ORPS'PONDENT

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John Day Lock & Dam commemorates 50 years

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US Army Corps of Engineers_® Portland District



Honoring the heroes of an historic sea rescue



John Day Lock & Dam commemorates 50 years



New hopes for the Rogue

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Cover photo: The lock and fish ladder at John Day Lock & Dam Photo by Sharon Gavin



Commander's Column

Portland Teammates: As we move into 2019, it's natural to focus on what's ahead, but it's also important to remember and reflect on our accomplishments in 2018. We collectively did an outstanding job 'Delivering Our Program' while adhering to the guiding principles of professionalism, technical expertise, and stewardship. In this issue of The Corps'pondent you'll see these themes demonstrated in several articles which highlight updates in the Rogue River Basin, a celebration of John Day Lock and Dam's 50th anniversary, and the restoration of salmon habitat in the heart of downtown Portland. These are just a selected few of the many ways that the Portland District is designing, delivering, and spearheading innovative solutions in the Pacific Northwest.

Some of our other contributions and recent accomplishments toward Achieving the USACE Vision for 2018 included:

Supporting National Security

More than 125 Portland District team members volunteered to deploy in support of FEMA disaster relief efforts. Most went to Florida, Puerto Rico or the U.S. Virgin Islands to assist in the aftermath of hurricanes Maria, Irma, Florence, and Michael while several deployed to support fire-fighting efforts in Oregon and floodfighting in WA. We also deployed employees overseas to Afghanistan and Iraq; it is always important to recognize and remember the sacrifices they are making every day.

Delivering Integrated Water Resource Solutions

The District-owned dredges completed an outstanding 'dredging' season while Channels and Harbors Team maintained the authorized depth along 100% of the funded Federal Navigation Channels without any restrictions. Both dredges are now in shipyards preparing for annual maintenance, and quite different this year, the Yaquina is in Alameda, CA, and the Essayons is in Honolulu, HI.

We conducted several important Public Meetings to discuss temperature control, fish collection and passage, and future construction at Detroit Lake and Dam. These meetings were designed to increase transparency and help the public understand the vast array of alternatives the Corps considers – including those submitted by the public.

Reducing Disaster Risk / Emergency Management

In May, Portland District personnel assisted the Seattle District (NWS) during a flooding event in Eastern WA by staffing the Emergency Operations Center and providing thousands of sand bags. In September, Portland District and Multnomah County Drainage District (MCDD) held a full scale emergency flood exercise that allowed partner agencies to build relationships and train on multiple real-life flood-fighting techniques.

Preparing for the future

We launched our New Start Feasibility Study of the Portland metropolitan area levee system.



Col. Aaron L. Dorf

The three-year federal feasibility study process will lead to a recommendation to Congress for federal investment in addressing the problem areas and vulnerabilities in the area's local levee and drainage system.

Additionally, the District engaged with 195 people from local and regional businesses during the Industry Day event on in November. Attendees learned about upcoming FY19 contract opportunities, solicitation review and proposal best practices, a small business outreach resource overview, and much more.

Looking towards our 'Work Plan' for 2019, the District will begin an Environmental Impact Statement (EIS) for the Operations and Maintenance of the Willamette Valley Project which will involve many team members from across the District. The District also received funding to complete a Tribal Village Development Plan (VDP) to replace lost housing due to the construction of The Dalles Lock and Dam, conduct critical maintenance dredging at Oregon's coastal navigation projects and Columbia River side channels, and perform engineering studies for repairs to coastal navigation structures.

Unfortunately, it is impossible to cover the full gamut of great work and projects being executed each and every day. One of the best ways to keep abreast of these activities is through our social media updates. You can follow us on facebook: www.facebook.com/PortlandCorps and Instagram: www.instagram.com/portlandcorps, for daily updates on activities throughout the Portland District.

Portland Strong – Army Strong. Col. Aaron Dorf 62nd Colonel of the District

Honoring the Heroes of an Historic Sea Rescue

by Sharon Gavin, public affairs office

On Sept. 10, 1957, Col. Jackson Graham, commander of the U.S. Army Corps of Engineers Portland District, visited the hopper dredge William T. Rossell to present the crew with an award for a spotless two-year safety record. Sadly, shortly after Graham arrived back in Coos Bay via helicopter, the Rossell was struck by the Norwegian freighter Thorshall. What followed was one of the most dramatic events in the history of the Coos Bay – the helicopter rescue of 15 sailors from the rapidly sinking vessel.

