District is to help you continue your traditions at our recreation areas with your families and friends today and into the future – just in a different and more budget-friendly, sustainable way.

Have a great summer. Kate, Stella, Johnny and I wish you wonderful and fun times – be sure to stay safe as you drive and/or are in or on the water. Life jackets are a must while enjoying our beautiful waterways and lakes. Don't operate a watercraft or swim after you have consumed alcoholic beverages and don't ever let the kids swim alone, and only in designated areas with lifeguards or qualified adults.

COL Ike



**Mac Robison** has worked for the U.S. Army Corps of Engineers for 38 years. He began his career in the Galveston District aboard the Corps dredge *A. Mackenzie*. He has been in the Portland District for 35 years.



**Position: Chief, Plant Maintenance Section, Channels and Harbor Project**

Robison is a Navy brat who lived in Guam, San Diego, Long Beach, Vallejo and Napa, Calif. He graduated from Napa High School, Napa Junior College, and then the California Maritime Academy.

**Describe your job.**

I am responsible for all maintenance, repair and modifications for the dredges *Essayons* and *Yaquina* and survey boats *Redlinger*, *Elton*, *West Mark* and *Patterson*; the District Radio System, leased land at Terminal 2, and the U.S. Moorings Facility.

**How does your job fit into our District mission?**

The Portland District has a dredging mission for the entire West Coast, Hawaii and Alaska. Sometimes it's a national mission, such as when the *Essayons* dredges in the Mississippi River. My job is to help keep all our dredges ready for any job they're called upon to do. If the Portland District dredges are not operational, there is a customer who is not getting their dredging done and the pressure is on.

**What do you find most rewarding about your job?**

I love ships – I always have. They can be cantankerous as they get older (they will break your heart) but when the old girls are working right, they are beautiful things. It is so satisfying after a long tough overhaul to watch a vessel sail away from the dock with a happy crew that is ready to tackle the mission. It's a challenge balancing everything: funding, scheduling, personnel, environmental and safety issues to achieve that satisfaction, but it's worth it.

**What is the most significant change you've seen during your career with the Portland District?**

The most significant change was when we replaced the dredges *Biddle*, *Harding* and *Pacific* with the *Essayons* and *Yaquina*.

**What was your first job?**

My first job was as third assistant engineer onboard the 50-year-old Corps dredge *A. Mackenzie*. I was on watch when she was rammed and sank in Galveston Channel. A big brick-red bow came into my engine room, followed by the Gulf of Mexico. That's when I decided I wanted to work ashore.

**What is your favorite travel destination?**

I would take a cruise to anywhere. I like the new big cruise ships; they are totally fascinating and cruises are great.

**What is one of your hobbies?**

I play golf. It's always challenging and requires just the right amount of physical effort.



As chief of the Plant Maintenance Section, Robison oversees all maintenance, repair, and modifications for Portland District vessel fleet.

## You can't use what you can't find: the quest for knowledge ... management

By Eric Hamilton, Public Affairs Office

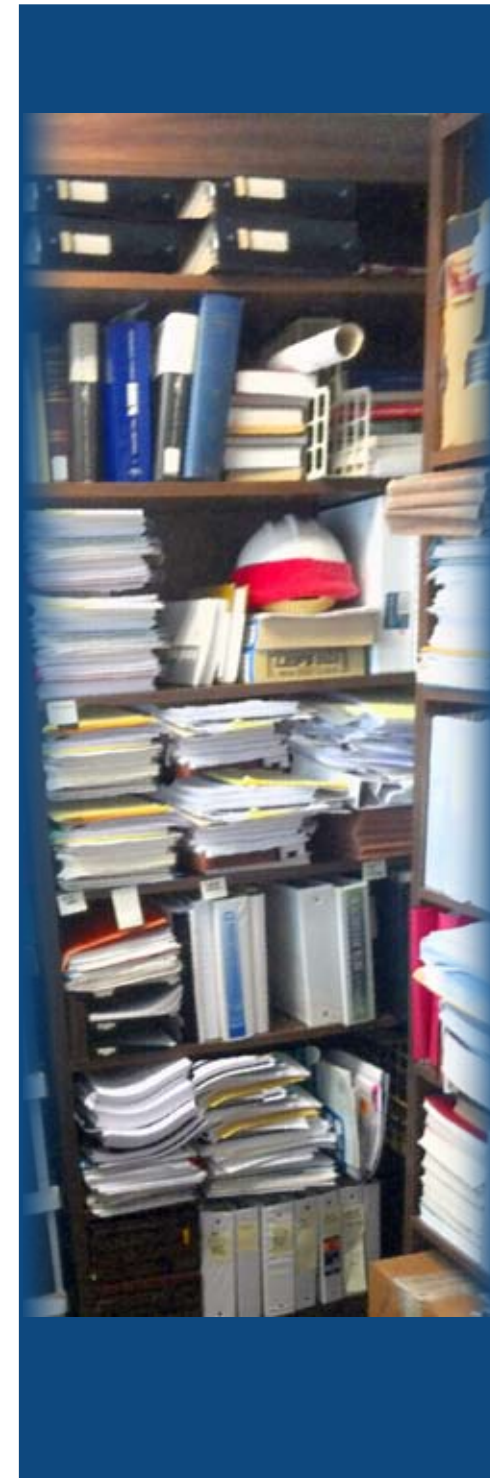
**W**hen Mark Siipola and Randy Wortman retired from the Portland District May 3, 2012, nearly 70 years' combined experience and institutional knowledge left with them.

