

CORPS' PONDENT

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March - April 2015



US Army Corps
of Engineers®
Portland District

**“She who watches”
at Horsethief Lake**



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Cover photo: Heidi Dimercurio, Public Affairs Office

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Commander's Column

We are about half way through fiscal year 2015 and are doing well in execution and have just completed a highly successful lock outage of the Lower Columbia River locks. Thank you for your tremendous work – our partners consistently praise your professionalism and dedication to the mission.

As discussed during the March 9 town hall, the Portland District has received the FY15 budget and work plan; the President also has submitted the FY16 budget to Congress and we are continuing to develop the FY17 budget. All of these data points indicate that the District is relatively stable in workload (which translates to workforce) for the near future. This is still dependent, however, on the outcome of sequestration, which, as all of you know, is still a topic of daily political discussion.

April is the District's birthday month. Our first commander and district engineer, Major Henry M. Robert, arrived on April 17, 1871, just a few blocks from our current location, and set up the office with two desks, a file cabinet and hired an office clerk and one assistant engineer. Today we have a work force of more than 1,200 employees spread across Oregon and Southwest Washington. We will celebrate his accomplishments and all those who came after him with a cake cutting ceremony and ball on April 17.

For multiple reasons, it is tremendously important to recognize our history. You are making history now. I encourage you to capture this history by writing a story for the Corps' pondent or by contacting a member of our Public Affairs Office with a story idea. I read all of the stories in the current issue and want to thank those who took the time to tell us about what they are doing.

April is also the month that we highlight our environmental operating principles and bring our kids into the workplace as part of Take Your Child to Work Day. When they join you here in Block 300 and out at the operating projects on April 24, your children will be able to see what you do every day. It also gives us a chance to show them how the District integrates our environmental operating principles into every project, process and daily work practice. This is important for them, as they will carry on the legacy of environmental stewardship – if not here at the Corps of Engineers, at the very least, in their own future work locations. I want to personally thank Scot Hale (HDC) and Jessica Morales (EC) for organizing this event.

Thank you for all that you do to encourage younger generations – whether by encouraging them to learn about and pursue STEM careers (thanks Erica, Jackie, Rhiba and all the volunteers for a tremendous e-Day event last month) – by being an example to them in terms of how you apply our environmental principles – or by remembering the lessons from our history. Your actions show our younger generation that we are doing right by our history and applying our values to accomplish our missions for the benefit of the American people. You embody our motto, "Essayons," in everything you do. 



Col. Jose L. Aguilar

Competence follows Character.

Col. Jose Aguilar

61st Colonel of the District





Portland District People

Mary Ocholi

Program Analyst, Engineering and Construction Division



What do you find rewarding about your job?

I enjoy analyzing financial data and understanding the various funding types. I enjoy the fact that the program managers rely on my analysis to make financial decisions.

What are your career aspirations and how are you preparing to accomplish them?

I aspire to work at the Corps' headquarters in Washington, D.C. I would like to understand how politics and other world developments affect the priorities of how projects are funded. I'll accomplish this by taking necessary certifications and taking developmental assignments when they are offered.

What do you think is one of the most important challenges facing women today?

Being able to balance between work and family. It's hard missing the kids' field trips and being unable to help out in their class as much as I want to. Oh!! Especially, when they remind me that I missed it.

How do you motivate or encourage your colleagues?

I share my thoughts, opinions, and yes... sometimes complaints. I show my appreciation to others whenever I can.

Describe yourself, your work ethic, or your career path in six words.

I'm a highly self-motivated professional.

Tell us about a woman you've worked with whose influence changed how you approach life or work.

I have had the privilege to work with great women in the past and present. My supervisor in the U.S. Army, Sandra Hayes, was a firm leader and yet companionate. Cheryl Patterson taught me a lot when I first started here; I have watched her handle difficult situations with such grace.

What is your favorite pastime? How do you relax?

Sewing and watching Lifetime movies.

What are you most proud of as a woman?

My family – they are my motivation

What would you tell your younger self?

Stop over analyzing things ... and you are more than enough. 