"We were just returning to Coos Bay when we saw a number of small boats leaving the harbor," recalled Wes Lematta, the pilot who ferried Graham to and from the Rossell. "We thought they were headed out fishing, but then Graham realized the dredge was sinking. We turned and flew toward the ship."

As they got closer, Lematta and Graham saw crew members getting into lifeboats, clinging to the rigging and dredge's superstructure, and "wreckage all over the channel." Shortly thereafter, the pilot flew to a nearby jetty to drop off Graham, then went to work. Over the next two hours, Lematta made more than 20 trips out to the Rossell, flying close enough to the rigging to retrieve crew members and carry them to shore one at a time. He saved about a dozen crew members before the winds picked up and he was unable to get close enough.

Back on the jetty, Lematta and Graham tied a rope to the helo's skid, so the remaining three men could wrap it around themselves and be lifted off the sinking dredge to safety.

In all, 46 of the Rossell's 50-person crew survived, because of Lematta's efforts, and those of Coast Guard Boatswain's Mate 3rd class Myron Colburn – whose skill and seamanship allowed him to rescue four crew members from a small crane on the dredge. Three men, Harry C. Petersen, Ong W. Tip, and Andrew H. Ferguson drowned; a fourth, George N. Quinton, made it to shore but suffered a heart attack and died.

Both Lematta and Colburn were commended for their rescue efforts, with Lematta being one of the few civilians awarded the Army Corps of Engineers Air Medal.



Suction Hopper dredge Rossell before being struck by the Norwegian freighter Thorshall. Army Corps of Engineers photo

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2018-2019 Leadership Development Class

ach year, a call goes out inviting Portland District employees to join the Leadership Development Program (LDP). Participants are selected by the District corporate board, whose goal is to have a small group of enthusiastic participants (usually 16). The selection board considers many aspects when selecting the candidates to maximize the group diversity including: years of service, grade level and representation from a variety of organizations and positions throughout the District.

This year's LDP team began in May 2018 and is comprised of 16 individuals from multiple locations in the

District and is led by facilitators Jenn Richman, district counsel and Bern Klatte, deputy chief of operations division.

The students will explore leadership and Corps policies during classroom instruction, public speaking (thanks to a partnership with ACE Toastmasters), a team-building off-site meeting and a one-week trip to Washington, D.C., to visit with Corps and congressional leaders. The program culminates with a capstone project selected to offer the students an opportunity to put their new-found skills to work.

FACILITATORS



Jenn Richman

Jenn Richman has been with the Corps for 16 years, currently serving as Portland District's district counsel since 2015. She began her career with the Corps in 2002 at Northwestern Division as an assistant division counsel. In 2011, she joined Portland District, as senior assistant district counsel. Since 2008,

Richman has also taught as an adjunct professor at Lewis & Clark Law School.

Richman, a facilitator of the LDP, shared her views on leadership, "I don't think there is a single trait for great leadership; most great leaders embody a number of key traits. They are adaptable, empathetic, passionate (yet calm in crisis), honest, and devoted."

Richman taught tennis in high school is and still a devoted fan of the sport. She said, "I play tennis 3-4 times a week and love traveling to see professional tournaments. So far I've been to the US Open (five times), French Open, Australian Open (three times), Italian Open, Barcelona Open, and Miami Open!"



Bernard (Bern) Klatte DEPUTY CHIEF OPERATIONS DIVISION

Bernard (Bern) Klatte has been with the Corps for 19 years, serving as the deputy chief of the operations division since 2015. He began his career with the Corps in 2001 as a fisheries biologist in Portland District, before moving to Northwestern

Division in 2004. Klatte returned to Portland District in 2007 to serve as the fisheries section chief.

As an LDP facilitator, Klatte had this to say about leadership, "Great leaders are emotionally intelligent, patient and calm under pressure. They see no point in overreacting or allowing their emotions to dictate their words or actions. To become great leaders ourselves, we must train ourselves to hold and express this same type of self-possession."

Klatte loves any type of outdoor activity, including hiking, biking, fishing, skiing and even cutting down trees.



Christopher Allworth Engineering tech Supervisor Bonneville lock and dam

Chris Allworth began his career with the Corps in February 2016 as an engineering tech at Bonneville Lock & Dam. In June 2016, he moved into his current position as the supervisory engineering tech where he serves as the document control

supervisor, ProjectWise administrator and computer aided drafting and design manager for the Bonneville project.

Allworth, a Marine Corps veteran, has lived in multiple western states but returned in 2014 to the town where he grew up, Washougal, Washington.

When asked what is the most important trait for great leadership, Allworth responded, "Listening provides you the opportunity to understand and meet the needs of those around you."