"These guys knew where all the treasure is buried," said Bob Buchholz, chief of the Hydraulics and Hydrology Branch. "Did we manage to preserve that wealth of information before they left? And if we did, could we find it? That's knowledge management's challenge."

Buchholz is the action officer for the Knowledge Management OPLAN initiative, Portland District's effort to find processes and solutions to keep and categorize both forms of knowledge: tacit (memories and experiences) and implicit (documents and files). The project delivery team includes a variety of District employees, each representing important knowledge management concerns.

"It's amazing but not surprising to find that every part of the District recognizes the need for sharing information across the organization, but is frustrated at the lack of a unified system," said Buchholz. "This OPLAN initiative sprang from the Planning Summit in the spring of 2011, when attendees were asked what issues were most critical for District leaders to address."

Managing knowledge minimizes minutes lost in hunting for forms, speeds searches for essential data, and fixes frustrations one may have when thinking, "that report was here somewhere."



Education is critical to effective knowledge management and can create consistent routines to retain information at the source and ensure availability, thus saving search time, cutting storage costs and improving efficient decision-making.

Every day we generate hundreds, maybe thousands, of documents and files. Time and technology have only multiplied the methods for managing that mass of paperwork. Yet film, floppy disks, microfiche and magnetic tape – all examples of obsolete technologies that once were cutting-edge knowledge management systems – are on hand here.

It's not just about technology, however. Every decision has considerations and consequences. Storing files off-site or off-line? Better know how to get them back when you need them. Removing duplicates and drafts from final archives? Good idea, but don't lose important records of key decisions, either. Choosing consistent, common ways to categorize information is also important.

"There's no silver bullet," Buchholz said. Consulting with other districts confirmed that each option comes with challenges. Several approaches presented in PDT meetings are under active evaluation. Yet, for any choice to succeed, the District's culture must change drastically, he said.

"We've developed a mountain of information over decades. It won't disappear overnight," Buchholz concluded. 📄



# District looks to rename spillway gate “Pool Restrictions”

By Scott Clemans, Public Affairs Office

Hydraulics and Hydrology Branch reservoir regulators and Willamette Valley Project dam operators have changed the way they manage water releases from many Willamette Valley dams in the past few years to better ensure those dams’ spillway gates will operate properly.

**But please don’t call those changes “pool restrictions.”**

Inspections of many Willamette Valley dams’ spillway gates in the past few years found twisted, bent and buckled gate arms and structural members; cracks at structural connections; welds that don’t meet current design standards; corroded wire ropes and connections; worn thrust washers; and other signs of stress.

Dam safety specialists became concerned that the gates may not operate properly, particularly when water levels were high and putting a lot of pressure on the gates. If that happened, water managers’ ability to control releases – and therefore reduce flood damage below the dams – would be seriously compromised.

In a worst-case scenario, a gate could buckle and collapse, sending an uncontrolled torrent of water downstream.

In order to minimize the chance of that happening, the District developed a number of Interim Risk Reduction Measures, one of which limited how high water will be allowed on the gates when they are being operated. In most letters, memoranda, reports and other documents on the subject, those “high water marks” on the spillway gates when they were in their closed positions were referred to as “pool restrictions.”

District program and project managers, Public Affairs specialists and Willamette Valley Project leaders widely used the term when explaining the gates situation to elected officials, emergency management organizations and downstream residents.

But Hydraulics and Hydrology Branch engineers say that term shouldn’t have been used in the first place, and are calling for its replacement.



Inspections of many Willamette Valley dams’ spillway gates in the past few years found twisted, bent and buckled gate arms and structural members; cracks at structural connections; corroded wire ropes and connections; and other signs of stress.

“I have been trying to remove the term ‘pool restriction’ when referring to these gate-related IRRMs,” said Matt Craig, Dam Safety Program manager. “We aren’t really restricting the pool to some absolute elevation but operating the gates to keep the pool below a certain spot on the gates.”

The critical parameter, Craig explained, is the location of the gate’s upper strut. As long as the reservoir level is below it, the gate can still be operated with reasonable confidence.

