



# CORPS' PONDENT

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US Army Corps  
of Engineers®  
Portland District

**Popular Willamette Valley bike  
trail leads cyclists to wildflowers  
along the Row River**



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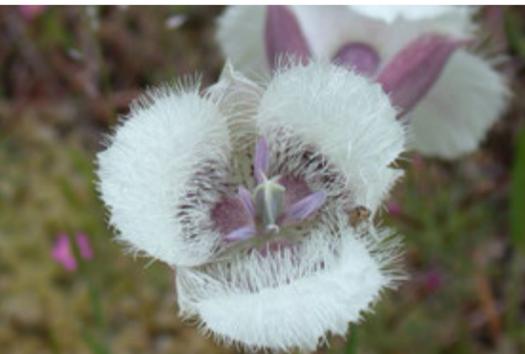
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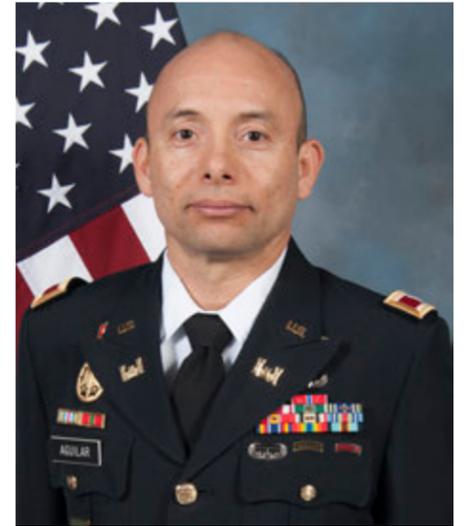
Cover photo: Corps of Engineers photo

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



### The first 30 days



Col. Jose L. Aguilar

**M**en and women of the Portland District: It is a privilege to work with you. Thank you for such a tremendous welcome back to the District. Suzanne and I are humbled and honored to serve with such a group of consummate professionals who have a world-wide reputation for excellence.

I will not consume this article with my life history, as my current bio and command philosophy are available online on the District's intranet home page. I urge you, however, to review my philosophy as I will refer to it many times in the future.

As I've traveled throughout the District's region this month, meeting with our stakeholders, I've continued to gain an appreciation for our operational environment. My goal for these visits was to quickly gain situational understanding so that I can integrate into the District team and do my part.

I am extremely impressed by the work of our team, starting first with the Assumption of Command, which was a

first class event. Events such as these are important as they serve as milestones in our rich history and showcase our organization – not to boast of what we have done but to serve as a testament that we can achieve great things together. Additionally, they inspire our continued commitment to deliver and live up to the accomplishments of those public servants who came before us.

I toured our Columbia River projects and saw tangible improvements to the John Day and The Dalles dams – compared to my earlier 2008-09 memories of the dams and some of the challenges we faced at that time. It was a reminder to me that it's often difficult to see changes happening when you're in the midst of them [such as new navigation gates at John Day and a spill wall at The Dalles] – but I come to you with a fresh set of eyes and see changes that are unmistakably visible.

I had a great visit at Bonneville Dam and appreciated the team's commitment to showing off what we do and are about – the dam is blessed with proximity to the Portland population center – so my thanks go to its staff for continuously telling our Corps story.

I spent the night aboard the *Yaquina* interacting with many of the crew while it was in Gray's Harbor. I saw a very complex operation that looked simple

because of the crew's competence and teamwork. I appreciated their hospitality, extended not only to me, but also to Col. Kimberly Colloton, Los Angeles District's commander, who also visited the *Yaquina* in May.

I spent some time in the northern Willamette valley, too, visiting both Dexter and Foster dams, where I saw construction underway of our new Foster fish facility and visited the Minto fish facility below Big Cliff Dam, which is now fully operational.

Again, I was extremely impressed by our team's professionalism and 24/7 dedication, but the visit also highlighted for me the strong partnerships we have built with other agencies. This was apparent as I toured the Minto fish facility with U.S. Fish and Wildlife Service staff – where I saw their passion for our shared mission as well. We are fortunate to have such great partners. Relationships are tremendously important – never



Col. Jose Aguilar (right) receives the organizational "colors" from Brig. Gen. John Kem. The passing of the colors is a long-established military tradition.



# OSO Strong

## Team Rubicon volunteers lend a helping hand

Commentary and photos by Tegan Shermikas, The Dalles Lock and Dam



Portland District Park Rangers (from left to right) Cameron Bishop, Ron Woodall and Jessie Brownlee bring in the flags for the Assumption of Command ceremony.



Lt. Col Glenn Pratt, Brig. Gen John Kem, Col. Jose Aguilar and Kevin Brice stand for the playing of the National Anthem.



The Aguilar family travelled many miles to attend the Portland District Assumption of Command ceremony.

sacrifice them for a single issue or the emotion of the moment.

During mid-May, Kevin Brice and I visited Washington D.C., where we represented you during our visits with eleven congressional delegations – seven of the visits with actual members of Congress and the others with their chiefs of staff.

I was honored to represent the District, but it was even more of a pleasure to see the incredible respect the delegations have for what you do and how you serve the region on a daily basis. I am confident we answered their questions that will allow them to legislate with a full understanding about our mutual interests. This kind of success takes work. Thank you Col. Eisenhower, Lt. Col. Pratt, Mr. Brice and the rest of the District staff who have nurtured these great working relationships.

I have had multiple briefings with staff from the Engineering and Construction Division, Hydroelectric Design Center and PPPMD, who have educated me on how I can best serve the District. I appreciate everyone's time and dedication to our mission and your counsel on a variety of topics – from learning about the Coyote Island terminal permit challenges to understanding our workforce management planning.

I was present during this year's Leadership Development Program graduation and want to congratulate the class for their sacrifice and commitment to working 'outside of

their comfort zone' this year and for their sage Quality Management System recommendations. I also want to extend my congratulations and encouragement to the 2014/15 class as they begin their 'journey of learning' next year.