Ellen Ballantine, P.E. TEAM LEAD AND SENIOR MECHANICAL ENGINEER HYDROELECTRIC DESIGN CENTER

Ellen Ballantine began her career with the Corps in 2009 as an engineer-in-training (EIT) with Portland District's mechanical design section. In 2012, after completing the EIT program, she transferred to the Hydroelectric Design

Center (HDC) where she has worked on numerous projects involving turbine runner replacements and rehabilitations. Ballantine is currently a team lead and senior mechanical engineer in HDC's turbo-machinery section.

When asked what factor influenced where she is today, Ballantine responded, "I give a lot of credit to my mom for shaping the person who I am today. She has always encouraged me to try my hardest, get involved, and be the best person that I can be."



Lewis Dixon

QUALITY ASSURANCE FOR AUTOMATED CONTROLS AND CYBER SECURITY (ACCS) HYDROELECTRIC DESIGN CENTER

Lewis Dixon joined the Corps in 2011 as an engineerin-training (EIT) in the Hydroelectric Design Center (HDC). After he completed the EIT program he joined HDC's electrical branch

working on the maintenance team for what was then called the generic data acquisition and control systems. In 2016, Dixon accepted his current position as the chief of the automated controls and cyber security section within HDC.

Dixon leads a team seven engineers who design, develop, install, test and maintain supervisory control and data acquisition systems for Corps and the U.S. Bureau of Reclamation hydropower projects in the Pacific Northwest.



Jasmine Garner BUDGET ANALYST

WILLAMETTE VALLEY PROJECT OFFICE

Jasmine Garner began her Corps career nine years ago as an office automation clerk in Los Angeles District. In 2014, Garner joined Portland District as budget analyst where she helps support the formulation and execution of the Corps' budget for the

Willamette Valley

When asked to describe her job, Garner said, "I analyze budgets to maximize efficiency while maintaining fiscal integrity."

Garner loves any outdoor activity that includes the sun, her husband and their dog, such as hiking, camping or fishing.



Brian Bell, P.E.

CHIEF MECHANICAL DESIGN SECTION Brian Bell began his career with the Corps' New Orleans District in 2009 before coming to Portland in 2013 to join the Hydroelectric Design Center (HDC). Since April 2018, he has served as the chief of mechanical design within Portland District's engineering and construction division.

Bell supervises a team of 24 that includes design engineers, technical lead engineers, engineers-in-training and an engineering technician. His team is responsible for the design and review of mechanical components at multipurpose dams, fish facilities, flood protection works, navigation structures, and hydropower facilities.

Bell's first job was running a small IT business from his parent's home. "I knew I had reached the pinnacle of my young career when I got my first anti-static wrist strap," he said.



systems section.

Jay Dallas, P.E. MECHANICAL ENGINEER HYDROELECTRIC DESIGN CENTER

Jay Dallas has been with the Portland District for the past 10 years serving as a mechanical engineer in the engineering and construction division. In 2018, he began his current position as a team lead in the Hydroelectric Design Center's (HDC) mechanical

Dallas graduated from the U.S. Military Academy West Point in 2004 and served as an engineer officer until 2009. During that time he was stationed at Fort Lewis, Washington and deployed to Operation Iraqi Freedom.

When asked why he applied for the LDP program, Dallas responded, "To improve my public speaking skills and gain a bigger picture understanding of how Portland District fits into and supports USACE as a whole and the nation at large."



Michael (Scot) Hale management support specialist hydroelectric design center

Scot Hale began his career with the Corps in 2012 as a secretary in the Hydroelectric Design Center (HDC). In 2017, he accepted his current position as HDC's management support specialist. In this role he helps

schedule, execute and support administrative actions for 186 HDC personnel.

Hale joined the Army after high school, serving as a cavalry scout in Germany for three years. After leaving the Army he earned his bachelor's degree in history.

Hale hiked Mt. Baker with his Boy Scout troop, an experience that had a significant influence on where he is today. "Things can be accomplished even when you are terrified," he said.



David LaDouceur

THE DALLES LOCK AND DAM David LaDouceur has been with the Corps for the past 10 years and manages lands and waters for multiple uses at The Dalles Lock & Dam. He began his career there, as a student park ranger. He says the best thing about his job is helping his team provide quality recreational

opportunities for the public and being good stewards of public land. According to LaDouceur, "great leaders need to be able to bring positive energy to their organization and frame issues in a manner that inspires employees."

LaDouceur's first job was swamping cherries. It involved walking alongside a tractor and dumping buckets of fruit that had just been picked into bins on the tractor. "It was miserable but a good lesson in hard work," he said.