Craig said, “The general plan is to ‘track’ the gates with the pool. In other words, in the event of a large storm,

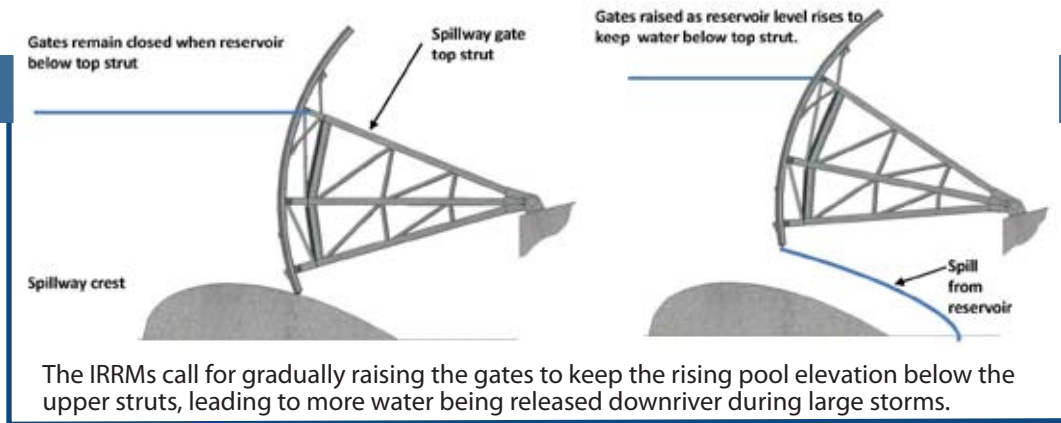
we will continue to gradually raise the gates to keep the rising pool elevation below the upper struts.”

Reservoir levels aren’t restricted to the elevation of the gates’ upper struts when the gates are closed, as the term “pool restriction” suggests, said Bob Buchholz, Hydraulics and Hydrology Branch chief.

“We still have full use of our flood control storage, all the way to full pool elevation. We just have to operate differently,” Buchholz said.

Buchholz admits the IRRMs do reduce water managers’ flexibility to maximize flood storage during large events, since the spillway gates may have to be opened sooner than they normally would be.

Reservoir Regulation team leader Laurie Nicholas noted however, that the spillway gates at many dams are not regularly used and probably would only be opened during conditions when major flooding was already happening downriver.



The IRRMs call for gradually raising the gates to keep the rising pool elevation below the upper struts, leading to more water being released downriver during large storms.

“I’m not downplaying the impact of adding more water to an already bad situation,” Nicholas said, “but quite frankly, people downriver would already be looking at so much water that the difference would hardly be noticeable.”

For those dams with regularly used spillway gates, Reservoir Regulation and Water Quality Section chief Bruce Duffe said, “We closely monitor weather forecasts and runoff reports and anticipate how much water will be coming into a reservoir so we can open the spillway gates before the water level gets above the IRRM elevation. If we don’t do that, we’ve lost that route for passing water through the dam.”

The District completed rehabilitation of Foster Dam’s spillway gates in 2010

and will complete Dexter Dam’s this year. Rehabilitation of Big Cliff Dam’s gates will start this fall. The District has also replaced or repaired some components at Lookout Point, Fall Creek and Hills Creek dams, but those and four other dams still require long-term, in-depth work.

Until that years-long work is completed, what are we to call these IRRMs so they make sense to the public?

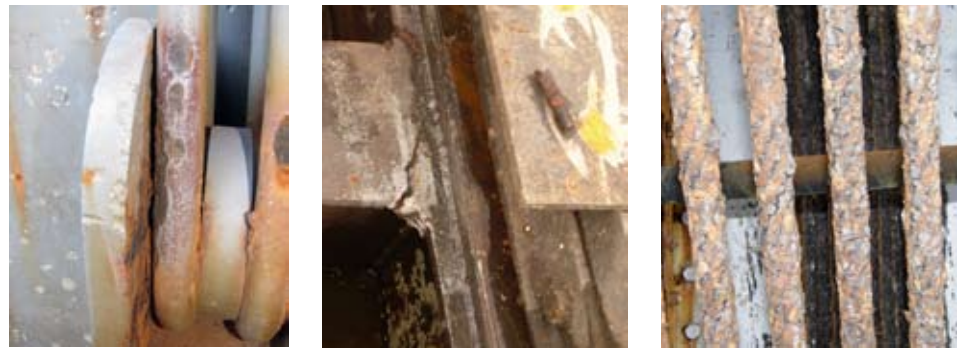
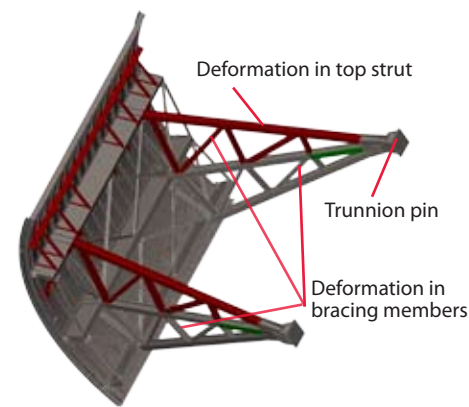
“I will be using gate operating restrictions or simply gate restrictions,” said Craig.

That will work for the short term, said acting Public Affairs Chief Amy Echols, but we need something better for the long haul.

“The problem is that terms like ‘pool restriction’ or ‘gate operating restriction’ often raise more questions in listeners’ and readers’ minds than they answer,” Echols said. “I can hear someone asking, ‘What part of the pool or gate operations are you restricting?’ We need to develop something fairly short and simple, but very clear.”

District Critical Infrastructure, Dam Safety and Reservoir Regulation staff will be working with Public Affairs specialists and Willamette Valley Project leaders to figure out a better way of explaining to stakeholders what the IRRMs do and don’t mean for spillway gate operations.

