

# CORPS' PONDENT

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July - August 2015



US Army Corps  
of Engineers®  
Portland District

**Spirit Lake Outlet Tunnel team plans to repair movement to tunnel floor**



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Cover photo: Corps of Engineers Photo

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**Commander: Col. Jose L. Aguilar**  
**Chief, Public Affairs: Matt Rabe**  
**Editor: Erica Jensen**





# Commander's Column

## Life's Constant: Change

Corps Teammates,

I write today upon completion of our visit to Washington, D.C. where we conducted a briefing on July 30 to the Civil Works Review Board. Collectively, with District and Northwestern Division staff and city of Portland representatives, we sought approval from the CWRB to release the Lower Willamette Environmental Dredging and Ecosystem Restoration Project for state and agency review. This was our last step in this effort before Lt. Gen. Thomas Bostick, our Chief of Engineers, forwards the report to the administration and Congress for authorization. I'm happy to report we were successful in these efforts, thanks in large part to the significant work and collaboration between our District and our agency partners.

I would also like to focus on the many changes happening around us, starting with our Corps headquarters office in Washington, D.C. Brig. Gen. Ed Jackson was recently appointed as the Corps' Deputy Commanding General for Civil and Emergency Operations. He replaces Maj. Gen. John Peabody, who retired in July after a tremendous career serving our nation as Lt. Gen. Bostick's point man for Civil Works – our District's primary mission.

Portland District also hosted Brig. Gen. Jackson a few weeks ago as part of his visit to the Northwestern Division, where he toured the Bonneville Lock and Dam and learned about our hydropower projects. He is a superb officer and I look forward to his leadership in his new position.

At the regional level, a number of significant changes have occurred at Northwestern Division and its districts. Brig. Gen. Scott Spellmon assumed command of the Division from Brig. Gen. John Kem on July 16. On the same day, Col. Bill Leady, NWD's deputy commander, retired from the U.S. Army and transferred his duties to Col. Torrey DiCiro. The Omaha District also conducted a change of command, where it was a pleasure to witness Col. Joel Cross' retirement as he handed over the mantle of command to Col. John Henderson.

At Portland District, we have experienced multiple changes. I will highlight a few, starting with the Support Division. Former Portland District Counsel Doug Craner retired in June and handed over his responsibilities to Jennifer Richman, who was selected to succeed him. Ralph Banse-Fay retired Aug. 3, handing over his office as chief of the Contracting Division to Tracy Wickham. It's also significant to note that the Contracting Division has had significant turnover in its branch leadership positions, with all four leaders changing since the beginning of this year. Irene Gilbertson became our new chief of the Strategy and Mission Support Office, and Jen Muller took over as our District's head librarian. Amanda Dethman was selected to lead Real Estate earlier this year and Kathryn Kirkpatrick will come in behind Doug Dailey, who departed for the Bonneville Power Administration, as chief of the Security and Law Enforcement Office.

The Hydroelectric Design Center has experienced transition in its leadership as well. John Etzel, HDC's deputy director took a position with the Pacific Ocean Division in Hawaii and Dick Nelson was selected to assume John's deputy duties.



**Col. Jose L. Aguilar**



Other HDC management changes include the selection of Mike Posovich as Product Coordination Branch chief; the selection of Steve Ernst as Electrical Branch chief; and the selection last year of Jim Calnon, as the new Mechanical/Structural Branch chief.

Bern Klatter was selected as Operation Division's deputy chief after Dianne Edwardson departed to become the chief of Baltimore District's Operations Division. John Easton was selected as chief of the Technical Operations Branch, replacing Kevin Moynahan who took on the job of operations project manager at John Day Lock and Dam, replacing Glenn Smith, who moved on to the Walla Walla District.

The Engineering and Construction Division has also had its share of management changes, including the selection last summer of Jean Swalley as the Technical Services Branch chief, and Liza Wells, who recently replaced Bob Bucholz as chief of the Hydraulics and Hydrology Branch.

The Planning, Programs and Project Management Division has remained relatively stable in its management staffing and is doing great work.

Please congratulate these District individuals when you see them, welcome them into their new positions and actively help them integrate into their new roles with our District team. Good luck to those who have departed – you will always be a part of the Portland District.

I share this information with you for situational awareness and to depict that change is all around us. As I have progressed through my own Army profession, I have learned to appreciate change as a constant. I also have observed that the units or organizations that can quickly reassess and respond to change thrive, while still holding on to their core values and making required adjustments to accomplish the mission. Portland District will thrive, too. 

Competence follows Character,  
*Col. Jose Aguilar*  
61st Colonel of the District



Brig. Gen. Ed Jackson, recently appointed as the U.S. Army Corps of Engineer's Deputy Commanding General for Civil and Emergency Operations, learned about Portland District's hydropower operations during a tour of Bonneville Lock and Dam, July 21.



## Kellen Shide

Mechanical Engineer, Hydroelectric Design Center



### Describe your job.

I provide technical documentation and recommendations nationwide to facilitate the maintenance and rehabilitation of hydroelectric equipment through specifications, drawings and engineering during construction, calculations and communication.

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

At the end of the day, knowing the work I do helps to ensure this country has reliable, clean, domestic electricity.