NATIONAL

Women's History Month

MONTH

JOURNAL

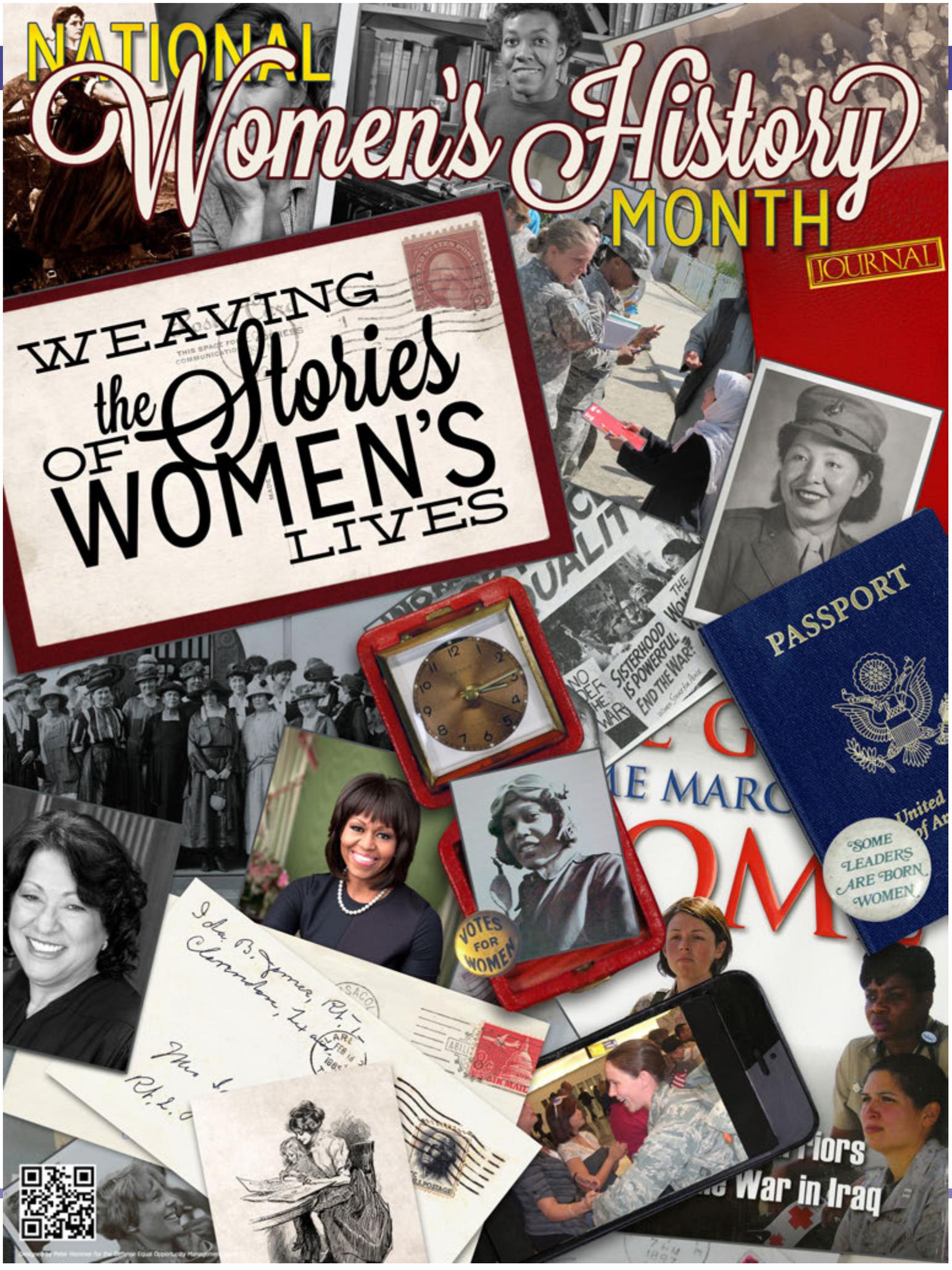
WEAVING
OF the Stories
OF WOMEN'S
LIVES



"SOME LEADERS ARE BORN WOMEN."

VOTES FOR WOMEN

WOMEN
LE MARC





The Dalles Dam updates its as-built drawings

How past actions help inform future needs

By Diana Fredlund, Public Affairs Office

Keeping a hydropower dam operating efficiently requires workers to monitor its systems, troubleshoot problems and make repairs when they're needed. But what happens if the record of past modifications can't be found? How does that affect future upgrades and repairs? How does it affect safety?

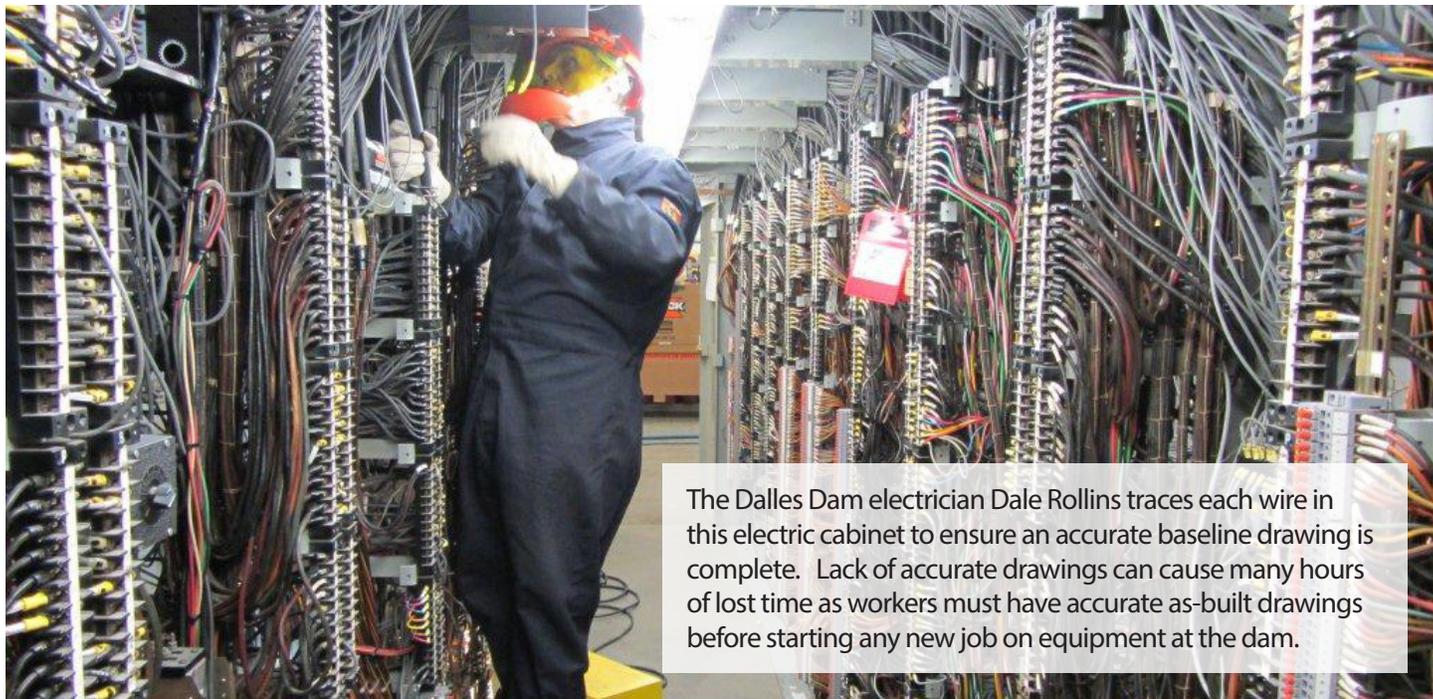
"Any time we work on equipment either to diagnose problems, or to integrate new devices, we refer to the drawings. It is very important that these drawings are accurate, reflecting any changes that have been made over the years," said Mike Colesar, chief of engineering at The Dalles Lock and Dam. "Inaccurate drawings create potentially hazardous situations and can delay any work we do."