I attended just a short portion of Super University (which is a great program) but learned a lot as well as enjoyed all my interactions with so many great leaders across the District.

Finally, as many of you know, I am coming to you fresh from an Afghanistan deployment. During this time, my wife and children have been living in Pennsylvania. In June, I'm planning to travel to Carlisle to watch my daughter graduate from high school, then, we will all move back to Portland as a family. We plan to settle near Lincoln High School where my son, Jose, will start his junior year and my daughter will start nursing school at the University of Portland. We are all excited and looking forward to another great assignment in this beautiful region.

This is a great team. The Portland District reputation is superb and well known across the nation. Please continue to do your part so we can deliver for the region, as those who came before us have always done. It is an honor to serve as your commander. 

Competence follows Character

*Col. Jose Aguilar*

The nation was shocked March 22 when a landside near Oso, Washington, destroyed part of the small community. First responders from many agencies rushed to the scene to help. Urban search and rescue teams also descended onto the massive mud and debris pile and quickly began trying to locate survivors.

Team Rubicon, a non-profit disaster relief organization, of which I am a part, also sent a small team to the area to assess how they could help. After days of coordinating with community leaders as well as the Incident Management Team, TR volunteers had a mission – we launched Operation Steelhead: help the community in whatever capacity was needed.

We helped the city of Arlington emergency operations center develop a donation management plan, assisted the Washington National Guard in moving supplies and water to storage areas, and helped supervise volunteers at donation drop off sites.

One highlight for me was when we helped a homeowner near the mudslide. The slide had stopped about 100 feet from their home which had been flooded by about six feet of water when the nearby Stillaguamish River became backed up by the mud and debris. We helped the homeowner remove materials from their house that had been destroyed.



Photos by Team Rubicon

Team Rubicon volunteers helped a homeowner last March remove materials from their home after it had been flooded with six-feet of water – caused when the Stillaguamish River backed-up due to a massive mudslide near Oso, Wash.

Helping out in Oso was a powerful experience for me. Seeing the destruction firsthand left many of us at a loss for words ... but it was also an amazing experience to see the small communities rally behind those impacted by the slide.

The image of the now muddied land that was once a picturesque mountain town will forever be etched in my mind. Operation Steelhead gave all of the Team Rubicon volunteers a chance to make a difference in the lives of those in Oso, no matter how small. 

Team Rubicon volunteers survey the site of the a massive mudslide which nearly destroyed the town of Oso, Wash., March 22, 2014.





# A new approach to protecting America's wetlands and streams

By Michelle Helms, Public Affairs Office, and Julie Curtis, Public Relations Manager, Oregon Department of State Lands

**T**he U.S. Army Corps of Engineers, Portland District Regulatory Branch is working with the U.S. Environmental Protection Agency and Oregon Department of State Lands to develop new ways to measure and compensate for impacts from development in streams and wetlands. The partnership also is building a new framework for accomplishing the mitigation that is required by both federal and state wetland fill permits.

Whew! Sounds complicated, you say? That's because it is complicated. For many years the Corps and DSL have required developers to mitigate for unavoidable impacts to wetlands based on the number of acres impacted. While not always a one-to-one ratio, required mitigation has been based on acreage: permittees must replace the impacted acreage on-site or off-site, through buying "credits" from a mitigation bank, or by paying into a fund for larger mitigation projects within the same watershed. This means that a person impacting a high functioning wetland and a person impacting a low functioning wetland have had equal mitigation requirements under the current program.

Wetland scientists have learned over the years, though, that the lost functions of impacted acreage would be better replaced by functional mitigation as opposed to merely restoring wetland acreage.

"From a resource perspective, this focus on replacement of area also means that we are losing, or at least trading, functions provided by our rivers and wetlands on the landscape," said Dana Hicks, Oregon Department of State Lands mitigation specialist.

"The agencies (USACE, EPA and DSL) have a history of working together on mitigation issues, particularly through the Interagency Review Team. We are each committed to streamline the permitting process for our customers."  
--Dana Hicks, Mitigation Specialist Oregon Department of State Lands

Because of new federal mitigation standards adopted in 2008, the Corps and other regulatory agencies are changing how they look at impacts to the nation's wetlands and streams, and how they set mitigation standards for permit holders. In doing so, the agencies are meeting the regulatory requirements of the Final Compensatory Mitigation Rule and accomplishing the goals of the Clean Water Act to protect the nation's aquatic environment.

"The 2008 Mitigation Rule aims to help us fix the track record of mitigation," said Tracie-Lynn Nadeau, environmental scientist, U.S. Environmental Protection Agency Region 10. "We are working together to develop tools and a new science-based mitigation framework that are transparent, practical and easy to use."

This approach is science-based and certainly complex, but not impossible. Jaimee Davis and Judy Linton are the Corps regulatory specialists working with the EPA and DSL to figure all this out. We asked them about the challenges and changes of this new requirement.

**CSP:** In a nutshell, what are you doing?

**Jaimee:** We are striving to create a Compensatory Mitigation Framework that is science-based, but is also rapid and repeatable; it has to fit into the regulatory context and be a useful tool for the public.

**Judy:** Part of the Compensatory Mitigation Framework will include a stream function assessment methodology that will allow the regulatory agencies to determine the health of a stream ecosystem.

**Editor's note:** Mitigation for impacts to Oregon streams currently is not routinely required. In 2009, state statutes were approved to required compensatory mitigation for impacts to all waters of the state, not just wetlands.

**CSP:** What do you want people to know about compensatory mitigation and the benefits of a functions-based program?

**Jaimee:** Under our current system, functions are not adequately replaced and so those functions continue to be lost. In a function-based approach the impacts (of wetland loss) will be lessened by more appropriate replacement.

**CSP:** Why is it important to work with the EPA and DSL on this?

**Jaimee:** The Corps and the EPA developed the Final Compensatory Mitigation Rule. It requires us to evaluate what functions would be lost and to determine appropriate compensatory mitigation that would offset those lost functions. Since EPA helped write the Mitigation Rule, they have an interest in how we adhere to the regulation. We needed to work with DSL because they often require compensatory mitigation as part of their Removal-Fill program; we want to make sure our requirements are aligned for resource protection, and so applicants wouldn't be expected to "double-mitigate."