### What do you like most about working for the Portland District?

I most enjoy working with the people of the Portland District. The large, historic hydroelectric facilities that have been entrusted to HDC and me are incredible assets to our Nation – but the greatest part of my job is working with those who share my passion to protect those assets every day they come to work.

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

I want to continue to develop my technical expertise in hydropower and other

aspects of what HDC does every day. I also want to continue to my develop leadership skills so that I can, one day, lead others to accomplish our mission.

### What is the one thing you need in order to do your job better?

One of the most important things I need to do my job better is trust. When those around me trust me to do the work correctly and allow me to do my job, I produce better products.

### First job

I was born and raised on a small family farm in Western Colorado and remember working on the farm with my father from an early age.

### A meal that influenced your life

Thanksgiving dinners. They have always included family, friends and extended family. This taught me that what makes someone ‘family’ is not genetics, but rather the character and faithfulness of the person.

### Favorite travel destination

My favorite travel destination is the Oregon coast. The beautiful landscapes along the Pacific Ocean are breathtaking. 





# Leadership Development Program welcomes new class

By Erica Jensen, Public Affairs Office

**P**ortland District welcomed a new cadre of future leaders this June as part of its Leadership Development Program, an intensive year-long opportunity that offers students a chance to observe and practice leadership principles, participate in mentoring relationships with senior staff, take graduate-level coursework at Portland State University and sharpen their presentation skills through a six-week Toastmaster and Speechcrafter program.

This year's class is facilitated by Dwane Watsek, chief of the Operations Division and Joyce Casey, chief of the Environmental Branch in the Planning, Programs and Project Management Division. Both bring a tremendous amount of individual, organizational and national leadership experience to the three academic components of the program.

This year's cohort is unique because almost half are from duty locations not in Block 300, according to Watsek.

"A number of the participants will need to deal with the challenges of remote and virtual communication," he said. "But I'm excited to see how the program will increase their self-awareness and broaden their Corps experience."

LDP ends in May 2016 with a capstone project, planned and implemented by the class who will incorporate into the project the personnel management, team building and project development skills they learned throughout the year.

"Our LDP program offers long-term value to this District," said Casey. "Members gain greater perspective about the work we do in the Pacific Northwest, and indeed, about the Corps nationally. They see how their work fits into our larger mission – which results in a more connected workforce who perform and work in teams better. I'm excited about this year's class and what they will do through this program together." 



Front row : Joyce Casey, Planning, Program and Project Management Division; Erika Stewart, Operations Division; Melody White, Operations Division; Karen Dailey, Contracting Division.  
Back row : Fenton Khan, Planning, Program and Project Management Division; Steven Ernst, Hydroelectric Design Center; Dan Robledo, Operations Division; Jacob Watts, Engineering and Construction Division; Wayne Wright, Operations Division; Jim Butler, Willamette Valley Project; Dave Tucker, Rogue River Basin Project; Doug Komoroski, Hydroelectric Design Center; Brian DuVal, Support Division; Dwane Watsek, Operations Division; Benny Dean, Regulatory Branch; Keith Duffy, Engineering and Construction Division; Charles Bennett, Bonneville Lock and Dam; Matt Chase, Engineering and Construction Division

Photos by Billie Johnson, ACE-IT





# SHUTTERBUGS!

## Enter your photos in #WEARIT to Win It!

**B**etween now and Labor Day weekend, you could win a prize just by sharing photos of yourself or your friends and family wearing a life jacket while having fun at a Corps-managed lake or river near you!

Post photos to our Facebook page at [www.facebook.com/portlandcorps](http://www.facebook.com/portlandcorps) or tweet them using our Twitter handle @PortlandCorps. Be sure to use the hashtag #WEARIT.

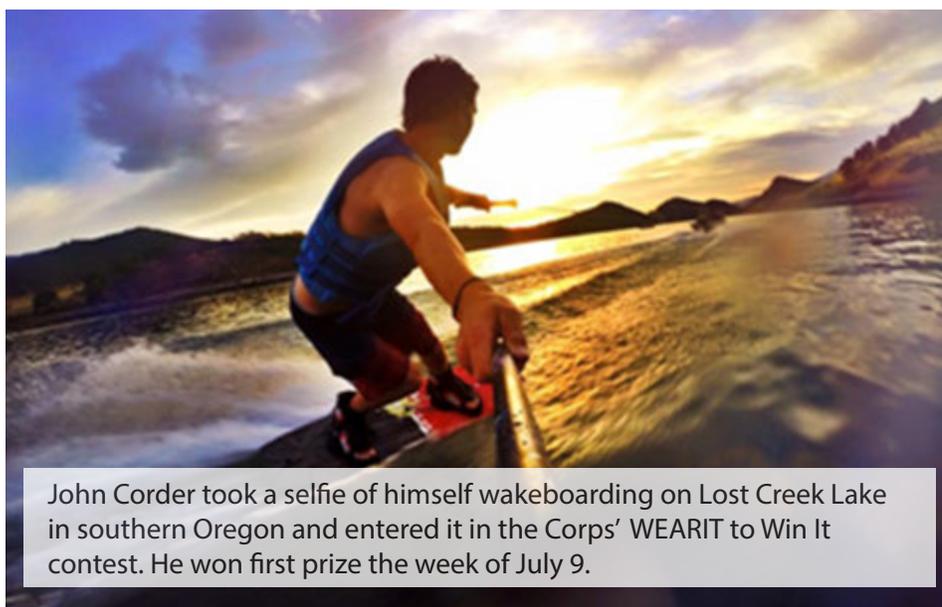
Every Monday until Labor Day, we will award a prize for our favorite photo posted on our Facebook and Twitter pages during the previous calendar week. Photos will be judged based on subject matter, focus, creativity and overall emphasis on water safety. If your photo is chosen, you could win a one-night camping coupon or a one-time use of a large group picnic shelter at one of our beautiful parks!