When The Dalles Dam began operating in 1958, there was an accurate set of drawings for all the electrical, mechanical and structural systems. For many years, a

process was followed to keep drawings maintained – and the right people were there to do the work.

"By the late 1980s, we seemed to have lost the ability to keep the drawings up-to-date," Colesar said. "Positions devoted to maintaining records industry-wide were eliminated. Contract cost overruns and schedule delays created by inaccurate drawings increased."

By the early 2000s, after Bonneville Power Administration began funding major hydropower capital improvement projects, engineers realized the lack of up-to-date drawings were significantly increasing costs. For example, when The Dalles Dam began a \$20 million station service project in 2002 to replace internal electrical equipment and batteries, engineers found the as-built drawings so badly out of date that they couldn't complete the project's design.



The Dalles Dam electrician Dale Rollins traces each wire in this electric cabinet to ensure an accurate baseline drawing is complete. Lack of accurate drawings can cause many hours of lost time as workers must have accurate as-built drawings before starting any new job on equipment at the dam.

Corps of Engineers photo



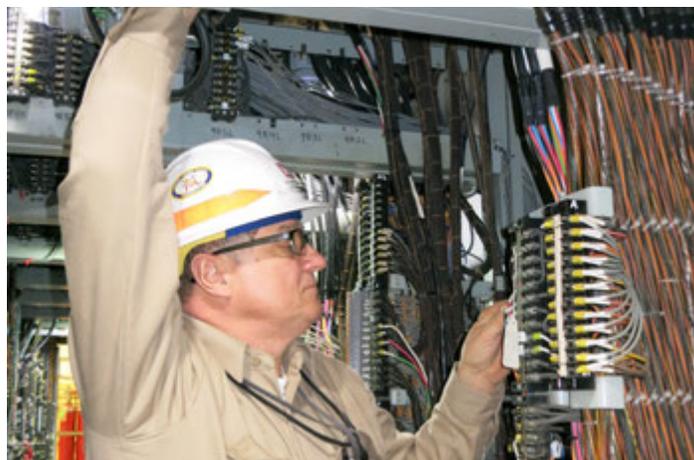
“A significant amount of time and effort was needed to just learn the baseline,” Colesar said. By the end of the Station Service Project, hundreds of thousands of dollars were spent on design inefficiencies and contract modifications caused by bad drawings. “That was a wake-up call – it was clear we needed to address this problem.”

Detroit Dam experienced a debilitating electrical fire in 2007, causing several million dollars in damage. Colesar was the investigating team leader, charged with determining the cause. Most of the damage was caused by avoidable fault propagation in the circuit breakers. Protection against this type of escalation had been inadvertently disabled because the plant drawings were inaccurate and confusing, Colesar said. “The Detroit Dam fire will stick with me the rest of my career as an example of why good drawings are important.”

The Dalles Dam needed someone to create order from the chaos left by years of inattention. Roger James, an engineering technician, was initially selected to head the effort at The Dalles and later for the Portland District As-Built Program. “Roger began working with us in 2006,” Colesar said. “He brought energy, persistence and an attention to detail that was vital to our success.” The Dalles Dam managers made a commitment to immediately improve the as-built drawings and develop a sustainable process to keep them accurate. BPA direct funding allowed The Dalles Dam to add new drafting and electrician positions to make this possible.

“Each new design project relies on accurate drawings. Without them, designers are working in the dark and too often deliver designs with errors. When contractors encounter site conditions that don’t agree with the contract drawings, contract modifications and schedule delays result.” James said. “Updating the as-built drawings has been a monumental task, but over the years we were able to design a process to systematically bring most of the equipment up to date.”

The first as-built drawing upgrade occurred during a major overhaul on main unit 15 in The Dalles Dam powerhouse. The process involved the complete electrical system of interconnected generator drawings. Two electricians traced thousands of wires, hand over hand, end to end – a job that took nearly eight weeks. That was followed by weeks of updates to the electronic versions and numerous reviews. “When the work was completed, crews commented that for



Electrician Ron Brumbaugh traces each wire in an electric cabinet to ensure the drawings accurately reflect current layouts at The Dalles Dam powerhouse.



Accurate design drawings are vital to keep maintenance costs down. Paul Ronning, far left, Roger James, center and Shelly Coleman review updated as-built drawings at The Dalles Lock and Dam on the Columbia River. Dam managers were committed to updating the drawings, finishing the powerhouse turbines and generators in 2014.

the first time in their careers, they had an accurate set of drawings to work from,” James said.

Building on the success of main unit 15, senior management agreed to continue this effort for every main unit during major overhauls in years to come. The first opportunity to leverage accurate drawings came when the dam undertook the Digital Governor Upgrade project



in 2010. This complicated electrical project replaced the mechanical governors on the turbines with digital governors. This time The Dalles Dam was ready. With much planning and hard work, accurate drawings were made available – first to designers and then to the construction contractors.

“Accurate drawings made it possible to design the new governors accurately. Because site conditions didn’t differ much from design, the contractor marched through the installation ahead of schedule,” Colesar said. “We were able to take those accurate as-built drawings, note any changes made during the work and provide them immediately to Operations and Maintenance staff after each unit was completed.”