**CSP:** Will this change the way Corps regulators review permits?

**Jaimee:** Yes. Regulators will need to learn how to use and interpret the assessment methods for wetlands and streams. They will then be able to determine if the mitigation an applicant has proposed is appropriate and if it adequately mitigates for the functions that would be lost.

**CSP:** Will aligning the processes for these three agencies make the permitting process easier for people applying for a Corps permit?

**Judy:** An applicant should be able to use the framework to develop one compensatory mitigation proposal that will satisfy both state and federal permit requirements. There may be times when the Corps has specific requirements for mitigation not shared by another regulatory agency.



Photo by Michelle Helms, Public Affairs Office

**What does a wetland do?** The Environmental Protection Agency says wetlands clean the water, recharge water supplies, reduce flood risks, and provide fish and wildlife habitat. Learn more at <http://water.epa.gov/type/wetlands/>

**CSP:** What will these changes mean for the environment?

**Jaimee:** Wetlands are extremely important resources (see "What does a wetland do") and an acreage-based system, while simple, does not fully mitigate wetland impacts. Historically, it has been difficult for us to require stream mitigation, because we didn't have the tools to measure the functions being impacted. We often fell back on requiring riparian plantings, no matter the type of impact. We all knew this was inadequate and now we will have the tools that will get us better environmental outcomes and help us do a better job at protecting our Nation's aquatic resources.

**CSP:** How will you implement this new standard and how will you work with permit applicants to make sure they understand this new mitigation framework?

**Judy:** Each agency is identifying specific steps they will need to take before requiring the use of the framework in the permitting process, and to make sure all users have a good understanding of it. Steps will include the opportunity for public review and comment on the framework prior to implementation and outreach to our stakeholders once the framework is ready for release. The agencies are working together to determine the best way to reach out to the greatest number of people. 

Photo by Diana Fredlund, Public Affairs Office



# Portland District partner named best in nation

## Linn County Parks receives Corps' Excellence in Partnerships Award

Story and photos by Scott Clemans, Public Affairs Office

A key Portland District recreation partner has been named best in the nation by the U.S. Army Corps of Engineers.

Senior members of the Corps' National Resources Management community of practice presented the Linn County Parks and Recreation Department with the Corps' 2013 National Excellence in Partnerships Award in a ceremony April 15 at the Sweet Home, Oregon, Community Center. Linn County Parks Director Brian Carroll accepted the award on behalf of his 11-person staff.

The Corps of Engineers and the Corps Foundation, a nationwide nonprofit organization dedicated to supporting Corps-managed rivers and waterways, present this annual award to recognize outstanding contributions by a partner to the Corps recreation and environmental stewardship programs.

"What you've done here in Linn County is a sterling example of what (the Corps) should be doing with partnerships around the country," said retired Portland District Operations Division Chief Debby Chenowith, now a Corps Foundation director.

Nominations are judged on partners' creativity and originality in serving the public, improvement of public awareness and support of the Corps missions, increased public education, accomplishment of Corps management objectives, involvement of other partners to increase community involvement, and development of programs accessible to diverse audiences.

Mary Coulombe, the Corps' chief of natural resources, said Linn County Parks' nomination stood out because of three key accomplishments: Developing a new recreation plan for Green Peter Reservoir, engaging other partners like the U.S. Forest Service and the City of Sweet Home



Roger Nyquist, chairman of the Linn County Board of Commissioners, said, "It is a proud moment and day for all citizens of Linn County."

in mutually beneficial projects, and working with the Linn County Road Department to secure a \$6.2 million grant to make improvements to the Quartzville transportation corridor along Green Peter Reservoir's north shore.

The Green Peter recreation plan aims to reduce environmental damage and increase public safety by phasing out dispersed camping and offering more developed recreation facilities.

Among its many community engagement efforts, Linn County Parks is a founding member of the "Sweet Home All Lands Collaboration" a coalition of public agencies, private companies and local citizens working to find ways to increase tourism, promote healthy lifestyles and create jobs in the community.

As for the transportation grant, "The Corps is the largest federal recreation provider, with 370 million visitor days on our 422 lakes and reservoirs, and 12 million acres of



Willamette Valley Project Park Manager Tami Schroeder discusses recreation challenges and opportunities at Green Peter Reservoir with members of the Corps' National Partnership Advisory Committee.

land and water," Coulombe said. "The roads are how we get people out to our recreation areas to camp, fish and boat."

Roger Nyquist, chairman of the Linn County Board of Commissioners, said, "It is a proud moment and day for all citizens of Linn County." He acknowledged the work of other Linn County agencies – particularly the county's road and GIS departments – that have supported parks department initiatives.

"They are often called on to help make the parks department projects happen and they never say 'no,'" he said.

Dustin Bengsten, deputy operations manager for the Corps' Willamette Valley Project, which oversees the Foster and Green Peter dam and reservoir projects in Linn County, has worked for the Corps in the Willamette Valley for the last 20 years. He admitted that in the past, "It could be difficult to do business with us at times."

"I believe we've come a long way because of Linn County's perseverance, patience and perspective," Bengsten said. "The successes we're celebrating today are the result of relationships that have developed over a long time ... Our vision has changed and we have come to a community understanding about managing public resources."

"It's great to see this community come together to provide great recreational opportunities and protect natural resources," said Heather Burke, the Corps' National Partnership Program manager. "We rely on our partners more and more to help us accomplish those missions as we face difficult budget situations."

Linn County Parks and Recreation manages six recreation areas on Corps land in the South Santiam Basin, including two campgrounds and several heavily-used boat ramps. The county also recently assumed management of an RV campground and marina on the southwest corner of Foster Reservoir. 