Each winner also will receive a U.S. Coast Guard-approved Type IV boat throw cushion and a distress whistle, courtesy of Discover Your Northwest.

Winners will be announced and notified via the social networking site on which they submitted the photo. Once selected, winners will be asked to provide their contact information to ensure receipt of their prizes. Only one prize will be awarded per photographer, but feel free to post multiple photos throughout the summer.

By submitting photos you are giving the Corps of Engineers permission to post the photos on our website or use them in publications, such as water safety ads, lake brochures, etc.

So spread the word, tell your friends and let's have some fun showing how we WEAR IT! 



John Corder took a selfie of himself wakeboarding on Lost Creek Lake in southern Oregon and entered it in the Corps' WEARIT to Win It contest. He won first prize the week of July 9.

**PRIZE DETAILS:**

Camping coupons are valid at Schwarz Campground at Dorena Reservoir, Pine Meadows Campground on Cottage Grove Reservoir and Lepage and Plymouth campgrounds near the John Day Lock and Dam. Corps-managed picnic shelters are located at Bonneville Lock and Dam and Lost Creek Lake in the Rogue River area. Winners will be provided with contact information to make campsite or shelter arrangements based on availability. Winners should call as soon as possible to book their reservation. Campsite and shelter reservation prizes valid for one year from date of issue.





# District pest plan focuses on

A commentary by Shelly Hanson, Natural Resources Management Section

Invasive animal and plant species impact Portland District's missions, including navigation, flood control, recreation, environmental stewardship and ecosystem restoration.

Such species interfere with harbor and waterway maintenance; affect operation of dam and navigation lock systems; displace native plants and wildlife; and further impair rare, threatened and endangered species.

It's our policy to integrate pest management at our projects around Oregon and southwest Washington in

ways that provide for the safety of the environment, the public and the pesticide applicator. Employees, contractors and volunteers must be licensed and trained to apply pesticides on our lands.

Portland District Commander Col. Jose Aguilar has designated the Natural Resources Management Section's environmental stewardship program manager as the point of contact for management of its pest control program. We review all actual and proposed pesticide use requests from operating projects and outgrants, and assure that all pesticide applications – particularly

those in or near waters and wetlands of the United States, are completed in compliance with applicable federal laws, including the Clean Water and Endangered Species acts.

We rely on early detection and response to prevent and control aquatic invasive species. All of our Columbia River projects have conducted vulnerability assessments, and sample regularly for the presence of invasive zebra and quagga mussels in partnership with Portland State University.



Photo by Wes Messinger, Willamette Valley Project

The classical biocontrol organism *larinus minutes* (knapweed weevil) was introduced by the Oregon Department of Agriculture and established in Oregon, including at Fern Ridge Reservoir.



# early detection, rapid response

We work with the 100th Meridian Initiative, a cooperative effort between local, state, provincial, regional and federal agencies to prevent the westward spread of zebra/quagga mussels and other aquatic nuisance species in North America, to prevent zebra and quagga mussels from becoming established in dam infrastructure.

We have also signed memorandums of understanding with three regional cooperative weed management associations and some local weed management boards. These partnerships of local, state and federal agencies coordinate weed management actions taken by individual agencies to accomplish more effective invasive weed control.

Individual operating projects have developed “good neighbor” relationships with local weed management groups and watershed councils for noxious and invasive weed control. They have implemented local measures – like boot cleaning stations at trailheads – to help visitors prevent the spread of invasive plants. They partner with other federal



Photo by Chad Stuart, Rogue River Basin Project

Wade Martin points out to his mother, Carolina, a spot on his shoe that could contain seeds from invasive species. Katie the family dog also waits to be brushed off.

agencies, participate in “pull together” events, and work with local volunteers to manage invasive species at the projects.

Our ultimate goal is long-term prevention of damage and eradication of pests. It won't be easy, but we're developing a District-wide Integrated Pest Management Plan with a focus on early detection of and rapid response to new pests, and long-term management and control of established invasive species.

The plan approaches pest control by focusing on identifying and wisely using the proper management tools, including mechanical/physical, cultural and biological measures, as well as pesticides, where appropriate, to limit the spread of invasive, noxious and exotic species on Corps lands. If we determine pesticides are the best tool, licensed applicators apply the optimal amount to reduce the potential for resistance and minimize the frequency of applications needed. 



Photo by Wes Messenger, Willamette Valley Project

Partners experiment to determine whether controlled grazing will reduce weedy competition with endangered species at Fern Ridge Reservoir.