Until they do, though, please don’t call them “pool restrictions.”



Corps of Engineers photos

Some of the areas of visible stress on Willamette Valley spillway gates, and the areas to be strengthened as part of rehabilitation.



Dexter Dam’s seven spillway gates have been rehabilitated and the IRRMs limiting reservoir levels to below the upper struts have been lifted.



# Engineers seek answers to why rocks march up Bonneville spillway

By Diana Fredlund, Public Affairs Office

**O**n a cold rainy day in March, divers and a barge crew moved carefully into position in Bonneville Lock and Dam's spillway. Their task was to remove nearly 400 cubic yards of rock that had settled in the stilling basin, the concrete floor just below the spillway gates. One week later they packed their gear and were gone, taking the rock with them.

That was the good news.

The bad news was that hydraulic engineer Laurie Ebner and her Project Delivery Team hadn't yet been able to study the physical model and observe how the rocks moved into the stilling basin.

"We knew the high water flows in 2011 were involved, but why the rock had deposited in the stilling basin was unclear," said Ebner. "We knew it had to be removed before we began

our spring spill operations, so finding out how it got there had to wait until later."

Each year the Corps passes water through the spillways at John Day, The Dalles and Bonneville dams from April 10 to Aug. 31 to support juvenile fish migration. Although the Corps has used spring spill for many years as a strategy to maximize juvenile fish passage, it has been mandated since 2007 by the Oregon Federal District Court.

"The Corps has been monitoring the Bonneville spillway annually since 2006, after regular maintenance showed that erosion in spillbay 9 was very close to the gallery that runs along the length of the spillway," said Ebner. The spillway was designed with access tunnels beneath the concrete apron to allow access for repairs and maintenance.

Small amounts of rock had been seen during the regular monitoring, but engineers noticed a lot of rock on the apron after 2011's high flows, said Matt Cutts, Portland District's Critical Infrastructure Program Manager. "Everyone who

Corps contractor J.E. McAmis removes rock from the Bonneville spillway stilling basin

saw the images was concerned about the impact on spring spill and spillway integrity."

The rock removal project focused on two outcomes: physically removing the rock in time for spill operations, and figuring out how to keep the rock from migrating back into the stilling basin.

"Before we could figure out how to keep the rock from returning, we needed to determine why it was there to begin with," said Ebner. The stilling basin area directly below the spillway gates had been designed without flow deflectors. Flow deflectors were added in the 1970s and 2000s to minimize the amount of gas that is suspended in the water as it drops from the forebay into the tailrace.

When the water drops directly down from the gates, the movement causes more gas – oxygen and carbon dioxide – to become suspended in the water, which can injure fish when they breathe it, said Ebner. "Flow deflectors help decrease the amount of suspended gas, but they can cause the water to curl up on itself, creating a kind of rotation under the jet at higher flow velocities. The rotation can pick up the rock on the apron and bring it up into the stilling basin." The stilling basin acts like

a marble mill, tumbling the rocks until they're rounded – as the rocks damage the concrete, she added.

Ebner and her team needed to understand how the rocks got up the spillway apron and physical modeling was their best tool. "We'd seen rock shifting around downstream in the spillway channel before, but it had never been found in the stilling basin at the end of fish spill season – when surveys have been conducted – until 2011. That was a surprise."

The Engineering Research and Development Center in Vicksburg, Miss., maintains scale models of many of the Corps' dams, including Bonneville, The Dalles and John Day.

"Physical modeling allows you to see the action as it takes place, under nearly real-world conditions," said Cutts. "These models can be set to very specific conditions, so you can measure how small changes affect elements, like rock."

The trip to ERDC was to determine how to modify spill patterns to prevent the rocks from moving into the stilling basin. "We believed the solution to rocks moving into the stilling basin was to modify the spill pattern," said Ebner. "We found out modifying the spill pattern isn't enough. During the model tests, we watched the flow patterns actually move the rocks up the apron to a small ledge near spill bays 9 and 10, and then push them up into the stilling basin! It was incredible to watch," she added.

Watching their movement confirmed to the team that they were not going to easily solve the rock problem. "The cause is a combination of high flow velocities, flow deflectors and structural characteristics of the



Rocks are placed on the apron of the Bonneville Dam scale model at ERDC. By watching how the rocks move, the team is able to determine how to keep them from jumping onto the stilling basin.

Portland District civil engineer Gary Henrie adjusts the underwater camera to see how the rocks react to different flow levels.



spillway channel, each of which is difficult to change."

Ebner had one concern during the modeling: were the rocks actually behaving as scale models? "Density is one factor that isn't easily scalable," she said. "After we watched their movement, I needed some of the actual rock to determine its density, so it could be properly scaled. Then we can assume the scale model rock is behaving like the prototype." When dealing with scale models, the original structure is called the prototype.

Physical modeling didn't yield the expected results, but the team has a lot of new data with which to solve the problem of moving rock. There likely isn't a single long-term solution out there, but Ebner and her team are undaunted. "We now know how the rock got onto the apron and up into the stilling basin.

"We have two alternatives until we find a way to stop the movement: allow the rock to move into the stilling basin and physically remove it each year before spill operations, or flush the rock back onto the apron. We know flushing it downstream with high flows through specific gates will move it off of the apron."