Jeffrey Matson ATTORNEY OFFICE OF COUNSEL

Jeffrey Matson joined Portland District in 2014 as an assistant District counsel with a focus on environmental, federal Indian law, and civil works issues. He also provides legal advice for cultural resources and procurement matters.

Prior to joining the Corps, Matson worked as an associate with the Ater Wynne LLP law firm handling similar issues. Matson says being able to problem-solve and practice preventative law while serving on different project delivery teams makes his job enjoyable.

Matson also has a Bachelor of Science in environmental engineering from the U.S. Military Academy. He is a certified engineer-in-training and competed on West Point's NCAA Division I varsity track and cross country teams throughout college. He is still an athlete with interests in endurance sports like ultra-trail running and alpine touring.



Jase Ousley, P.G. DREDGING CONTRACTS SPECIALIST

CHANNELS & HARBORS OFFICE Jase Ousley began his career with the Corps as a Department of the Army intern in Jacksonville District in 2008. His next stop was Vicksburg District as a physical research scientist in their Coastal and Hydraulics Laboratory.

Ousley joined Portland District in 2016 as a dredging contracts specialist in the waterways maintenance section of the channels and harbors mission, where he coordinates dredging activities for the Port of Portland's Dredge Oregon.

Ousley's mother has been a strong role model for him. She set expectations that he get an education, work hard, be respectful and enjoy life. He said, "I applied to LDP to grow as an individual." Ousley is still striving to follow his mother's advice.



Crystal Thomas program analyst planning, programs and

PLANNING, PROGRAMS AND PROJECT MANAGEMENT DIVISION

Crystal Thomas began her career with Portland District in 2010 as a student in the resource management division.

Since 2015, she has served as an appropriation manager for the Bonneville Power Administration large

capital program. She ensures that funding is managed in compliance with rules and regulations, and helps project managers execute in accordance with their project schedule.

Thomas said her father instilled in her the importance of good grades, self-discipline and hard work. Joining the LDP program fits into these values. She added, "He has always led by example and encouraged me to take advantage of every educational opportunity available to me."



Andrew Traylor FISHERIES BIOLOGIST

Andrew Traylor joined Portland District in 2010 as a fisheries biologist at Bonneville Lock & Dam. In 2013 he served temporarily as the hatchery coordinator before being hired permanently to the position.

As a fisheries biologist, Traylor coordinates activities

at salmon and steelhead hatcheries throughout Portland District and manages several contracts governing work completed by state fish and wildlife agencies and private contractors. He sees fewer fish in-person in his current position compared to when he began his career walking through streams to electrocute fish "non-lethally for a short nap" as research.

When he's not working with fish, Traylor spends time outdoors, climbing mountains, gardening, working on cars and perfecting his latest margarita recipe.



Stephen (Steve) L. Siefert, P.E. ENVIRONMENTAL ENGINEER ENGINEERING & CONSTRUCTION DIVISION Steve Siefert joined Portland District in 2017 after 17 years in private consulting for both small and large government contractors. He currently serves as the technical lead for two contaminated sites, identifying and solving problems

associated with legacy releases of hazardous material.

Much of his work involves coordinating crossfunctional teams. "I lead a team to identify and solve environmental problems while coordinating stakeholder and tribal involvement," he said.

When asked what influenced him, Siefert responded, "One of the biggest influences in my life was volunteering for a year to teach in an inner-city school. Poverty and tragedy were common experiences among the students, but I learned a lot about perseverance from them. Ever since then doing work that matters has been my driving force."



Erica Tarbox, P.E. TECHNICAL LEAD ENGINEERING & CONSTRUCTION DIVISION Erica Tarbox joined Portland District in 2016 after working as a civil engineer for the U.S. Forest Service at the Fremont-Winema National Forest in southern Oregon.

She currently serves as the technical lead for the Oaks

Bottom habitat restoration project, The Dalles Dam gate repair pit project, and The Bonneville Dam spillway north viaduct bridge repair/replacement project. She is also the bridge safety program manager for Portland District, responsible for overseeing bridge inspections, maintenance, and replacements.

When asked what is the best thing about her job, Tarbox replied, "There is never a dull moment."



Kate Wells ACTING SECTION CHIEF ENVIRONMENTAL PLANNING SECTION

Kate Wells joined Portland District in 2015 as an environmental resource specialist and is currently serving on a one year detail as the acting chief of the environmental planning section. Wells' job is to ensure Portland District projects are

in compliance with applicable environmental regulations. When asked what traits are necessary for great leadership, she replied, "Providing clear direction, while remaining personable is the sweet spot of leadership we should all strive for."