The Corps of Engineers and the Corps Foundation, a nationwide nonprofit organization dedicated to supporting Corps-managed rivers and waterways, present this annual award to recognize outstanding contributions by a partner to the Corps recreation and environmental stewardship programs.



Linn County Parks and Recreation Department Director Brian Carroll (center) accepted the Corps' 2013 National Excellence in Partnerships Award at a ceremony April 15 in Sweet Home, Ore. The Corps' Chief of Natural Resources Mary Coulombe (left) and Corps Foundation Director Debby Chenoweth presented the award.



# John Day Dam team works on fixes big and small

By Diana Fredlund, Public Affairs Office

**B**ig equipment often means big challenges, but less expensive, smaller-scaled solutions to problems often spring from teams looking at those big challenges. Turbines can be two stories tall, which can pose big challenges for the engineers and maintenance staff responsible for keeping them humming.

The John Day Dam, located about 100 miles east of Portland, Ore., on the Columbia River is capable of producing 2.2 million kilowatts at peak production; enough to meet the electrical needs of two cities the size of Seattle, Washington.

One of the last Columbia River dams built by the U.S. Army Corps of Engineers, the John Day Dam was completed in 1971 with 16 Kaplan turbines in its turbine gallery. Kaplan turbines use variable pitch blades. Compared to a fixed blade propeller

turbine, a Kaplan turbine can adjust the angle of the blade as it travels through the water – which dramatically increases the operating range of the unit and allows the unit to operate more efficiently.

Introducing more moving parts into a piece of equipment under load – such as water pressure – increases the likelihood that something will go wrong. Engineers call it fatigue failure. Kaplan turbines have a lot of moving parts under load, any one of which can malfunction.

“Turbines operate in harsh environments, with continuous blade adjustments under large loads. With so many moving parts, fatigue failure is always a design consideration,” said Kellen Shide, a mechanical engineer with the Corps’ Hydroelectric Design Center. “In addition, these units are nearing the end of their design life,

which means they’ve been operating for 40, 50 or 60 years. The maintenance staff does a great job of monitoring the turbines and keeping them operating reliably.”

In recent years, engineers and mechanics have seen linkage failures in some of the Kaplan turbines. As the water turns the propeller, it spins a set of large magnets past coils of copper wires, called a stator. If a linkage to one of these turbine blades fails, it prevents the whole propeller from functioning properly. There is tremendous vibration and the generator must be shut down to prevent damage to other generator components. As the Kaplan units age, maintenance staff and engineers have seen linkage failures increase.

About two years ago, Main Unit 11 in the John Day turbine gallery experienced a linkage failure. Historically, the only way to repair linkage failures was to disassemble the whole turbine and repair the blade; no small job for maintenance staff and engineers.

“Replacing a Kaplan turbine means the unit would be taken out of service for a year or more and cost millions of dollars. Unstacking, or disassembling, a unit is also a massive undertaking,” Shide said. “We needed to ask, can a repair allow the unit to continue functioning?”

HDC completed a regional Kaplan repair study in 2009 that reviewed Kaplan turbines in Portland and Walla

John Day Lock and Dam, located about 100 miles east of Portland, Ore., houses 16 turbines in its powerhouse. A study determined that up to half of them could be pinned and the powerhouse could still efficiently generate hydropower.



Corps of Engineers photo

Walla districts. “The study found that pinning a turbine blade would allow the unit to operate, but the blades are then in a fixed position, decreasing the operating range and flexibility,” Shide said. “An analysis of the situation found that no more than half of John Day Dam’s turbine units could be operated with blades in a fixed position. After that point the power grid loses too much flexibility and units would need to be repaired back to variable pitch blades.”

Pins are used to lock the blades in a fixed position. The HDC study showed that pinning the blades at 29 degrees was the best compromise between power production and favorable fish passage configuration, Shide said. “This allows the unit to continue operating. It isn’t a permanent condition; if needed we can go back later and repair a unit.”

The project staff assisted contractors who pinned Main Unit 11’s ailing turbine blade, using one of the eight allowed turbine pinning opportunities

available to them. “Pinning a unit is still a big job, but it allowed us to get the unit back into service in about four months - much quicker than if we’d needed to restack or replace it,” said Rob Lewis, John Day Dam’s maintenance chief. “Main Unit 11 is up and running again, helping us generate hydropower.”

Another situation that could be solved by pinning the blades began concerning John Day Dam’s maintenance staff: oil leakage.

“Machines need oil to lubricate moving parts, but at a hydropower dam oil can’t reach the river,” Lewis said. “To keep oil away from flowing water, the turbines use an O-ring to seal the contained space. The high pressure on the O-rings can cause the seal to degrade over time and leaks can occur, but replacing the O-rings to stop a leak means disassembling a unit, taking it out of service for months. We needed to find a better solution.”

Pinning the blades could solve the problem since there is no need for lubricant if there are no moving parts. “That was a consideration, but we knew we could only pin eight turbines – why would we use such a big fix for a small leak? If in response to oil leaks we exhaust the number of units we can pin, what happens when we have a linkage failure in another unit? There had to be a better way,” Lewis said.

The design team, made up of John Day Dam maintenance and mechanic personnel and HDC engineers, began brainstorming possible solutions.

“We asked ourselves – what is the bottom line? Keeping oil from leaking anywhere, but especially into places where it could reach the river,” Lewis said.

Environmental compliance is one of the Corps’ most important mandates. “One drop of oil in the water is too much,” said Ken Duncan, Portland District’s environmental compliance



Corps of Engineers photo

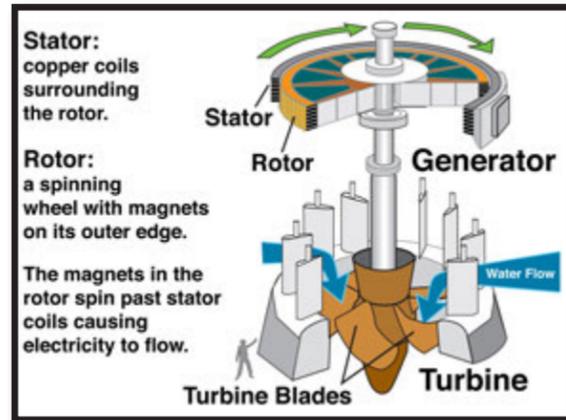
After Main Unit 7 began leaking oil the at John Day Dam, engineers began looking for a better solution than pinning the turbine blades. Previous solutions meant disassembling the turbine to replace the O-rings used to seal the oil into its chamber, a four-month job.