Finding an answer isn't going to be easy. The team will head to ERDC again soon, looking for ways to modify spill patterns so the rock doesn't march up the apron to the stilling basin. They will keep at it, learning a bit more each time. There is one thing Ebner is confident about for her next trip: she now knows her scale model rocks will act like the prototypes, because their specific gravity was estimated from rocks taken from a barge filled with rocks that left Bonneville spillway on a cold, rainy March day. 📷



Corps of Engineers photos

Bonneville Dam spillway



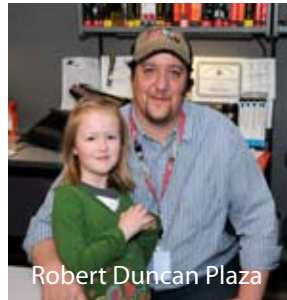
# Portland District employees celebrate **TAKE YOUR CHILD TO WORK DAY**



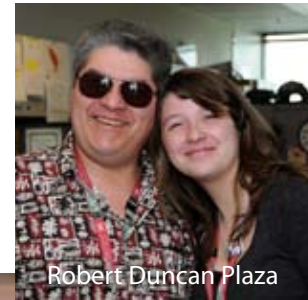
Robert Duncan Plaza



Bonneville Dam



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The Dalles Dam



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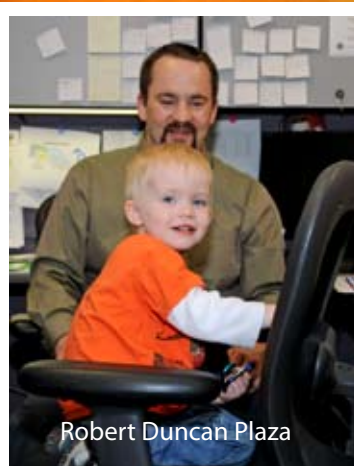
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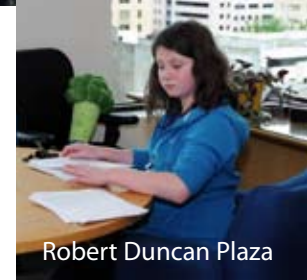
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Robert Duncan Plaza



The Dalles Dam



Robert Duncan Plaza



The Dalles Dam

Photos by Corps of Engineers employees and parents



# Travel promotion goes international

By Melissa Rinehart, Natural Resources Management Section

**F**rench, Italian, Japanese, German, Russian. These are all languages that you might overhear when visiting the Bonneville Lock and Dam Visitors Center – but they, along with Portland District’s other recreation areas, want to welcome even more tourists to their recreation areas from around the globe.

Other countries invest millions of dollars in travel promotion while the U.S. has had no international marketing effort, but Congress is now behind new efforts to make travel around the country easier for international visitors.

President Barack Obama signed the Travel Promotion Act on Sept. 10, 2010, establishing a new public-private Corporation for Travel Promotion to attract international visitors to U.S. soil. The act will broaden visitors’ range of travel to rural and urban destinations outside the nation’s most frequently visited sites. The new corporation, led by the U.S. Department of Commerce, combines the accountability of the government with the travel expertise of 11 board members from various segments of the travel community.

In the coming years, international travelers also will see an improved passport and entry process to make traveling to the United States easier. These efforts, funded by private donations and matching funds from a new fee collected from foreign



Columbia River Gorge

travelers, will promote the U.S. as a travel destination and holds special significance for recreation providers and the tourism industry.

The Portland District will support the goals of the Travel Promotion Act by working with local partners to attract international travelers to communities they might otherwise miss.

Visitors already come to the Pacific Northwest for its beauty, food, wine and welcoming citizens but Portland District has jewels within its boundaries that no traveler, local or international, should miss.

The Columbia Gorge is a natural destination for many tourists and while traveling along the Columbia River they’ll find plenty of Corps recreation opportunities along the way.

Nearest to Portland is the historic Bonneville Lock and Dam which offers visitors educational displays, a view inside

the dam’s Powerhouse 1 and fish viewing at several visitor centers and the Bonneville Fish Hatchery. Hamilton Island boat launch on the Washington shore provides access to the river and loaner life jackets, if needed. The Fort Cascades Historic and Hamilton Island trails offer scenic views of the Columbia River, Rooster Rock and a variety of wildlife.

At The Dalles Lock and Dam, located about 20 miles further east along the river, tourists can view exhibits in the dam’s visitor center which provide many perspectives about hydropower dam operations on the “Mighty



Columbia River.” While there, they also can walk through the historic rose garden, use The Dalles Riverfront Trail (a 7.4 mile paved multi-use path) and seek nearby geocaches with their GPS units. In 2012, a new electric shuttle, sponsored by the city of The Dalles, will take visitors from visitor center to the powerhouse for tours.

Even further east, just past the John Day Lock and Dam, LePage Park on the John Day and Columbia rivers is an oasis along Interstate 84, offering camping (with full hook-ups), picnic areas, boat ramps, fishing, a swim beach and – just in case – loaner life jackets to keep visitors safe while having fun.