Wells said her favorite movie is Jaws, because "It led me to learn about Ron and Valerie Taylor who provided shark biology advice on the set, and continued to pioneer shark research for many years." When she's not protecting the environment for the District, she takes time to travel, fish, hike, read, and cook.



Matthew Wood, P.E. ACTING TEAM LEAD FOR THE SMALL PROJECTS TEAM ENGINEERING & CONSTRUCTION DIVISION Matthew Wood began his career with the Corps in 2000 as an engineer-in-training with Alaska District. In 2004, he left the Corps and spent several years in the nonprofit world working abroad with Mercy Ships and Youth

With a Mission and state-side with Loom International, based here in Portland. He rejoined the Corps in 2016 as a member of the small projects team in Portland District.

Wood said the small projects team provides him with "a unique opportunity to take projects from cradle-to-grave... a rare niche with unique projects and some pretty great people to work alongside."

Between a two-year old and house projects, Wood squeezes in time to bike and run when time allows.

John Day Lock & Dam commemorates 50 years

Story and photos by Sharon Gavin, public affairs office

Sept. 20, 2018, the Portland District commemorated the 50th anniversary of the ceremonial spillway opening at John Day Lock and Dam, which took place Sept. 28, 1968.

The John Day project had first been conceived decades

earlier, in 1932, but was put on the shelf until 1948. It was another seven years until design and construction were assigned to the Army Corps of Engineers Walla Walla District; the first construction funds were appropriated in 1958.

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Construction of the large dam lasted ten years, and the resulting structures spanned the Columbia River from Oregon to Washington – 5,869 feet in all.

Building a structure like this – in the middle of the Columbia River – had its challenges. But as each situation

presented itself, well-coordinated teams that included contractors, designers, engineers, financial experts, scientists, and many others, developed innovative solutions so that none of the challenges significantly affected the overall schedule.

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Park rangers from other Corps locations joined the John Day rangers to help commemorate the event.

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As a result of the sophistication of operating procedures developed between 1958 and the mid-1960s – including the introduction of computers and extensive integration of power distribution systems – in 1967 the Northwest Division Engineer decided that it was best for The Dalles and John Day dams to be allocated to the Portland District for improved coordination.

July 12, 1968, the first of 16 hydropower generating units went online, and Sept. 28 of that year, an estimated 6,000 people gathered at the north side of the John Day Lock and Dam for its dedication.

In his keynote speech at the event Vice President

Hubert Humphrey noted, "Through most of our early history, rivers were focal points in the lives of most Americans...as trails, as waterways for commerce, and sources of...power. This great project represents what can be done...It is the wisest investment that a people ever made and more of them can be made."

Since 1968 John Day Lock and Dam has served the nation and the region as one of the largest multi-purpose operating projects in the U.S., with critical missions in hydro-generation, flood risk management, fish passage, navigation, recreation, and environmental stewardship.

While providing these great benefits to the people





Top photo - A cake was decorated with the John Day Lock & Dam 50th commemoration graphic.

Bottom photo - Kevin Moynahan, the John Day Lock & Dam operations project manager addressed the event attendees.

of the northwest, building John Day had serious consequences: tribal lands and sacred sites were inundated, and fish passage has been seriously affected.

Throughout the last 50 years, the Portland District has worked with the tribes to coordinate and consult on projects to help mitigate these issues. As a result, the Corps is developing a juvenile bypass system to increase the survival rate of smolts heading downstream; redesigning fish ladders to make them lamprey friendly; investing \$41 million in the north shore fish ladder to reduce the amount of time it takes fish to get through the ladder from seven days to about 20 minutes; and using passive integrated transponders to provide better data about fish passage and



Steve Miles, director of the Hydroelectric Design Center and Col. Aaron Dorf, the commander of Portland District, toured the John Day Lock & Dam powerhouse.

migratory patterns.

Additionally, dam operators are looking at new technology for turbines that reduces fish passage injury and mortality, while effectively maintaining power production.

With extensive capital work and other improvements underway and planned for the next 15 years, John Day Lock and Dam is well positioned to continue to be a leader in regional support and is truly a testament to the ingenuity, audacity, vision and dedication of all those who have worked on the project over the years from its inception to the present day.