# Mountain on the move

## Spirit Lake Outlet Tunnel team plans to repair movement to tunnel floor

By Diana Fredlund, Public Affairs Office

**W**hen mountains move, humans can only watch and figure out how to work with the changes.

A massive avalanche of rock and debris choked Spirit Lake when Mount St. Helens erupted May 18, 1980, changing the jewel-like lake forever. The avalanche completely blocked the natural outlet where Spirit Lake flowed into the North Fork Toutle River and on into the Toutle, Cowlitz and Columbia rivers.

The avalanche created a dam of sediment, ash and fragmented rock, with heavier, less porous materials below and more erodible pumice and ash from pyroclastic flows above it. Snow and rain continued to feed Spirit Lake, but without an outlet, the water level rose dangerously close to the more easily erodible material.

“The natural dam is strong enough to withstand the weight of water in Spirit Lake until it reaches the top layer,” said Chris Budai, Spirit Lake Outlet Tunnel project manager. “If water levels were

to rise into the more porous pumice and ash, it could erode the entire dam and possibly send tons of material and water downstream.”

In the worst-case scenario, communities like Castle Rock, Kelso and Longview in the Cowlitz River Valley would be flooded by more than 60 feet of water and debris. “The U.S. Forest Service needed to find a way to stabilize the lake level and the Federal Emergency Management Agency tasked the Corps with finding it,” Budai said.

Mount St. Helens erupted in southwestern Washington May 18, 1980



Mount St. Helens and Spirit Lake are located within the Gifford Pinchot National Forest in southwestern Washington. In 1982, President Ronald Reagan declared a state of emergency and FEMA requested that the U.S. Army Corps of Engineers develop and execute a solution to Spirit Lake's water level problem.

"The first step was to design an interim plan to maintain the lake's water level until a long-term solution could be developed," Budai said. The Corps established a temporary pumping facility on Spirit Lake in November 1982, which operated until the Spirit Lake Outlet Tunnel was completed in 1985.

It wasn't as easy as moving equipment in and getting repairs started, however.

In 1982 President Reagan and Congress created the Mount St. Helens National Volcanic Monument within the Gifford Pinchot National Forest. An important objective of the legislation was to protect natural features and allow the environment to develop naturally, according to Peter Frenzen, staff scientist for the Monument.

"Spirit Lake and the surrounding area are very remote now, since roads and infrastructure were destroyed in the blast. As the best known and most studied eruption of the 20th century, we believe it's important to learn about how nature manages its own recovery," Frenzen said. "It does create some challenges, but within the bounds of public safety we need to preserve this important natural laboratory."

"It definitely posed a challenge when the Corps began constructing the outlet tunnel in 1984," Budai said. "For example, we couldn't protect the slopes

at the tunnel intake with shotcrete when we excavated it."

Shotcrete is a concrete mix that is "shot" through a pressurized hose, allowing the material to adhere to a variety of surfaces. Instead of using shotcrete, the slopes were protected with chain link fabric and rock bolts, but the rock was exposed to freezing and thawing conditions that caused a rapid deterioration of the rock slope, Budai said.

"Fragments of rock would break off and build up behind the chain link fabric and eventually fall onto the intake air grating that allows the tunnel to function properly. Additionally, ash, pumice and other volcanic material that surrounded the intake was a constant source of material that fell on the air grates and blocked air flow into the tunnel."

Engineers modified the intake air grating to allow this debris to drop into the shaft and then wash out through the tunnel, eliminating the problem.

The intake shaft drops water about 40 feet into an 8,465-foot long, 11-foot diameter tunnel that the Corps constructed through Harry's Ridge, which borders Spirit Lake. The water flows into South Coldwater Creek, Coldwater Creek and the North Fork