The lush landscape of the Willamette Valley is the perfect place to see a variety of migrating and resident birds while walking on scenic trails at the Fern Ridge Wildlife Area. Bicyclists can ride up to 22 miles on the Row River Trail, passing the cool beauty of the Dorena Reservoir.

In Southern Oregon guests can visit the McGregor Visitor Center at Lost Creek Reservoir, where they will find a bounty of recreation opportunities, including a boardwalk nature trail,



McGregor Park nature trail.



Mountain bikers explore miles of trails in the Rogue River basin.



Steelhead fishing in the Willamette Valley.



Boating on the reservoirs.

biking and rafting, and world-class fly fishing. Hikers are invited to explore the beauty of the Lost Creek Lake Trail, which hugs the shores of the lake and takes hikers 20 or more miles through open grassland and oak forests.

The Corps has many beautiful sites offering a wide range of recreation opportunities for both local and international visitors. Whether it’s camping, biking, geocaching, fishing, windsurfing, boating or something else, there’s a spot for you at one of the District’s 133 recreation areas.

As the nation’s new Travel Promotion Act is fully implemented, visitors planning trips around the United States

can access information at <http://www.discoveramerica.com>, or can find out about the Corps recreation areas in Oregon and southwest Washington at <http://www.nwp.usace.army.mil/Missions/Recreation.aspx>

In the coming years, you’ll continue to hear a variety of languages spoken at Portland District recreation areas and across the country – hopefully just more of them. 🇺🇸



Bonneville Dam First Powerhouse exhibit area panorama.



# Trips to Pine Meadows Campground are a family tradition

A Commentary by Alan Stokke, Engineering and Construction Division

Membership into the Dave Beach clan has many benefits – one of which includes an annual camping trip to the Corps of Engineers Pine Meadows Campground located on Cottage Grove Reservoir.

When I joined the family in 2007 they'd already been visiting the park for more than ten years and now, after a few trips of my own, I understand why they love it so much!

While the campground has excellent facilities, I'm also convinced that it is the best place to go with a small sailboat. The waterfront campsites offer beautiful views and the grassy shoreline is perfect for pulling boats up overnight and in between sails.

Jessica, my wife and Dave Beach's daughter, learned to sail on the lake as a child. I learned to sail there in 2007 and have since taught even more friends how to do the same. Now, every year we amass a fleet of Banshees and Minifish and have, to date, enjoyed consistent, predictable breezes every time.

There's also plenty to do on the lake if sailing isn't your passion, including jet skis and powerboats for wakeboarding, water skiing or inner-tubing. Fishing also is popular, and while I have yet to hook a "keeper," the overly aggressive mini bass are really fun to catch!

Wildlife can be viewed near shallow areas of the lake from kayaks or other small boats. Multiple bird nesting sites dot the lakeshore and just about

every year I've been buzzed by nesting Ospreys while I've sailed on "their side" of the lake.

On land, there's a trail along the lake for biking and running with multiple geocaches hidden in the woods along the way. Young campers have fun in a play area and a roped-off swimming hole and also ride bikes or roller skate through paved areas around the campground.

Pine Meadows Campground has also recently adopted an alcohol-free policy which makes our trips even more family-friendly.

Through the years, we've played games, cooked meals over the fire and had some really great conversations while gazing at the stars. These are the experiences that are most meaningful to me and I look forward to sharing this tradition with my future family as it has brought my wife and I much joy.

I hope you have a special place where you are building your own memories – if not, why not consider one of the Portland District's great recreation areas in the Willamette Valley or Rogue River areas, or along the Columbia River?

And if you happen to choose Pine Meadows campground as your destination during the second week of August then please stop by our campsite and say hello! 📷

*Editor's Note: Dave Beach, now retired, was formerly chief of Channels and Harbors Project.*



The roads and trails around Cottage Grove contain several geocaches, ranging from easy to undiscoverable treasures.



Jessica Stokke, Operations Division, shows off her "lunker" bass caught in Cottage Grove Reservoir.

Photos by Dave Beach



Alan Stokke and Brian Roche, Engineering and Construction Division, enjoy fishing on a placid Cottage Grove Reservoir.



Sailing back to camp for dinner.



Cottage Grove Reservoir's grassy shores make a great place to land.



A view of base camp from the water.





# Corps wages ongoing war against invasive species



Two new cleaning stations at popular trailheads along the Rogue River educate and call visitors to action in the fight against invasive species.

Story and photos by Chad Stuart, Rogue River Basin Project

A colorful oddity at two of Lost Creek Lake's most popular trailheads is designed to capture visitors' attention and deliver an important message:

"Don't give invasive species a free ride."

The message is part of an ongoing battle that the Corps faces at its lands and waters every day – the battle against invasive species.

"Invasive species are defined as alien species that do or are likely to cause economic or environmental impact or harm to human health," said Willamette Valley Project botanist Wes Messinger. "Invasive species impact

nearly all groups within the Corps, whether it's a park choked with ivy, a forest understory blanketed by false brome grass or an intake clogged with zebra mussels."

According to Corps headquarters, around \$100 million in operations and maintenance funds are spent annually on invasive species. At the Rogue River Project alone, 25 confirmed land-based invasive species infect nearly 80 percent of the more than 9,000 acres of land.