As-built drawings are important for all kinds of equipment at The Dalles Dam. While the first priority was updating the powerhouse drawings, workers are now in the habit of updating the as-built drawings for the navigation lock and fish passage equipment, too.

Today, computers are the sole source for up-to-date as-built drawings at The Dalles Dam. The monumental task of updating the generator as-built drawings has been completed. Crews now are focusing on other key areas of the powerhouse, including mechanical and structural features. It is important to note that even though hundreds of critical drawings have been “as-built,” there are still many that remain untouched. “When work begins, a copy of the latest version of drawings for the system being worked on is printed. If it is marked ‘as-built’ the engineers and craft workers know this is accurate information they can rely on,” Colesar said. “As they modify any system, they mark it on the paper copy. After they’re finished they turn in the paper copy so we can update the computerized original.”

Accurate as-built drawings are important to contractors and other agencies, too. The BPA large capitalization program requires that as-built drawings be reviewed and created if necessary before the design phase begins. Projects cannot be closed out until the as-built drawings are accepted by the operating project.

Maintaining the as-built drawings works only if everyone recognizes it’s important to keep them accurate. “We need to make sure everyone understands why this is important. This includes senior management, project managers, designers, maintenance engineers, technicians, and craftspersons,” James said. “It does take more effort, but we’ve seen what



Corps of Engineers photo

The Dalles Dam engineering technician Paul Ronning, right, discusses design drawings with engineer Ron Brumbaugh. Workers at The Dalles Lock and Dam, 110 miles east of Portland, Oregon, found out-of-date drawings caused cost overruns and contractor delays. Dam workers finished updating the drawings for the powerhouse turbines and generators in 2014.

happens if we let it slide. The Digital Governor project proved it is possible to be successful.”

The education is paying off, according to Colesar. “We’re seeing fewer contract modifications, which means fewer cost and time overruns. That’s good for everyone. Accurate drawings make for a safer workplace and supports more informed decision making.”

Without accurate as-built drawings, maintaining and repairing equipment at Portland District operating projects means lost time and money while contractors bring the equipment documentation up to date. Thanks to a huge and continued effort by a team of management, technicians, engineers and craftspersons, as-built drawings are up-to-date and ready for the next project.

“We’re planning several capital investment projects, including a complete upgrade of our control systems at The Dalles,” Colesar said. “With good drawings, we can begin the design phase knowing we have accurate information we can depend on. That’s a good feeling.” 



Celebrating an historic return

Marking the restoration of revered Native American images

Photos by Heidi Dimercurio, Public Affairs Office

Members of the Corps, Bonneville Power Administration and the Yakama, Warm Springs, Nez Perce and Umatilla tribes gathered at Horsethief Lake in the Columbia Hills State Park on the Washington shore March 5, 2015, to celebrate the restoration of petroglyphs that were moved to the park.

Before the Dalles Dam was completed in 1957, the Corps removed some petroglyphs located below the new water line. Those petroglyphs were relocated to Horsethief Lake in 2004. Another group of petroglyphs had been placed at Roosevelt Park, but weather and vandalism had damaged them. Funding from the Corps and BPA paid for a specialist to conserve and restore the historic images and place them with the others at Horsethief Lake.

The sunny March 5 celebration included remarks from tribal, BPA and Corps leaders, presentation of a commemorative photo marking the occasion and ended with a traditional Native American feast of salmon and buffalo.

For information about the petroglyphs and guided tours, visit the Columbia Hills State Park website at <http://www.parks.wa.gov/489/columbia-hills>. 



The Corps of Engineers, Bonneville Power Administration and members of the Columbia River treaty tribes gathered at Horsethief Lake, Columbia Hills State Park, near Dallesport, Washington. Tribal, Corps, BPA and Washington Parks leaders receive a commemorative photo.



A Warm Springs tribal member prepares salmon for a traditional feast.



The petroglyphs were created by ancient peoples who lived near the river and Native Americans revere this link to their past, including She Who Watches, seen here.





MCR jetties: supporting safe passage for more than 100 years

By Michelle Helms, Public Affairs Office;
Rod Moritz, Coastal Engineer; Heidi Moritz, Coastal Engineer

It is one of the most treacherous bar crossings in the world. Since 1792, more than 2,000 ships have sunk in and around the Mouth of the Columbia River, also known as the Graveyard of the Pacific. For the past 130 years, mariners seeking to safely transit the Columbia bar have relied on three simple-looking structures, fingers of rock reaching out from the Oregon and Washington shores into the Pacific Ocean. The U.S. Army Corps of Engineers' MCR jetty system is that vital link between the mighty Columbia River and the Pacific Ocean, supporting commerce, recreation and homeland security.

Prior to 1885, the tidal channels through the MCR shifted between to Cape Disappointment, Washington, to the north and Fort Stevens, Oregon, to the south, a distance of about 5.5 miles. Ships often had trouble crossing the Columbia River bar, the area in which the flow of the estuary rushes headlong into towering ocean waves. Outbound ships often had to wait several weeks until bar conditions were favorable for crossing. To make navigating through the MCR even worse, sailing ships had to approach either of the two natural channels at a right angles to the wind and waves. The natural channels often shifted widely over several tidal cycles. At best, crossing the bar was dangerous. At worst, it was impossible.