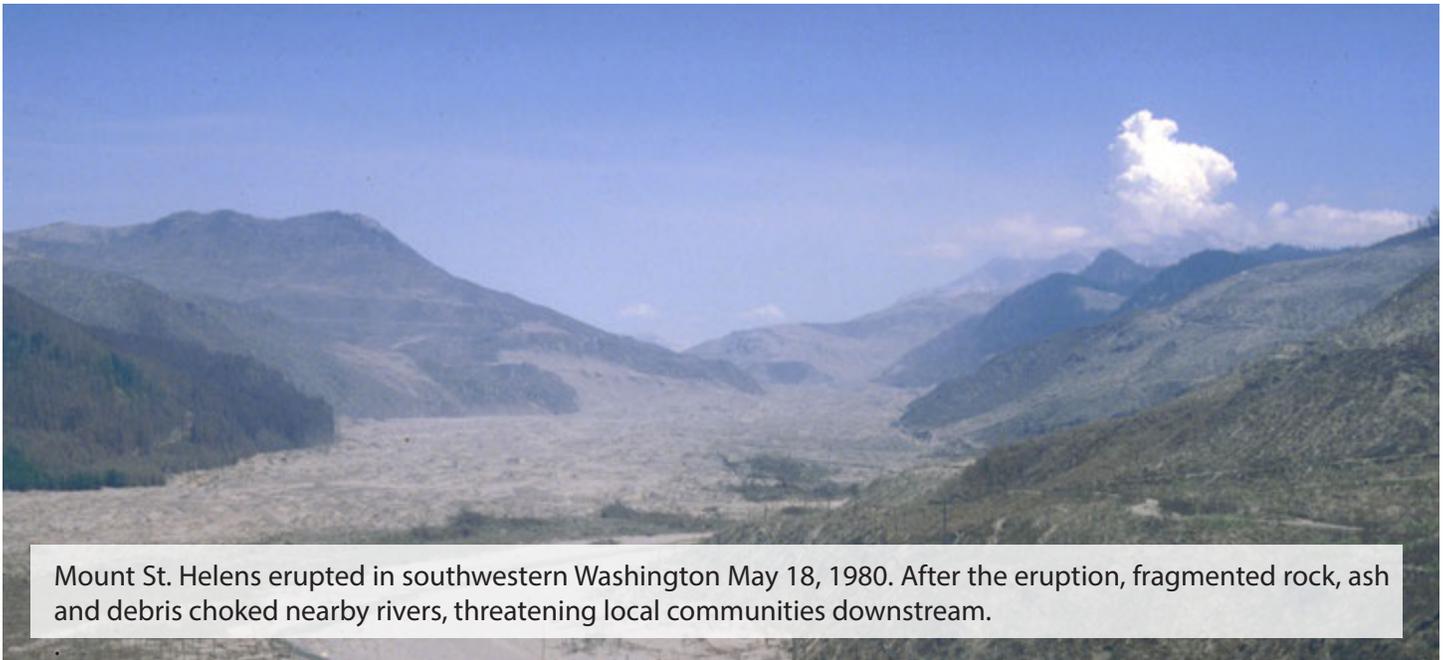


(MSH) Mount St. Helens erupted in southwestern Washington May 18, 1980. The eruption forever changed the jewel-like Spirit Lake, seen here prior to May 1980.

Toutle, Toutle and Cowlitz rivers as it flows to the Columbia River.

Geologists knew there were some areas along the tunnel's path that could exert additional pressure on the tunnel. These areas are known as shear zones, where the pressures could cause the ground to move if the tunnel was not adequately supported; they also contained soft, clay gouge material that flows under pressure.

"The tunnel had to be designed to withstand these varying stresses," Budai said. "We knew routine monitoring would be important so we could react if we detected any changes in the tunnel."



Mount St. Helens erupted in southwestern Washington May 18, 1980. After the eruption, fragmented rock, ash and debris choked nearby rivers, threatening local communities downstream.

Since its completion in 1985, the Corps has repaired the tunnel many times; most were small repairs to restore tunnel integrity.

A more significant repair was performed in 1997, when tunnel movement due to pressure build-up in a shear zone caused a partial failure of some tunnel supports. Pressure build-up from that same shear zone has caused gradual movement in an area near the 1997 repairs, causing the tunnel to constrict. For nearly 30 years the annual inspections showed only a gradual constriction in the tunnel's diameter, which engineers monitored but decided no action was necessary; in October 2014 Budai found that was no longer true.

"Our inspection in October found one part of the tunnel's floor had moved upward by about a foot and a half, increasing the possibility of a tunnel collapse," Budai said. "Another concern is the decreased water capacity due to the constriction." Decreased

capacity means less water can flow without pressurizing the tunnel – the expansion and contraction that occurs if water completely fills the smaller tunnel. Pressurization can be seen when water flows out of a bottle that's tipped nearly vertical, causing a back-and-forth motion. In a concrete structure like the Spirit Lake Outlet Tunnel, that can cause damage and failure, since it can rapidly erode the tunnel rock and undermine the tunnel supports.

Budai and her team knew the soft clay material was being forced upward into the tunnel. "The movement is much like that of toothpaste being squeezed from a tube," Budai said. "The pressure from the material above the tunnel was forcing the soft material up into a weaker section of the tunnel."

When sharing her findings with the Forest Service, Budai emphasized the need to move quickly. During an inspection six months later, Budai found the floor had moved upward another six inches, reinforcing the need

to repair the tunnel before the next flood season in January 2016.

Because the Monument is managed by the Forest Service, the Gifford Pinchot National Forest first needed to secure funding from its national headquarters. As soon as the situation was discovered, senior leaders from the Forest Service and the Corps met to discuss the needed repairs and formulate a funding strategy.

Budai and her team began designing the repair plan. "Under normal circumstances a Corps project moves through the design, review, and contracting phases in 12 to 18 months," Budai said. "Our accelerated schedule includes design and review in about six weeks. The construction contract is expected to be awarded by early August; work is scheduled to begin in September 2015 and finish by February 2016."

Fast-tracking the repair project means it receives a higher priority for resources while still conducting all the



quality assurance checks every project undergoes. “We are ensuring all design and review actions are fully in place. It means our team is focusing almost exclusively on the Tunnel Outlet Project for a while in order to get the work done on time.”

“It’s important to remember these are interim repairs, designed to provide us time to make more extensive, long-term repairs,” Budai said.

“The Forest Service is the lead agency in all of this work. We have an excellent team of Forest Service and Corps employees working together to ensure all aspects of the project

fit current and future requirements.” The long-term project will require formal studies to ensure the repair work meets all regulations, she added.