"Every year we are waging a battle against invasive species. We mow, pull, cut and spray the most notorious invaders to try and gain headway on project lands," said Justin Stegall, natural resource specialist at the Rogue River Basin Project. "It's a slow

process, but our efforts on the ground are beginning to see some headway at our most critical and rare habitats."

"We cannot win the war without education playing a critical role, and that is where our new cleaning stations come into play," said Stegall. "But we have also taken it one step further and asked visitors to step up and take action."

Federal Executive Order 13112 outlines the battle plan for dealing with invasive species. The goals within the document drove the Natural Resource staff at the Rogue Project to plan, develop and build the invasive cleaning stations from scratch.

"In the EO it states that to control invasive species, education and

prevention are two important factors," said Stegall. "We wanted to combine both of these goals from the EO into one station."

The cleaning station looks like a standard bulletin board with an interpretive message.

"What set it apart are the message and tools for cleaning your clothes and pets," said Park Ranger Edward Amerson of the Rogue River Basin Project. "Of course the green-blue background sure pulls the eye toward the poster and creates awareness."

Humans play a key role in the spread of invasive species. Hikers and dog walkers can be unintentional taxis, which can have dire consequences to both public and private lands across America. For example, visitors hiking any of the 30 miles of trails at Lost Creek Lake may unknowingly pick up an unwanted seed attached to their pant legs, shoes or pets. That seed can then be brought home and begin to grow in their lawns, gardens and property.

The reverse is also true. Plants can and have been brought onto Corps land in this manner.

The cleaning stations have a boot scraper to clean mud and unwanted seeds off a visitor's shoes. Two whisk brushes clean seeds from pants, shirts, backpacks and pets.

"It is possible that every time a hiker or dog walker leaves or enters Corps lands, they are carrying hundreds of seeds that could sprout and grow," said Stegall. "These cleaning stations are an important tactic to call awareness to the possible threat and impact of invasive species."

"I think it's a great idea," Carolina Martin said, as she stopped to clean her son Wade and family dog Katie. "I wish I had something like this where I grew up ... then maybe there would not

## Steps to prevent invasive species:

- ◆ Inspect and clean footwear, clothes and other personal items before leaving or entering a work site or trail.
- ◆ Clean equipment like hand tools, heavy equipment, boats and trailers before and after a job.
- ◆ Properly dispose of invasive species seeds or cuttings.
- ◆ Don't transport plants, seeds or firewood more than 50 miles unless clean of invasive species.

be so many problems with unwanted plants that take over."

Another visitor ending a day hike said as she brushed off her pants and shoes, "It's unique. I have never seen anything like it."


The cleaning station design has been presented to the Jackson County Weed Board, of which Stegall is the Corps representative. The response has been overwhelmingly positive.

The Nature Conservancy and U.S. Bureau of Land Management want to put a similar design and message at the extremely popular hiking destination at Table Rock. Oregon State Parks wants to put the cleaning station at Valley of the Rogue Park. Jackson County Parks

and other Corps of Engineers operating projects have all expressed interest in this design as well.

"I think it speaks to the widespread nature of this problem across our District and region. It is something that touches almost everyone, whether they are a federal employee, landowner or outdoor enthusiast," said Stegall.

Invasive species are a problem that impacts everyone, but also something everyone can help with.

Stegall said, "By taking simple steps to clean your clothes, equipment and personal items, whether at home or at work, we can start winning the battle on invasives, and ultimately the war." 



Wade Martin points out a spot on his shoe to his mother, Carolina, that could contain seeds from invasive species while Katie, the family dog also awaits her turn for brushing.



# Improving recreation at Green Peter Reservoir

By Christie Johnson, Willamette Valley Project

**M**akeshift rock fire rings filled with charred aluminum cans and broken glass; piles of toilet paper and human waste scattered among the trees; discarded camping equipment; bags of garbage and dirty diapers; and freshly scarred trees with missing limbs, broken off or cut for firewood.

These are just some of the things you will find along the narrow strip of Corps land between Green Peter Reservoir and Quartzville Road following a typical summer weekend.

During a weekend or holiday, this same area is packed with campers – some with expensive RVs and boat trailers, others with simple tents and pickup trucks.

Most campers are there to enjoy the recreation opportunities of the reservoir, but others take advantage of the free camping because they have no other home or are trying to get away from a bad situation. Drug dealers and wanted criminals have also been known to use this remote location, due to the relatively limited law enforcement presence.

Park rangers sometimes call Green Peter Reservoir the “Wild, Wild West”

of the Willamette Valley Project, but soon that is all going to change.

“We cannot continue to allow dispersed camping in this area,” said Willamette Valley Project Park Manager Tami Schroeder. “In addition to the resource damage caused by this activity, we are very concerned for the safety of park rangers and visitors.”

The elimination of dispersed camping is one of many proposed actions in the Green Peter Reservoir Recreation Plan completed in 2011.

The plan was developed in partnership with Linn County Parks to improve recreation opportunities in the area while addressing safety and resource management issues.