With the opening of the American West during the latter half of the 19th century, a consistent and reliable link from

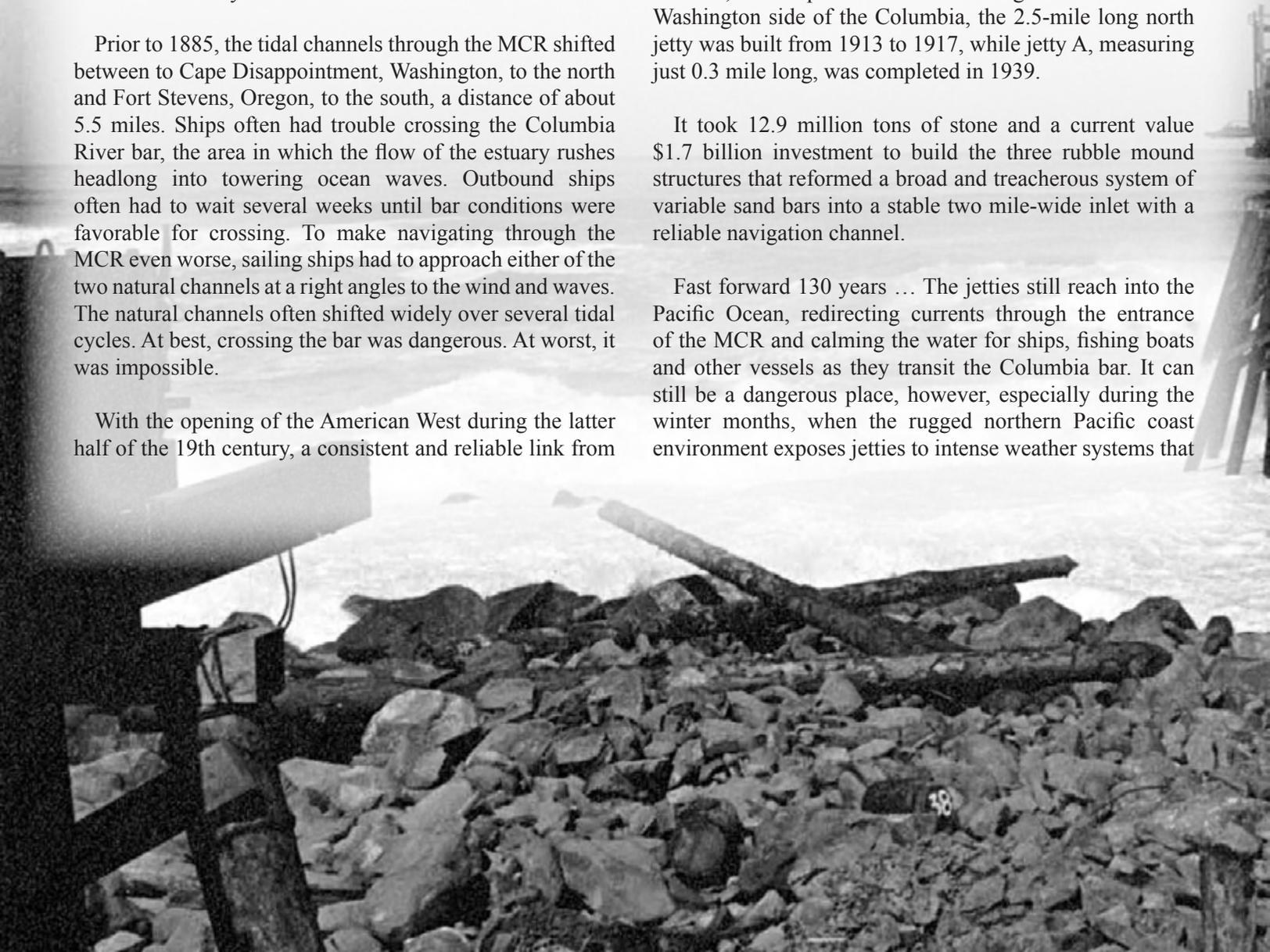
inland areas of the Pacific Northwest to other parts of the country and world was needed – meaning a consistent and reliable navigation channel through the MCR.

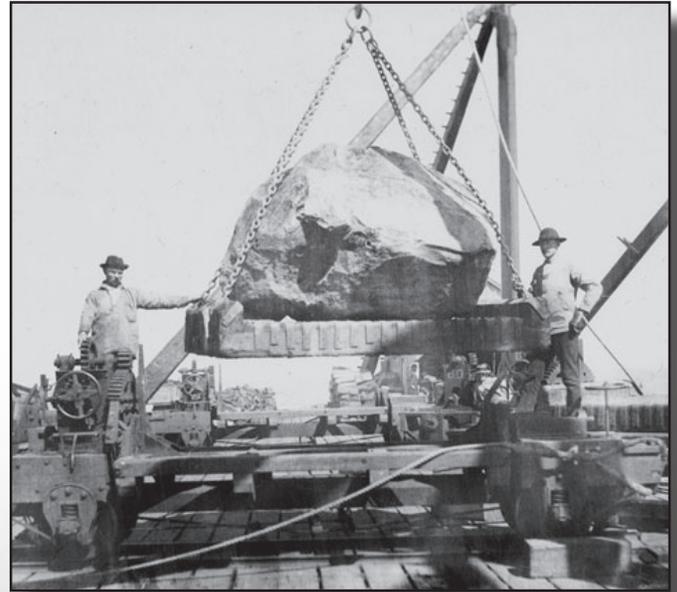
Enter the Corps of Engineers and the River and Harbor Act of Aug. 2, 1882, which authorized a study of the MCR and a plan for stabilizing the navigation channel.

Taming the channel began by constructing the south jetty on the Oregon side of the river. It took a decade, from 1885 to 1895, to complete the 6.6-mile long structure. On the Washington side of the Columbia, the 2.5-mile long north jetty was built from 1913 to 1917, while jetty A, measuring just 0.3 mile long, was completed in 1939.

It took 12.9 million tons of stone and a current value \$1.7 billion investment to build the three rubble mound structures that reformed a broad and treacherous system of variable sand bars into a stable two mile-wide inlet with a reliable navigation channel.