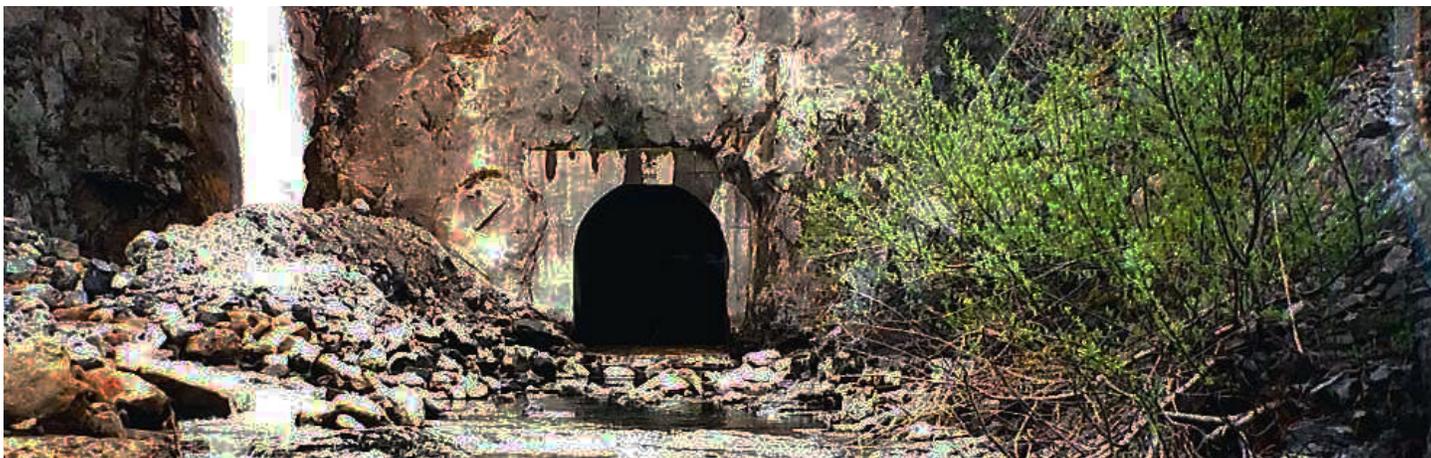
Water continues to flow into Spirit Lake and thanks to a team of Corps and Forest Service scientists, engineers and biologists, the lake will continue to flow safely through the tunnel and continue its way to the ocean.

“The cooperation among the agencies is outstanding,” Frenzen said. “The tunnel has controlled the level of Spirit Lake for 30 years, and our goal is to make necessary short-term repairs while investigating how best to manage Spirit

Lake’s water level sustainably into the future.”

Mountains move on their own schedule and many were surprised in 2004 when Mount St. Helens erupted again. The Spirit Lake Outlet Tunnel was designed to withstand landslides and mudflows from future eruptions.

It’s possible today’s team members won’t be working on the project the next time Mount St. Helens erupts – but they’re doing all they can to ensure future teams will have options for managing the level of Spirit Lake long into the future. 



To construct the Spirit Lake Tunnel Outlet, the Corps used a mammoth tunnel boring machine to dig through Harry’s Ridge to create a new outlet for the lake after the natural outlet was blocked by the eruption

Corps of Engineers Photos





# Don't become a statistic

## Wear your life jacket! If you don't have one - borrow one

By Melissa Rinehart, Natural Resource Management Section



Corps of Engineers Photos

Life Jacket Loaner stations at many Portland District recreation areas in the Columbia Gorge, Willamette Valley and in the Rogue River area carry life jackets for both adults and children.



Photo by Kyra Fulkerson, Willamette Valley Project

Cody Fulkerson, 23, of Springfield, Oregon wakeboards for the first time at Dorena Reservoir on July 12, 2014.

**T**he U.S. Army Corps of Engineers hosts 370 million visitors annually at its more than 400 lake and river projects.

Last year, Portland District recorded 9.8 million of those at its own recreation areas – in the Willamette Valley, Rogue River area and along the Columbia River, where visitors of all ages enjoyed biking, hiking, boating, fishing, camping, windsurfing and more.

On average, however, 168 people per year, lose their lives while recreating on Corps-managed lands and waters across the country – 84 percent of

whom were not wearing a life jacket and who probably never intended to end up in the water.

According to national public fatality statistics, the most at-risk visitor groups are males between the ages of 18 and 35, not wearing a life jacket and swimming in non-designated areas. Other causes for water-based recreation injuries and fatalities also include falls from boats, docks and other places. Alcohol or drugs often play a contributing factor in these instances.

In May 2012, Maj. Gen. Michael Walsh (Retired), Deputy Commanding General for Civil and Emergency



## Key Facts and Figures

- It's important that everyone (Corps employees, volunteers and partners) stress the importance of wearing a life jacket when in and around water.
- 89 percent of water-related fatalities involve those not wearing a life jacket.
- 39 percent of public recreation fatalities involved individuals between the ages 18 – 35.
- More than 80 percent of swimming fatalities occurred in non-designated swimming areas.

Operations, launched the Corps' Strategic Campaign Plan for Reducing Public Fatalities, emphasizing the need to reach those who are most at risk.

According to the plan, the target group (males, aged 18-35) has little perception of risk and, therefore, little motivation to wear a life jacket – although recent studies have shown that influencers (i.e. spouses and children) can be instrumental in gaining behavioral change.”

One of the ways Portland District is reaching this target audience and their influencers at its parks is by providing free use of life jackets through the Life Jacket Loaner Station program.