Work crews installed a bypass pipe that transports oil back into Main Unit 7's containment chamber. Over time O-ring seals can weaken, but when it happens now, this oil management system will keep the lubricants away from the river and back in the container where it belongs.



Corps of Engineers photo



coordinator. “The Corps has a strong program whose goal is to see no oil reach the water. We work to ensure our containers and our practices are the best they can be. If any spills do occur, we work to stop the leak and clean the spill, coordinating with state and federal water agencies to ensure everyone is aware of our situation.”

always happen,” Lewis said. “When the oil leaks past the O-ring, we found a way to block all the paths it could find to the river. The team devised a way to place a vent tube at one of the leak points; the vent tube transports any leaking oil back into the containment chamber. It remains in a closed area that doesn’t allow it to reach other equipment, the floor or the river.”

With the environmental mission clearly in focus, the design team came up with a relatively inexpensive way to remedy the oil leaks. “The pressure forces oil to find the path of least resistance – and we know that will

Best of all, the repair costs less than pinning the unit and leaves that option available for a future linkage failure that might occur elsewhere. “Pinning the unit to stop an oil leak would work,

but it reduces the flexibility in the system,” Shide said. “This is a much better solution.”

The oil management solution was installed in Main Unit 7 at the John Day Dam nine months ago, and Marshall Waddington, John Day Dam power plant mechanic, is keeping an eye on the results. “The unit has been back in service since August 2013. We have not detected any leakage since then. This solution proves to be a viable option to a performing a complete teardown of the unit.”

Lewis is proud of the solutions the team developed. “Our design team started looking at the big picture when it came to maintaining this big equipment,” Lewis said. “We could have pinned Main Unit 7 to keep the oil from leaking and called it ‘job complete.’ Maybe that would be complete, but we would have lost a chance to proactively find a better fit. Together we found a solid, relatively inexpensive repair that allows our turbines to continue doing their job – generating low cost, reliable electricity.”

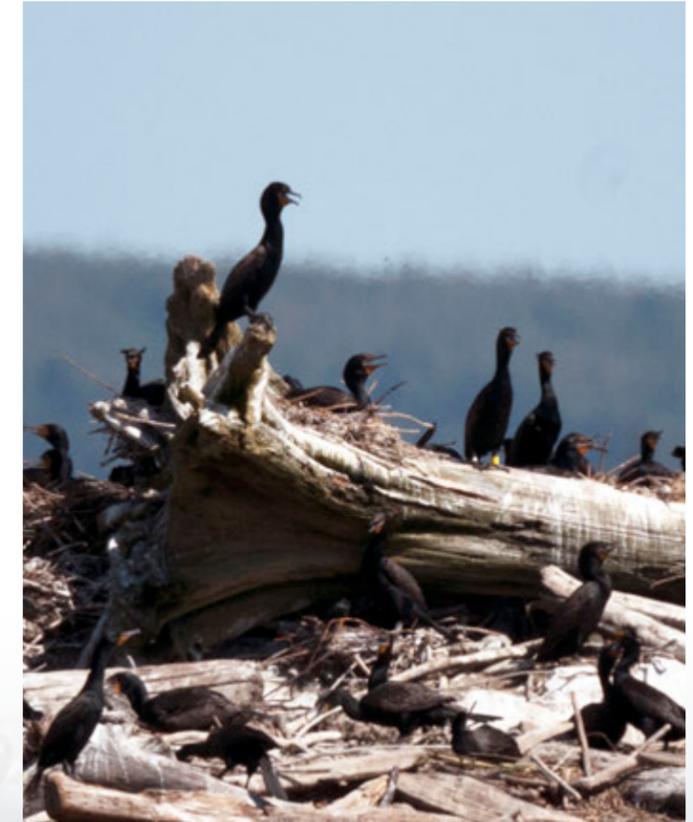
# Cormorant fish predation in Columbia River estuary

By Amy Echols, Public Affairs Office

**M**any projects in the Columbia River Basin cumulatively improve survival of fish listed under the Endangered Species Act. An element of the Federal Columbia River Power System Biological Opinion emphasizes the need to significantly reduce consumption of ESA-listed juvenile salmon and steelhead by a colony of more than 26,000 double-crested cormorants on East Sand Island in the Columbia River Estuary. The U.S. Army Corps of Engineers, as the federal land manager, released a draft Environmental Impact Statement (for public review) that evaluates alternatives to managing this colony to reduce predation. The draft EIS will describe a preferred alternative with the greatest likelihood of meeting specific avian predator goals defined in the biological opinion.

Throughout the EIS process, the Corps and cooperating agencies are working to balance complex issues, including the needs of ESA-listed fish and the double-crested cormorants that are protected under the Migratory Bird Treaty Act. Colony management actions also must minimize shifting the cormorants to other areas in or outside estuary that could also impact ESA-listed fish and other species.

Portland District welcomes public input on the alternatives based on facts, observations and analysis.



Corps of Engineers photo



Bonneville Power Administration photo

## Main Unit 7 design team members

Name	Position
Greg Hicks	John Day Mechanic
Jeff Phillips	John Day Mechanic
Charles Davidson	John Day Mechanic
Marshall Waddington	Mechanical Worker in Charge, John Day
Jesse Alsup	John Day Mechanical Planner
David Mackintosh	John Day Mechanical Engineer
Kellen Shide	Hydroelectric Design Center Technical Advisor
Rob Lewis	John Day Maintenance Manager



# Partnership blooming in the Willamette Valley

Story and photos by Christie Johnson, Willamette Valley Project

**W**illamette Valley Project Botanist Wes Messinger had a vision in 2011 to use a popular bike trail to connect people with the wildflower habitat nearby. Three years later, that “Bikes to Blooms” concept has blossomed into a partnership of multiple government agencies and community organizations.