Balancing perspectives in the Willamette Valley

by Erik Petersen, Willamette Valley Project operations and project manager

Detroit Dam completed in 1953, is a 463-foot tall concrete structure with gated spillways. Photo by Karim Delgado, public affairs office n the 1930's, people from Oakridge, Cottage Grove, Springfield, Eugene, Monroe, Albany, Salem and Portland were tired of flooding in the Willamette Valley. Oregonians demanded solutions to the frequent flooding, which severely impacted travel, accessibility to homes and businesses and damaged personal and public property. They convinced politicians to address the problem with infrastructure, and drove the authorization, funding and construction of the Willamette Valley system: 13 dams that mitigate flood damages by managing perennial flood risks. The U.S. Army Corps of Engineers developed this system from 1939-1969 and it has since provided immense benefits, especially with the valley's continued, un-checked growth (by politicians, municipalities, developers, etc.) along the Willamette River.

The Willamette Valley Project prevents damages of roughly \$1 billion to property on an annual basis by taking the peaks off frequent, seasonal high-flow storm events. Its reservoirs provide recreation opportunities for people, and their use positively impacts local and regional economies in a big way, approaching values of \$100 million a year. While the dams block fish passage, the system provides water storage that benefits fisheries habitat and water quality on both tributaries and the main-stem Willamette during the course of summer months. The project provides enough hydroelectric power (500 megawatts) to light up a moderately sized city - but more importantly, it provides power-on-demand, and supports electrical grid stability.

Sustaining flows for fish and water quality have afforded benefits to municipalities and irrigators - they have reliable conservation season flows to meet demands of water users in all but the most extreme conditions. Stewards care for public lands and waters associated with this system, and they are intent on applying the very best science in the most efficient ways possible, not only to avoid blinkingout species, but to restore and sustain them. Recently, the Corps has worked hard to improve upstream passage for returning adult anadromous fish, and the Endangered Species Act requires us to find ways to ensure downstream passage of juveniles, so iconic species of spring Chinook and winter Steelhead can complete their life cycles. This is proving to be challenging.

By its very nature - the Willamette Valley is all about balancing competing demands - and balance depends on perspective. Most decisions affecting balance will offend the party that perceives a loss. If there's more water during the course of the summer for fish water quality and water supply, less is available for recreation. If we conserve more water for recreation and other purposes earlier in the year, then people downstream are at more risk of flooding, and flooding jeopardizes economies, lives and property. Legal authorities, given by the U.S. Congress, guide or constrain most of the Willamette Valley system outputs - so our discretion is limited. And shifting any one output in favor of others, even for brief periods of time, can have major, unintended consequences - and may violate the law.

Having more than 30-years' experience in U.S. Army Corps of Engineers water resources development projects, I have found that balance is hard to find, and often, equitable decisions mean people on both sides are equally unhappy. Public satisfaction in what the Corps does is transitory. Often times, people don't understand, or don't want to understand, the complexity of balance, and second, third and fourth order impacts of changing that balance.

We need to be transparent. We need to comply with laws. We need to save fish. We need to conserve water supplies and water quality. We need to steward land and water. We need to provide recreation benefits that support local and regional economies. We need to capitalize on water movement by producing hydroelectric power. We have processes intended to show people their stake in water resources issues and allow them opportunity to inform the balance. We are responsible for managing that balance, and that means no one will be wholly satisfied - at best people can understand constraints and appreciate what they get from the system. At worst, they feel victimized by a bureaucracy in control of infrastructure that cares nothing about them, and provides them no perceived benefit.

Big water projects are complex - trade-offs are difficult. As a society, we recognized this when the dams were constructed. We see it even more now. We have the best minds in the business driving solutions to complex problems. We are trying to maintain balance while moving forward, intelligently. We are an easy target for critics. The value and merit of this system, and the sustainability it represents, however imperfect, demand we stay informed, we open our eyes to all the trade-offs, work civilly to inform decision makers, recognize that change is necessary and understand balance is imperfect. We are better for having the system here, than not.

Corps begins final step to complete fish passage in the McKenzie River Watershed

by Tom Conning, public affairs office

Cougar Dam is a rockfill dam with a gated concrete spillway on the South Fork McKenzie River, east of Eugene, Oregon. The U.S. Army Corps of Engineers completed the dam in 1963 and it has blocked fish migration since then. So far, the Corps has modified the dam to allow for fish passage above the dam and for temperature modifications downstream. The Corps is looking to begin soliciting feedback from the community about its proposal to move these fish downstream. Photo by Tom Conning, public affairs office

Compared to his comedic-adventures in the Disney/ Pixar movie "Finding Nemo," Marlin, Nemo's dad, would have a stroke at the thought of a salmon's journey from egg to ocean. From the beginning, the young salmon (called fry or fingerlings) and the movie's famed clown fish have coral-ated fates because both deal with turbulent waters.