“Studies have shown that it only takes about 60 seconds to drown and at least 10 minutes for a strong swimmer to put on a life jacket after entering the water,” said Patti Williams, chief of the Natural Resources Management Section for the Portland District. “You never know when you may end up in the water so it's better to start with your life jacket on.”

The loaner stations carry life jackets for both adults and children and are available in the Columbia River Gorge



at LePage Park and Plymouth Park swim beaches and boat docks, and at the Bonneville Lock and Dam Hamilton Island boat ramp. In the Willamette Valley, visitors will find loaner stations at the Pine Meadows campground and Lakeside Day Use area on Cottage Grove Reservoir, Schwarz Park on Dorena Reservoir and at Richardson Park on Fern Ridge Reservoir. Visitors to the Rogue River area in southern Oregon will find loaner stations at Joseph H. Stewart State Park boat ramp and Takelma Park boat ramp.

According to national recreation statistics, 96 percent of drowning

victims would be alive today if they had worn a life jacket.

“If we save even one life then we have succeeded with our life jacket loaner program,” said Dwane Watsek, Chief of Operations for the Portland District. “Wearing your life jacket is the single most important lifesaving action that you can take to protect yourself and your family.” 

*For more information about the Corps' water safety program, visit <http://www.usace.army.mil/Missions/CivilWorks/Recreation/WaterSafety.aspx>*





# Ryan Braaten honored with 2015 National American Recreation Coalition's Beacon Award

By Erica Jensen, Public Affairs Office



Ryan Braaten, a park ranger at Bonneville Lock and Dam, was honored in June with the 2015 National American Recreation Coalition Beacon Award, an annual recognition which honors the use of technology to enhance visitor services and improve recreation programs across the nation.

Visitors to Bonneville Lock and Dam can now access information about the dam through a variety of innovative technologies, thanks in large part to Ryan Braaten, a natural resource specialist at the dam. Braaten led efforts to develop interactive displays, addressing the history of the dam, fish, water safety, energy and the Corps benefits to the region and nation.

Braaten was recognized in June for his creative efforts to improve the dam's visitor experience through technology, at the Partners Outdoors

Conference in Washington, D.C. He received the 2015 National American Recreation Coalition's Beacon Award – an annual recognition which honors the innovative use of technology to enhance visitor services and improve recreation programs across the nation.

“This is a tremendous honor for Ryan, Bonneville Lock and Dam, and for Portland District, since only one person from each federal land management agency is recognized each year and Ryan was chosen as the Corps of Engineers national winner this year,” said Patti Williams, chief of the District's Natural Resources Management Section.

Braaten cooperatively led the development of three interactive touch screen displays now used in the Washington Shore Visitor Center, that educate visitors about Corps missions, salmon life cycles and implementation measures to improve pacific lamprey and salmon passage on the Columbia River system. He programmed four more displays used during the dam's annual Great Electrifying Event last February, helping visitors important concepts of hydropower production.

He developed quick response, or QR codes, allowing visitors to download brochures to their Smart devices for self-guided tours of the visitor center and surrounding areas.

Braaten also loaded two digital tablets with interpretive information that Bonneville park rangers use when speaking with tourists and others around the dam.

According to Bonneville's natural resource manager Greg Webb, “Virtually all of our park visitors are utilizing various technologies more than they did five years ago. Ryan's efforts are a great example of how our staff is providing a variety of new technological tools that draw people to our parks, and effectively communicate information that benefits both the individual and agency.”

Braaten partnered with staff from Discover Your Northwest, a non-profit cooperative association that operates the Bradford Island Visitor Center bookstore, to fund his innovations.

“Ryan worked with DYNW staff and others to launch the “Make a Donation, Take a Button” campaign,” said Williams. “The effort has helped to increase sales as much as \$10,000 a year. These funds support the technology required for Ryan's new interpretive advancements.”

As part of the Corps' natural resource management team, Braaten has shared many of his technical innovations through the Corps' NRM Gateway website to help other park



New interactive displays such as QR codes and monitors enhance visitor's experiences at Bonneville Lock and Dam.

rangers and Corps facilities replicate his success at their own facilities.

“When Ryan shared his skills and knowledge with the National Interpretive Services PROSPECT participants this year, he inspired many to consider similar opportunities for visitors at their sites,” said Pat Barry,

former Bradford Island Visitor Center Manager (Barry retired in 2015). “Many of his templates are now included in the Corps’ Interpretive Services for Managers, Supervisors and Team Leads PROSPECT Course curriculum. They also are available on a national database for all Corps interpreters to access.”

“Ryan used his creativity and knowledge of technology to connect people to nature, reaching key audiences in a cost effective and resourceful manner,” said Williams. “He is a true asset to Bonneville Dam, the Portland District and the Corps of Engineers.”



Park ranger Ryan Braaten, regularly leads tours of the Bradford Island Visitor Center and other areas around the dam where new interactive displays, QR codes and messaging on monitors enhance visitor understanding about the dam and the region.



# Corps employees, local youth take STEM for a ride

By Michelle Helms and Meghan Fischer, Public Affairs Office

**A** new partnership and fun approach may be the ticket to getting some Portland-area kids excited about science, technology, engineering and math.