Fast forward 130 years ... The jetties still reach into the Pacific Ocean, redirecting currents through the entrance of the MCR and calming the water for ships, fishing boats and other vessels as they transit the Columbia bar. It can still be a dangerous place, however, especially during the winter months, when the rugged northern Pacific coast environment exposes jetties to intense weather systems that





Flatbed rail cars hauled huge stones along a tramway that extended from the beach to the end of the jetty. Reports made during construction of the south jetty say that at times the power of the ocean would cause portions of the tramway to sway so violently that trains could not run on it



buffet the MCR and the coast. It's not unusual during winter storms to see waves 30 feet high attacking the seaward end of the jetties. In spite of the brutal beatings they take during storms, the MCR jetties have stood the test of time. The Corps undertook interim repairs to the north and south jetties between 2004 to 2007, and in 2013, the Corps began the first of several construction phases to rehabilitate the entire system by 2021.

More than 100 years ago, the United States government recognized the critical role the Columbia River played to the country's economic success. Today the river remains vital to the nation's economy and security. Authorizing the Corps to study, plan and build a system to stabilize the river's entrance in 1885 was an investment in the country's future; rehabilitating these structures today, protects that initial investment as the nation continues to move forward.

The Graveyard of the Pacific is still a dangerous place, the MCR jetties mean \$20 billion a year in cargo passes through in relative safety. The 6-mile long, deep-draft navigation channel at the MCR is the ocean gateway for access to and from the 500-mile long Columbia/Snake River inland navigation system. Thanks to the jetties, it remains a critical gateway linking the Northwest, Mountain, Midwest and East Coast states to growing markets in the Asia and the Pacific Rim. If the Corps of Engineers has any say in the matter, the jetties will remain on the job for another 130 years. 

The Portland District maintains 11 jetty systems on the Oregon coast, from the mouth of the Columbia River near Astoria to the Chetco River at Brookings, Oregon.

Jetties ensure a consistent and safe navigation channel from ocean to inland waters. The structures' design hasn't changed in the 130 years since the Corps of Engineers began building jetties on the Oregon coast. Their foundations consist of rocks placed on the ocean floor, topped with larger boulders that form the main body of the jetty. Layers of boulders form the outer "armor" of the structure, with larger boulders used toward the end of the jetty to "cap" the structure, where it is most vulnerable to powerful waves. Although the boulders weigh anywhere from 30 to 50 tons, the powerful Pacific Ocean currents cause the stones to shift, allowing smaller rocks and sand to be washed away, leaving caverns beneath the surface of the structure.

Understanding coastal jetties - http://www.nwp.usace.army.mil/portals/24/docs/pubs/coastal_jetties.pdf



Seven easy Earth-friendly habits

Climate and other global environmental changes are major challenges for all missions of the U.S. Army Corps of Engineers. The Corps leads many aspects of the federal government’s climate change adaptation response, because these changes threaten water resources – a core mission.

While our efforts as a Corps team are leading the way to address climate change through programs and projects, each of us can also take steps as individuals, at work and at home, to affect climate change. Climate change cannot be addressed by just one single agency or one individual; it requires collaboration of great minds, and committed individual actions.



Photo by Greg Volkman, John Day Lock and Dam



Photo by Enrique Godinez, Corps of Engineers, Northwestern Division

1. Go paperless! Print, copy or fax only when necessary.
2. Use alternative transportation
 - Telecommute if you can
 - Carpool or take public transit whenever possible
 - Better yet, walk, bike or jog to get where you’re going
3. Use reusable cups, mugs, utensils and containers.
4. Turn off lights when you don’t need them and use focused lighting rather than fixtures that illuminate the entire room.
5. Scrub dishes before turning on the faucet to rinse.
6. Recycle ink cartridges, light bulbs and batteries.
7. Avoid phantoms! Unplug unused devices and chargers.

Student interest blossoms during STEM visit



Third graders at Salem’s Chapman Hill Elementary School take notes and ask questions during a visit by Portland District’s Floodplain Manager Julie Ammann during National Engineering Week. The students had studied natural disasters and emergency preparedness after reading about the Willamette Valley’s historic flooding in 1964. Discussion covered the role of dams and levees in protecting the students’ homes and community. Using basic STEM concepts, Ammann explained how engineering math, biology and other sciences work together to manage water to support fish survival, recreation and other water uses.



Photos by Amy Echols, Public Affairs Office





Portland District engineers host successful Engineer Day celebration

Thinking about the future means investing in our youth

By Heather Hall, Engineering and Construction Division

As part of National Engineers Week, the Portland District welcomed more than 75 junior and senior high school students from a wide range of schools from Rosemary Anderson to St. Helens and Fort Vancouver, to Lowell, Oregon. The expanded outreach of this year's event is largely credited to employee promotion beyond our District headquarters.

The students arrived with an interest in engineering, hoping, as Portland District Commander Col. Jose Aguilar

said, to “figure out if engineering really is – or is not – the right fit.” The students were divided into groups and attended workshops that introduced electrical, mechanical, structural, civil and environmental engineering.

Students also took an exclusive, basement-to-rooftop building tour of the newly renovated Edith Green-Wendell Wyatt Federal Building. It gave the students an opportunity to see the end result of engineering plans, specifications and design concepts.

Rounding out the day was a lunch-hour career fair, where technical firms such as West Consultants, Inc., GeoEngineering, and Shannon & Wilson, Inc., were on hand to highlight their firm's capabilities and answer the students' questions. A creative and interactive game of Bingo got students out of their seats and engaging with company representatives.

Students seemed to genuinely value the interactions they had with their mentors, and appreciated the level of





Photo by Erica Jensen, Public Affairs Office



Photo by Billie Johnson, ACE-IT

Ben Stolt led a structural engineering workshop as part of Portland District's engineering day activities, Feb. 24.