Salmon face predation and flooding inundates eggs with too much water, whereas drought leaves them dry. Human irrigation practices can dewater habitats, pollute or return water that is too warm into those environments. Likewise, harsh currents can wash fry away or leave them stranded when water levels recede, and the threats from birds and other fish never cease.

Later, the smolts head out to sea for the first time to face dangers such as waterfalls, researchers at fish monitoring facilities (no dentists or divers to worry about here), and massive barriers, which offer limited options for passage – aka: dams.

And it'll take more than a pebble to jam the filter for the fish to escape.

Corps addresses juvenile passage at Cougar

The U.S. Army Corps of Engineers' Cougar Dam

sits astride the South Fork of the McKenzie River, approximately 50 miles southeast of Eugene, Oregon. The dam has been blocking fish passage in the river since the Corps built it in the 1960s. Salmon numbers have plummeted in this watershed and, as a result, the Corps has worked to help by improve water temperatures and supply adult fish passage upstream of the dam. However, these actions haven't addressed moving juvenile fish downstream of the dam – until now.

The Corps has initiated an Environmental Assessment to get feedback from the public about the proposal's potential impacts from the proposal to move these fish downstream and it will release a draft EA in early 2019. Public input will help the Corps determine the best approach, with the goal of minimizing impacts to stakeholders throughout the region. This could include lack of water for boating, fishing or swimming in the reservoir or turbidity concerns for towns that use water from the McKenzie.

One of the project construction options may require a drawdown of Cougar Reservoir. If this option goes forward, it would be the third time in 16 years* that reservoir water levels could see impacts. Corps officials recognize the effects these drawdowns have on recreators and want to minimize those potential impacts. "We're early on in the process and haven't made any decisions regarding drawdown scenarios," said Chris Budai, Portland District project manager. "We're dedicated to meeting our environmental stewardship responsibilities, ensuring we're getting the most fish safely downstream and minimizing the impact to reservoir and McKenzie River users."

A completed life cycle

The completion of juvenile passage downstream of Cougar Dam will be a culminating achievement in a yearslong effort to provide safe passage for Endangered Act-listed fish. Downstream passage, plus upstream passage and water temperature control downstream projects that the Corps has already completed, is the final leg of a three-legged stool that should help recover endangered fish species.

Or, that's what Corps officials hope will happen.

"Providing safe downstream fish passage and maintaining other authorized purposes of the dam is challenging, but salmon populations won't improve without it," said Greg Taylor, Portland District fish biologist.

Failure isn't an option

Corps officials recognize the difficulties involved in completing the project. They also know that failing to protect these endangered fish is not an option. Public input on the proposal will be key in helping the Corps develop an approach that will protect the fish, while keeping conservationists, anglers, water supply users, etc. informed and comfortable about the topic.

"Collecting and passing juvenile salmon over a 450-foot-tall dam is not easy," said Kevin Brice, Portland District deputy district engineer.

"It's not easy biologically, engineering-wise or operationally," Brice said. "However, we are committed to making this project successful. High-head dam passage is a new challenge for the Corps and we're proud to be leading the way for the good of the environment, the citizens of Oregon and the nation."

Which, leads to another link to "Finding Nemo" – some advice for the Corps from Dory, the forgetful side-kick, "When life gets you down, you know what you gotta do? Just keep swimming, just keep swimming..."

*The Corps conducted a drawdown in 2005 to build a temperature control tower, in 2015 for emergency wood removal at the tower and a proposed drawdown in 2021 to complete the downstream fish passage project.



The U.S. Army Corps of Engineers built a temperature control tower (left) in 2005 at Cougar Dam, in Oregon's Willamette Valley, which necessitated a drawdown of the reservoir. Corps plans to create downstream fish passage at the dam could affect reservoir levels during construction and installation. However, the Corps' goal is to minimize impacts to stakeholders throughout the region. *Photo by Tom Conning, public affairs office*

Bringing salmon back to Oaks Bottom

by Sarah Bennett, public affairs office

A cross section of the original round culvert inside of the new, larger box culvert that replaced it. Greater water flow at a slower rate is more attractive to juvenile salmon.

n the summer of 2018, Portland District partnered with the City of Portland on a major habitat restoration project to bring salmon back to Oaks Bottom. The complex of meadows, woodlands and wetlands offers a unique opportunity for large-scale, tidally influenced floodplain and wetland restoration in the heart of the city. The Oaks Bottom Wildlife Refuge is the largest remaining natural area within the Lower Willamette River floodplain. The wetland there is prime habitat for migrating juvenile salmon looking for a place to eat, rest, and grow before they reach the Columbia River.