The District is conducting an environmental assessment and public outreach this summer to prepare for phase one of the plan, which includes closure of roadside camping areas, expansion of the county-operated Whitcomb Creek Campground, and creation of a designated camping area at Trout Creek, also to be operated by the county. Implementation of these changes may begin in 2013.

“The Corps is not authorized, funded or staffed to manage dispersed camping,” said Schroeder. “By shifting camping activity to designated areas

and expanding the county’s role in managing recreation at Green Peter Reservoir, we will be able to work within our budget and improve the quality and safety of recreation in this area.”

“We are very excited about working with Linn County Parks to develop additional recreation opportunities at Green Peter,” added Schroeder. “This area has so much potential, and we are happy to finally make some positive changes.”



Park Ranger Kelcy McHarry examines tree damage in a dispersed campsite.



Campers setting up close to the county road create a safety hazard.



# District rangers attend Water Safety Summit

By Amber Tilton, The Dalles Lock and Dam

The U.S. Army Corps of Engineers is the largest federal provider of outdoor recreational services in the nation, so it's no surprise that water safety is one of our missions. That's why about 70 Corps park rangers from districts across the country gathered in early March to attend the 16th Annual International Boating and Water Safety Summit in San Diego, Calif.

This year's summit highlighted the U.S. Coast Guard's National Strategic Plan, which the Corps and other agencies helped draft – its goals and objectives were the topic of many discussions and activities, including hands-on demonstrations at the beach. Rangers were tasked with a variety of activities, including illustrating advanced and/or on-water skill-based boating, participating in a knot knowledge contest and constructing two new life jacket loaner stations, which were later donated to the local San Diego Park and Recreation District for use at their swim beach.

Three Portland District park rangers attended the summit, including Christie Johnson, Willamette Valley Project and Kelly Thomas and Amber Tilton from The Dalles Lock and Dam. Thomas currently serves on the Corps' National Water Safety Team and helped at the Corps' informational water safety booth at the event, introducing the Corps' new “Are you Next?” campaign – which is purposefully thought-provoking and aimed at generating awareness – that everyone is a potential drowning victim if they don't wear a life jacket.

District rangers contributed to the summit through a variety of ways. Thomas and Tilton presented on best management practices, sharing how to conduct vessel safety checks and find partnership support and Johnson created a display and



Corps of Engineers photos

shared information about developing and executing the Willamette Valley Project's life jacket loaner program.

Everyone enjoyed a day along San Diego's beaches, but for rangers it was also serious. Not only did they learn from their peers about best practices, ideas and water safety programs – they also learned they are not alone when it comes to educating the public about boating and water safety.

Professionals from many agencies are ensuring safety - each one hard at work while their guests play in and near the water – all of them striving to reduce boating and water safety injuries and fatalities in our nation's waters.

**The most expensive cushion in the world.**  
 Not wearing it could cost your life.

**Don't sit on it! WEAR it!**

US Army Corps of Engineers  
<http://watersafety.usace.army.mil/>



## Sharing the Corps' message

You are the face of the Corps. Share these messages with your family, friends and community.

# Stop the invasion with boat inspections

**A**quatic pests, both plants and animals, hitch rides around the country on trailered boats and other watercraft. Aquatic invasive species, like zebra and quagga mussels, create a mass of sticky threads that glue them to practically any hard surface: boat hulls, anchor chains, motors, wheel wells and even other organisms such as crayfish. If they spread to the Pacific Northwest, the threats to hydropower, irrigated agriculture, drinking water, recreation and salmon recovery will be immeasurable. Other invasive species are already in Oregon waters.

To halt the movement of these species around the country, boat and trailer inspection efforts are increasing in the region. You'll see them this summer at highway rest stops. Do your part to protect our waters by thoroughly inspecting and cleaning your boat or trailer after every outing and before hitting the road.



Before launching and before leaving...  
**Inspect everything!**

- **CLEAN** all aquatic plants, animals and mud from your boat, motor or trailer and discard in the trash. Rinse, scrub or pressure wash as appropriate away from storm drains, ditches or waterways. Lawns, gravel pads, or self-serve car washes are best. Do not just check the obvious places; these pests can hide anywhere.
- **DRAIN** your motor, live well, bilge and internal compartments on land before leaving the waterbody. For paddle boats, drain by inverting or tilting the craft, opening compartments and removing seats if necessary. Rinse or flush under flooring, at inflation chamber joints or other areas that can trap mud and debris.
- **DRY** your boat between uses if possible. Leave compartments open and sponge out standing water. Find a place that will allow the anchor and dock lines to dry.

## Understanding coastal jetties

**J**ust as bridges provide safe passage over rivers, gorges or other depressions, jetties help ocean-going vessels move between coastal rivers and the Pacific Ocean. Jetties were never intended to be used for recreational purposes. Some of their dangers are visible, others are hidden:

- Sudden larger waves, even in calm weather, can knock a person off balance or into the water.
- Waves and strong currents near the jetty can prevent safe recovery after a fall into the water.
- Open crevasses and sinkholes between large boulders create stepping hazards.
- Slippery rock surfaces are caused by sea spray.
- Caverns within the structure, caused by the eroding of stones and sand, could be hidden below the surface and suddenly collapse.