Photo by Ribha Patel, Engineering and Construction Division

Engineering Day students saw engineering and sustainability principles in action through their tour of the Edith Green/Wendell Wyatt Federal Building which underwent a major renovation between 2009 and 2013 and led to its Platinum-certified LEED rating.

detail with which their questions were answered. One student shared that the best part of the event was the opportunity to ask unlimited questions and receive real-life answers. Through the day students learned that Corps employees traveled many unique paths to get where they are today.

Personally, what impressed me most about the students was their ambition and commitment to their future academic and career goals at a young age.

One student in particular, a junior from Lowell High School, wanted to learn about summer internships that are available with the Corps. He had a desire to gain experience beyond the typical high school part-time jobs flipping burgers or pumping gas. With the increasing demand for individuals within the science, technology, engineering and mathematics fields, his

ambition could represent the driving force behind our future engineers.

Whether it was the playful promise of pushups from Aguilar, or the curiosity about what a real-life engineer does, the students' interactions with mentors, speakers and career fair participants helped make this year's Engineering Day a huge success. "This event had, by far, the most active participation from students I've seen in all the years I've worked to host this event," said Steve Miles, director of the Hydroelectric Design Center.

How exciting is that? As Corps employees, how incredible is it that we can help influence a student's career ambitions, or at minimum, feed their hunger for knowledge? That is exactly the intent behind Engineering Day: to provide valuable insight to our future leaders within the engineering industry. Well done, everyone! 





Portland District's dive operations team brings underwater reality to the classroom

By Erica Jensen, Public Affairs Office



Photo courtesy of Columbia High School

Fifteen students enrolled in Columbia High School's Marine Advance Technology Education program learned about remotely-operated vehicles theory and operations during two visits this winter with Rick Benoit and Toddy Manny, both from Portland District's Office of Dive/ROV Operations and Safety.

Rick Benoit and Todd Manny from Portland District's Office of Dive/ROV Operations and Safety made two trips to Columbia High School in White Salmon, Washington, this winter. The first was to teach students about remotely-operated vehicles and how the Corps of Engineers uses them around the world during its dive operations; the second visit took place at an underwater laboratory where students got to practice what they learned.

Benoit and Manny got involved with the school when Skip Fowler, a ranger at Bonneville Lock and Dam, suggested them to Columbia High School, which had just begun its Marine Advance Technology Education program, a new course that includes curriculum on ROVs, their use and benefits.

"We were happy to be asked," said Benoit. "Todd collaborated with Columbia High School, U.S. Geological

Survey, the Skamania County Sheriff's Department, Bonneville Lock and Dam's fisheries staff and others around the District to make this happen."

During their first visit, Benoit and Manny taught ROV theory and operation principles to 15 students in Chris Hipskind's class to help them prepare to build and operate their own unit. They also brought reality to classroom science as they briefed students on required education, career options and how the Corps' uses ROVs in its dive operations at dams and other underwater structures around the world.

"Most of the kids were wide-eyed and inquisitive and thought the possibility of doing this kind of work was very cool," said Benoit. "They asked lots of questions about what they needed to do to get a job like mine."



After giving students time to build their ROV, Benoit and Manny returned in March, along with Bonneville Dam fisheries staff and biologists from the U.S. Geological Survey, to host an in-water workshop at the Stevenson municipal swimming pool. They helped students test their self-made ROV, as well as to learn how to operate commercial underwater robotic cameras. The cameras offered a view of not only the underwater landscape, but also of the possibilities for a future career in dive operations.

This was Benoit's third classroom presentation. Since then, he has two more requests in the queue: one with the Multnomah County Young Marines and one with the Boy Scouts.

"This is a great way for Rick and I to introduce kids to our fascinating underwater world and the career possibilities it offers," said Manny. "Our goal was to open up young minds and inspire students to begin a lifelong pursuit as an underwater explorer ... and I think we did that."

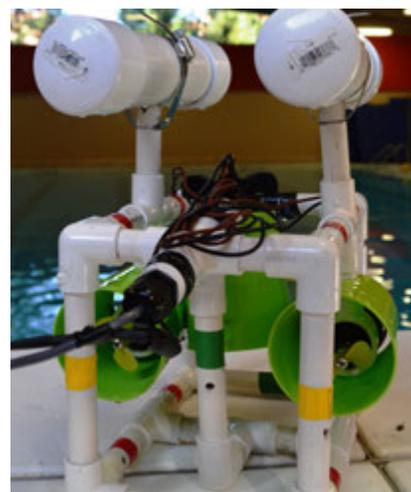
Portland District staff regularly partner with schools and other institutions around the Pacific Northwest to bring reality to Corps of Engineers and other STEM-related career fields. If you have an idea or opportunity for a classroom presentation or other education activity, contact the Portland District Public Affairs Office at cenwp-pa@usace.army.mil.

Todd Manny, Portland District's Office of Dive/ROV Operations and Safety, left, taught Columbia High School students ROV operations and theory last February.



Photos by Rick Benoit, Operations Division

Students from Columbia High School in Stevenson, Washington, built a remotely-operated vehicle, or ROV, as part of their Marine Advance Technology Education program curriculum.



the MATE Center

The Marine Advanced Technology Education Center is a national partnership of organizations working to improve marine technical education and in this way help to prepare America's future workforce for ocean occupations. Headquartered at Monterey Peninsula College in Monterey, California, the MATE Center has been funded as a National Science Foundation Advanced Technological Education Center of Excellence since 1997. Its purpose is to provide the marine technical workforce with appropriately educated workers and to use marine technology to create interest in and improve science, technology, engineering and math (STEM) education.) <http://www.marinetech.org/home/>



Sgt. Arnie Gonser, Skamania County Sheriff's Department, helped students test their homemade ROV and operate commercial underwater robotic cameras during an in-water workshop in March.