This spring, the U.S. Army Corps of Engineers and its partners began implementing the first phase of a larger plan to expand access, interpretation and restoration opportunities around the Row River Trail, a paved trail managed by the city of Cottage Grove and the U.S. Bureau of Land Management that passes through Corps-managed land at Dorena Reservoir.



In spring, cyclists may enjoy a variety of wildflowers blooming near the Row River Trail at Dorena Reservoir.

The first major steps in the plan were to change Bake Stewart Park to a bike-in/walk-in park and host an event introducing the “Bikes to Blooms” concept to the community.

## Changes to Bake Stewart Park

A Corps of Engineers maintenance crew completed most of the major changes in April to Bake Stewart Park, which provides access to the Row River as it flows into Dorena Reservoir. The overall goal of the project was to convert the small, rustic park into a walk-in/bike-in park that is open year-round instead of seasonally.

The maintenance crew expanded and improved a gravel parking area near the entrance, gated off vehicle access to the rest of the park, added new signage, two new bike racks and a picnic table pad. Park Ranger Michelle Frobose and Natural Resource Specialist Cameron Bishop provided detailed plans and on-the-ground guidance.

Another key component was to connect the park with the Row River Trail. Bishop worked with a county work crew last fall to cut a gravel spur trail from the park’s gravel road to the paved trail, providing a more direct and safer route to the park.

“The changes we’ve made at Bake Stewart Park will help us meet both recreation and environmental stewardship goals,” said Park Manager Tami Schroeder. “Managing it as a walk-in/bike-in park will enhance recreation opportunities, reduce management costs and help protect the resources.”

By removing vehicle traffic, the Corps can reduce large-scale mowing required in the past to minimize vehicle-related fire hazards.

“Bake Stewart Park contains some very high quality upland prairie and oak habitat, which is rare in the Willamette watershed,” said Messinger. “By adjusting the frequency and timing of mowing, the wildflowers and grasses will have a better chance to bloom and go to seed.”



Corps park rangers Michelle Frobose and Cameron Bishop provide guidance for the parking lot expansion at Bake Stewart Park.

## Bikes to Blooms Tour

The Coast Fork Willamette Watershed Council took the lead in planning, promoting and coordinating the Partnership’s first public event. Despite a forecast of rain showers, about 30 community members turned out May 10 to ride the trail and learn about wildflowers during the Bikes to Blooms Tour.

“Although they did experience some wet weather along the way, participants enjoyed seeing a great variety of wildflowers and learning about the resources along the trail from local experts,” said Pam Reber, Coast Fork Willamette Watershed Council Coordinator.

The tour began at the Dorena Dam trailhead, where park rangers provided an introduction to the Bikes to Blooms vision and a brief history of the area. About a half mile down the trail at Row Point, BLM Botanist Cheshire Mayrsohn guided the group through a prairie restoration site and described the values of the native plants to animals and people.

The tour ended about five miles from the dam at Bake Stewart Park, where Messinger provided an hour-long walk through the prairie and oak woodlands, identifying native flowers and grasses, as well as non-native plants that can have negative effects on prairie habitat.

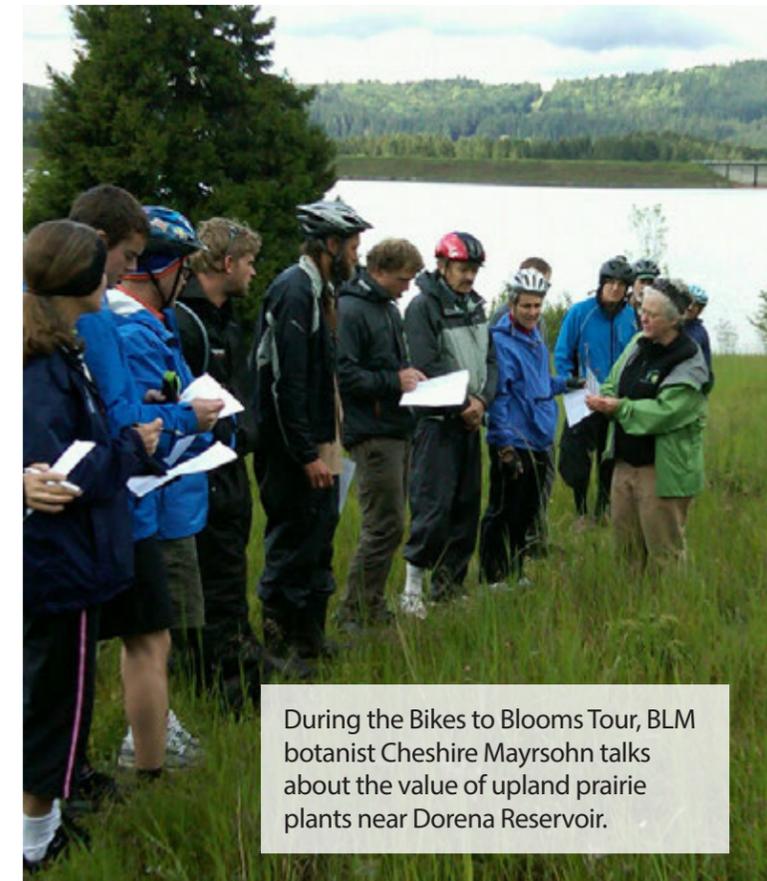
Messinger ended the tour by inviting participants to get involved with the Bikes to Blooms Partnership by volunteering for future community restoration projects. He



At Bake Stewart Park, Corps botanist Wes Messinger describes how Larkspur flowers are pollinated by bees and hummingbirds.

said that he hoped the experience and understanding they gained on the tour would inspire them to want to help.