The U.S. Army Corps of Engineers and the Boy Scouts of America, with help from BMX USA, recently took STEM concepts to the Native American Youth and Family Center in Portland. Bicycle motocross, or BMX, began in the early 1970s and presents a unique platform that fosters both education and physical fitness. The company donated fifteen bicycles for the two-day workshop and trained volunteers to teach a White House-endorsed STEM curriculum.

“The first step is for the kids to learn how to build the BMX bike itself,” said Paul Cloutier, Tribal Liaison for the Northwest Division. “Once the bike is built we start going over various lessons

with regards to science, technology, engineering and math.”

Lessons like how improper tire pressure, whether too high or too low, impacts rolling resistance, drag and energy output. Or in kid-speak: you can’t win the race if you don’t have the right amount of air in your tires.

“The kids are learning the science behind bike riding,” said Lisa Dixon, Community Impact District Executive, Cascade Pacific Council, Boy Scouts of America. “And they’re having fun which is good, because more than likely you’re going to remember it better than if you don’t have fun while learning.”

Some of the other objectives of the workshop include seat positioning and force, off road terrain versus pavement, speed acceleration, deceleration, braking and stopping; pedaling, coasting and balance and bike circles and diameter.

This was the first time the Corps partnered with the Boy Scouts of America to focus specifically on outreach within the Greater Portland American Indian/Alaskan Native youth community, and it’s not the last. Cloutier said the BMX event is the launch of a larger pilot effort; future sessions include archery, welding and basketball.

“It’s a mix essentially of some activities they know and some new activities,” said Dan Rowell, NAYA Family Center Academic and Extracurricular Support Manager. “We’re looking to get them interested in these areas of study, get them excited about that, so maybe it peaks some more interest in those fields.”

“It’s really important that we get out, interact with our youth,” said Cloutier. “Just learning the basic principles in science and things of that particular nature really helps those youth get on a very nice potential glide path to a future career in any one of those four related fields.”

STEM outreach is a priority for the Corps. Cloutier said the opportunity to participate in an event with Native American youth is particularly rewarding.

“We’re just really excited to see how this continues to flourish and grow and have a positive, lasting impact within the native community in the greater Portland area.” 



Corps of Engineers Photo

JR Inglis, Portland District Tribal Liaison, looks on as two students from the Native American Youth and Family Center learn to build a BMX bike.



# 2015 Call for Entries PHOTO CONTEST

Corps people



Recreation/Water safety



Project/mission



Environment



Scenic/seasonal



Cultural/tribal



STEM



**DEADLINE: Sept. 30, 2015**

See back for contest details. Contact the  
Portland District Public Affairs Office at  
[cenwp-pa@usace.army.mil](mailto:cenwp-pa@usace.army.mil)



# ENTRY FORM

(One photograph per entry form)

2015  
Call for Entries  
PHOTO CONTEST

Photographer: \_\_\_\_\_ Work Location: \_\_\_\_\_

Office Symbol: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Date of Photo: \_\_\_\_\_ Photo title: \_\_\_\_\_

Caption: \_\_\_\_\_

Category (check one):  Project/mission  Recreation/water safety  Corps people  
 Environment  Cultural/tribal  Scenic /seasonal-specific photos  STEM

**Eligibility:** All Portland District employees, long-term contracted employees and volunteers.

**Submission period ends:** Sept. 30, 2015

**Entries:** One entry per form. E-mail your submission to [cenwp-pa@usace.army.mil](mailto:cenwp-pa@usace.army.mil).

## Submission criteria/guidelines:

- Corps water-based recreation. All photos of activities on or near the water should depict properly-sized and properly-buckled life jackets for everyone in the photo.
- Close-up images of individuals under 18 must be accompanied by a signed “*Photograph, audio and video release acknowledgment*” form available from the Portland District Public Affairs Office.
- No photo of employees wearing an official Corps of Engineer badge will be accepted.
- All uniformed Corps employees shown in photos should be wearing the proper uniform for the activity in which they are engaged. For regulations, visit [http://publications.usace.army.mil/publications/eng-pamphlets/EP\\_1130-2-550/c-8.pdf](http://publications.usace.army.mil/publications/eng-pamphlets/EP_1130-2-550/c-8.pdf)
- Safety - Photos depicting project work must follow Corps safety standards and practices. All people in the photos must be wearing proper personal protective equipment associated with the activity they are doing in accordance with USACE Safety Manual EM385-1-1

- Set your digital cameras to the highest resolution. (3mb or higher)
- Both horizontal and vertical photos will be accepted, but horizontal preferred. No panoramas.
- Photos with date stamps will not be accepted.
- Photos must not be digitally altered (no photo modifications).
- Submissions may be used in other Portland District publications, presentations, displays, web or other applications.

**Judging:** PAO and the Safety Office will review submissions to ensure they comply with public affairs and safety policies. PAO and ACE-IT will judge photos that pass this screening for photo alterations, technical quality, composition, lighting, visual impact and appropriateness to category (for which photo was entered).

**Employee voting:** Three photos from each category will be selected for online voting in October with winners announced in November.

A winner will be chosen for each category and one winner selected as ‘Best in Show’ based on overall employee votes.

For more information e-mail [cenwp-pa@usace.army.mil](mailto:cenwp-pa@usace.army.mil).

Winning photos will be featured and highlighted throughout the year in District publications.