Special funding promotes efficient, sustainable recreation

By Scott Clemans, Public Affairs Office

Like many other business lines, the Corps' recreation program has been in a financial jam in recent years.

“Funding has declined or remained the same, while the cost of managing and maintaining facilities has increased,” said Willamette Valley Project Park Manager Tami Schroeder. “Recent budgets have usually covered basic maintenance and operational costs, but not the costs to improve, repair or replace aging and deteriorating facilities.”

Fortunately, Portland District recreation managers have been able to take advantage of a new funding source to make improvements that will lead to leaner but meaner recreation facilities and programs.

The District landed National Recreation Adjustment Plan funding to add new and upgrade existing volunteer camp host sites at Schwarz Park near Dorena Reservoir, replace deteriorating restrooms at Lakeside Park near Cottage Grove Reservoir and stabilize sections of the river bank at Lepage Park on the John Day River.

Upgrading the existing Schwarz Park volunteer camp host sites and constructing four additional full hook-up sites will allow Willamette Valley Project park rangers to recruit up to 14 highly-skilled volunteers each recreation season.

Those volunteers assist visitors and perform maintenance in Corps-managed parks around Cottage Grove and Dorena reservoirs, resulting in improved customer service, better-maintained facilities and grounds, and significant cost savings.

The Willamette Valley Project is also removing old, deteriorating restrooms at Lakeside Park and replacing them with more efficient vault-style toilets that are easier and less expensive to maintain.

Replacing the current restroom facilities with concrete vault toilets will reduce operation and maintenance costs and decrease stress on the aging water and sewage systems at Cottage Grove Reservoir.

“The water system [at Lakeside Park] was installed in the late 1970s, and the old restrooms were installed in 1981,” Schroeder said. “We are taking advantage of the NRAP funding opportunity to replace the restrooms now, instead of waiting until there are major problems that we cannot afford to fix.”



The Lakeside Park restrooms were installed in 1981. Willamette Valley Project recreation managers are taking advantage of NRAP funding to replace the restrooms now, instead of waiting until there are major problems they cannot afford to fix.

Photos by Christie Johnson, Willamette Valley Project



The new facilities will also better accommodate people with disabilities.

Stabilizing the river bank at Lepage Park will increase the safety and usability of several riverside RV camp sites, and an access road that serves all of the park's RV sites.

“We had multiple high water events this year that caused some pretty serious erosion,” said Melissa Rinehart, acting chief of Portland District's Natural Resources Management section. “The bank had eroded close enough that we might have had to close some of the shoreline sites and the access road.”

If the shoreline camp sites and the access road had to be closed down, the park would have faced a potential seasonal revenue loss of almost \$100,000. The cost to replace lost infrastructure from further erosion could have been three to six times the cost of the bank stabilization.

NRAP supports local projects that promote efficiency and sustainability while continuing to provide high-quality recreation opportunities. NRAP funding is awarded through a competitive process.

“The NRAP funding is specifically targeted at projects that fix a safety issue, increase visitation or reduce operating costs,” said Rinehart. “The ultimate goal is to operate more cost efficiently.”

Some of the criteria used to rate project proposals include benefit-to-cost ratio, economic and social impacts, partner involvement, and compatibility with a district's or operating project's overall efficiency plan.

All of the District's project proposals were highly rated in the NRAP competitive process.

The NRAP program is part of the 2011 National Recreation Strategic Plan, which is focused on making the Corps' recreation program more sustainable for the future.

District recreation managers will undoubtedly continue to face tight budgets in the future. But the creative use of NRAP and other alternative funding sources will help ensure that projects promoting efficient, sustainable high-quality recreation continue to be implemented at Portland District parks. 



The Willamette Valley Project is removing old, deteriorating restrooms at Lakeside Park and replacing them with more efficient vault-style toilets that are easier and less expensive to maintain.





SHARING THE CORPS MESSAGE:

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

Protecting the nation's aquatic environment

The Portland District Regulatory Branch is committed to protecting the Nation's aquatic resources while allowing reasonable development through fair and balanced permit decisions.

A U.S. Army Corps of Engineers permit is required for most projects that involve placing dredged or fill materials into waters of the United States, including wetlands, and for any work in, over, or under navigable waters. These projects range from building bridges to installing a culvert to repairing a fishing dock.

The Corps issues permits under the authorities of Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act and Section 103 of the Marine Protection Research and Sanctuaries Act.

Portland District project managers consult with federally recognized tribes, and state and federal agencies, and consider many factors when reviewing project proposals, including the environmental, cultural, recreational, and economic impacts. They are committed to making decisions based on thorough evaluation of the most current, accurate and relevant information about projects' direct, indirect, and cumulative impacts. The Corps carefully balances regulatory decisions to protect the nation's aquatic resources.



Rogue and Willamette basin water supply

As we go to press, mountain snowpack in the Rogue and Willamette basins are near historic lows. The question on many people's minds is: Will we be able to fill our Rogue River Basin and Willamette Valley project reservoirs and accomplish our fish and wildlife, hydropower, recreation, water quality and supply, and other missions?

The short answer is: It's too early to say. Here's why ...

- Our Rogue and Willamette reservoirs fill mainly from spring rain, not melting snow.
- March and April rain has historically helped fill our reservoirs.
- Streamflow forecasts for most Willamette and Rogue basin rivers are still 70 to 90 percent of average.
- Precipitation in both the Willamette and Rogue basins has been near average this water year.
- Despite conditions, we somehow almost always seem to find a way. For example:
 - ◆ Lost Creek Reservoir has come within a few feet of full every year since 2001.
 - ◆ Fern Ridge Reservoir has filled 19 of the past 25 years, and come very close 3 others.