The Bikes to Blooms Partnership includes the Corps, BLM, City of Cottage Grove, Cottage Grove Chamber of Commerce, Coast Fork Willamette Watershed Council, Kennedy High School, Native Plant Society of Oregon and the Coalition for Bicycle Safety.



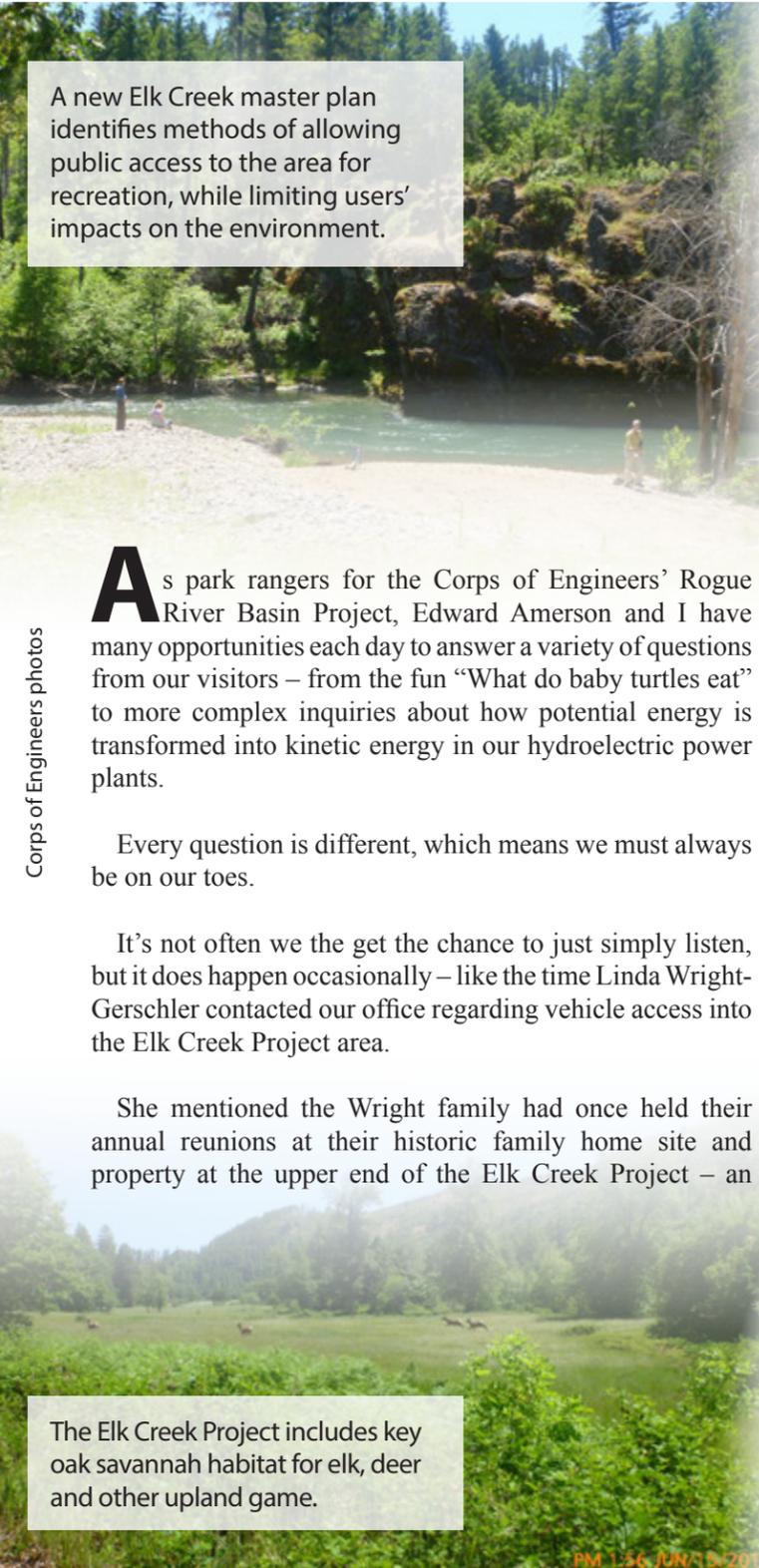
During the Bikes to Blooms Tour, BLM botanist Cheshire Mayrsohn talks about the value of upland prairie plants near Dorena Reservoir.



# Sharing the Wright family's Elk Creek homestead memories

A commentary by Justin Stegall, Rogue River Basin Project

A new Elk Creek master plan identifies methods of allowing public access to the area for recreation, while limiting users' impacts on the environment.



Corps of Engineers photos

As park rangers for the Corps of Engineers' Rogue River Basin Project, Edward Amerson and I have many opportunities each day to answer a variety of questions from our visitors – from the fun “What do baby turtles eat” to more complex inquiries about how potential energy is transformed into kinetic energy in our hydroelectric power plants.

Every question is different, which means we must always be on our toes.

It's not often we get the chance to just simply listen, but it does happen occasionally – like the time Linda Wright-Gerschler contacted our office regarding vehicle access into the Elk Creek Project area.

She mentioned the Wright family had once held their annual reunions at their historic family home site and property at the upper end of the Elk Creek Project – an

The Elk Creek Project includes key oak savannah habitat for elk, deer and other upland game.

PM 1:56, JUN 15, 2011

area now known as the Seven Mile Swim, which the Corps manages for light visitor use and upland and aquatic species habitat.

We ended our initial contact with an appointment to tour the Elk Creek area together ... and later that summer, that's just what we did.

Linda showed up with family in tow, including her dad Gene Wright and his cousin, Leland “Buddy” Netherland, who had both lived on the Elk Creek property as young boys.

The ranch had originally been purchased by Russell Winn and Ora Vincent-Winn in 1938. They sold the ranch in the early 1950s to the Tucker family who owned it until the 1960s when it was sold to make way for the Elk Creek Dam.

Gene explained that, prior to the Corps of Engineers' land acquisition; the area had been the site of a working ranch and dairy. He pointed out where the foundation of the main house had been and where the cold storage shed was located.