For the past century, the wetland was effectively cut off from the Willamette River by a railroad berm, with only a small round pipe-culvert to allow for high water flow. The Corps and the City worked together to replace the culvert with a large, open bottom culvert, providing juvenile salmon with a much more natural path in and out of the refuge. Construction crews also re-graded tidal channels to improve hydrology and habitat diversity in the wetland, benefiting a wide variety of birds, reptiles, and small mammals. In order to install the new culvert, construction crews had to cut through the railroad berm, which also supports the popular Springwater Corridor. To allow for construction, the trail—used daily by recreators and Portland's many bicycle commuters—had to be closed for four months during the summer, the only time "in-water work" is allowed in that stretch of the Willamette River. Working with City partners, the Corps engaged trail users before, during, and after construction.

The uniqueness of the site and the limited work window tested the creativity and ingenuity of the project team and the construction crews. Among other unique solutions to site-specific obstacles, large materials were delivered by barge, the crane used for the project was stationed on a barge floating in the river, and the culvert was built off-site in pre-fabricated sections.

In the upcoming planting season, crews will plant approximately 8,500 native trees within the project footprint. **I**

Army Corps of Engineers photo





Re-graded tidal channels will improve hydrology and flow between the open water in the wetland and the Willamette River. *Army Corps of Engineers photo*



A large trench was cut through the Springwater Corridor and the railroad berm to allow for installation of the new box culvert. *Army Corps of Engineers photo*



A crane lifts one of the box culvert sections into place. The precast culvert pieces were formed off-site and brought in by barge to allow for faster assembly and decrease the project's footprint. *Army Corps of Engineers photo*



An excavator works on the culvert as a coffer dam holds the Willamette River at bay, keeping the construction site dry. *Army Corps of Engineers photo*

New hopes for the Rogue

by Lauren Bennett, public affairs office

he movie "Star Wars: Episode IV – A New Hope" premiered on screens throughout the country in 1977. Around that same time, the Corps updated the Rogue River Basin project master plans to reflect new hopes for Lost Creek Lake, Elk Creek, and Applegate Dam.

Now, as the Star Wars franchise is revived, these 40plus year-old master plans are feeling the force awaken as the Corps updates them to provide direction and planning strategies for the next 20 years. And, like any major motion picture, over a year's worth of work goes into producing these plans.

Corps personnel visited each site in fall 2017 to see what's changed, what's stayed the same, and the impacts of these changes on each area. Climate change variables, such as predicted changes to precipitation, wildfires and severe storm events, provide an example of impacts taken into account to be incorporated into the updated plan.

The Corps gathered that information, drafted a report and presented it to the public for comments. In January and July of this year, the Corps hosted two public meetings in Shady Cove and conducted a 30-day public review comment period for the initial scoping period and later for the 60 percent draft plan. Over the course of the planning process, the Corps will have conducted three separate open comment periods for public review and input.

"While the Corps tries to look at all aspects, the comments we receive from the public are invaluable. The public has been instrumental in helping us identify new uses, objectives, priorities and goals that helped guide our thinking and decision making," said Gail Saldaña, Portland District project manager and landscape architect.

The Corps updated the draft plan incorporating many of these comments, and will release the updated 90-percent completed master plan for one final public comment period this winter.

An integrated environmental assessment is one aspect of the update. Suzy Hill, Portland District environmental resource specialist, is the lead on the environmental assessment aspect of the plan.

"The integrated environmental assessment compares the environmental impacts of current land management



Photo by David Hays, natural resources office

practices to new management alternatives. Doing this comparison between past practices and newly proposed practices ensures that the Corps minimizes adverse impacts and comprehensively analyzes all resources at the Rogue River projects," explained Hill.

In some cases, the Corps recommends that land management practices stay the same. For example, the McGregor park and visitor center will remain unchanged as a high-density recreation area.

Mirroring "Rogue One", when the resistance worked to steal plans to the Death Star, the Corps went Rogue to gather input for an updated plan to guide goals for recreation, environmental stewardship and cultural resources for the next 20 years.

The Corps asks the public to stay engaged throughout the rest of the planning process by submitting comments in the upcoming and final open comment period this fall for the 90-percent draft plan. The Corps expects to finalize and release the master plan in early 2019.

View the 60-percent draft master plan and integrated environmental assessment online, and learn more about the master planning process at www.nwp.usace.army.mil/plans/ master-plan. 📼