History came to life for all of us that day as we continued to walk down the dirt road toward Elk Creek. The family talked about raising cattle in the fields, where the hogs were kept and how the chicken coop was designed on the side of a small slope.

We paused near a deep pool in Elk Creek surrounded by lichen-covered cliffs and once again we went back in time.

“It was right about here where the wagon broke down,” Gene reminisced.

He said it had been his and his cousins' chore to load the wagon with cow manure, and that it was so overloaded that day that the axle broke.

“So, we just decided to take the pitchfork and go fishing instead. Yeah, that's right – the salmon were that thick,” he finished.

We came to the area where the family gathered for their annual picnics and ate from Tupperware containers filled



Photo courtesy of the Wright family

The Wright family at their historic family home site and property located at the upper end of the Elk Creek Project.



Corps of Engineers photo

The Wright family along with park rangers Justin Stegall and Edward Amerson, Rogue River Basin Project, pose for a portrait near the area where the family held their annual reunions along Elk Creek.

with bright red tomatoes and other assorted fruits; the Wright family remembering their past meals along the bank while the kids skipped rocks in the slow pool of Elk Creek.

Through their stories that day, Ranger Amerson and I could see how meaningful the Elk Creek area was to Linda Wright and her family.

We support our great nation through our missions – flood risk reduction, fisheries and stewardship enhancement, hydropower and recreation, to name a few – and we perform this work with honor.

Sometimes, though, we also just get to stop and listen ... as Park Ranger Amerson and I were honored to share the memories of the Wright family and walk with them through their history of the Elk Creek area.



Photo courtesy of the Wright family

Gene Wright and his sister Mary Ann Wright-Madison pose on the porch of the Wright family's historic homestead on Elk Creek.



# Geocaching – Using technology to find hidden treasures and fun outdoors

## The Dalles Lock and Dam hosts its first geocaching event

Story and photos by Emma Nelson, The Dalles Lock and Dam

**G**oogle the internet about the impacts of technology on society and you'll get back hundreds of articles about how these trends affect our children's entertainment habits – which now seem to revolve around an electronic device of some kind, rather than playing outside as in past generations.

Have you thought about this? Why aren't children, and, people in general,



Corps employee, Melissa Rinehart and her son, Will, found a treasure bag full of goodies during the "Amazing Race, Geocache Style" event sponsored by staff from The Dalles Lock and Dam, March 29.

spending as much time having fun outdoors? Why have they traded outside entertainment for time in front of a mega-sized screen playing a hundred different video games, or playing internet games with someone halfway around the world? Are they now spending more time online looking at beautiful scenery rather than getting outdoors to enjoy it?

Geocaching lets you tangibly explore some really cool and scenic outdoor locations and, instead of searching for virtual treasure online, you can actually find real treasure by using your own two feet and a cell phone or GPS unit.

Staff from The Dalles Lock and Dam Visitor Center hosted their first ever geocaching treasure hunt March 29 to show people how easy it is to take their technology outside and play. The event, called The Amazing Race, Geocache Style, included five geocaches hidden in Seufert and Patterson parks and along the three-quarter mile section of the Riverfront Trail connecting the two parks.

More than 50 people, of all ages and skill levels from throughout the Columbia Gorge and beyond braved erratic Spring weather to search for the secret caches – all of which included a short message about the history of

the area and were stuffed with items promoting water safety, reminding everyone to play it safe and wear their life jacket!

"Our goal was to introduce people to geocaching and offer help with GPS units and phone apps, hoping that people would continue exploring new places with their friends and family in

### What is Geocaching?

Geocaching is a worldwide game of hide and seek using Global Positioning System devices. Specific coordinates (latitude and longitude) are found on a variety of websites and entered into a GPS or smart phone application. When you find a geocache, it is usually filled with items appropriate for all ages. A general rule is that if you take something from the cache then you should leave something in it as well as sign the log book. For more on guidelines and all types of fun games and multiple caches, visit [www.geocaching.com](http://www.geocaching.com).

the future, once they learned how easy and fun it is," said Amber Tilton, a park ranger with The Dalles Lock and Dam.

It was a first experience for many visitors, but the dam's park rangers and other volunteers showed them how to use a GPS to guide them to the hidden treasures.

Visitors had many reasons for attending the event, but most used the experience to spend time outdoors with their friends and family. Michelle from The Dalles, Ore. said her family went to the event to "give her granddaughters some fun as well as enjoy some family time."

Other treasure hunters said they wanted to learn how to geocache or wanted to use the experience as part of their exercise.

When Jenni Nuzzi's family of smiling faces returned to the visitor center, and rangers asked if they would go geocaching again her response was, "Yes! We are hooked now."

"It was great to see people bringing their children, friends, family and technology outdoors to enjoy the day," said Tilton. "We met our goal to help people leave their virtual reality indoors, and still be able to use technology to explore the beauty of the outdoors." 



People of all ages enjoyed a day of geocaching March 29 at The "Amazing Race, Geocache Style" – an event sponsored by staff from The Dalles Lock and Dam whose goal was to help visitors enjoy time outdoors and learn how to use GPS technology. In the photo above, one family poses with their newly-discovered treasure which had been hidden in the dam's caboose. The caboose is a historical presence at the dam and is often visited as part of tours of the dam's powerhouse and fish ladder.



### Corps of Engineers' Portland District geocache locations.

- Spearfish Park (GC20NKX)
- Locking Through (GC4F3H5)
- Go With the Flow (GC1CQ07)
- Ducks Float (GC1CQ0Y)
- Bradford Island History (GC1BQTM)
- Bonneville Landmark (GC1C0JJ)
- Green Power (GC2CD2A)
- Take me to Lunch (GC2MVP5)

If you are new to geocaching, a good place to start is [www.geocaching.com](http://www.geocaching.com) where you can set up an account for free and learn more. More District-specific geocaching information can be found at <http://go.usa.gov/YaMF>.



## 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, hitchhike 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 inspections 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.

- **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. 

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

