INTERCOM

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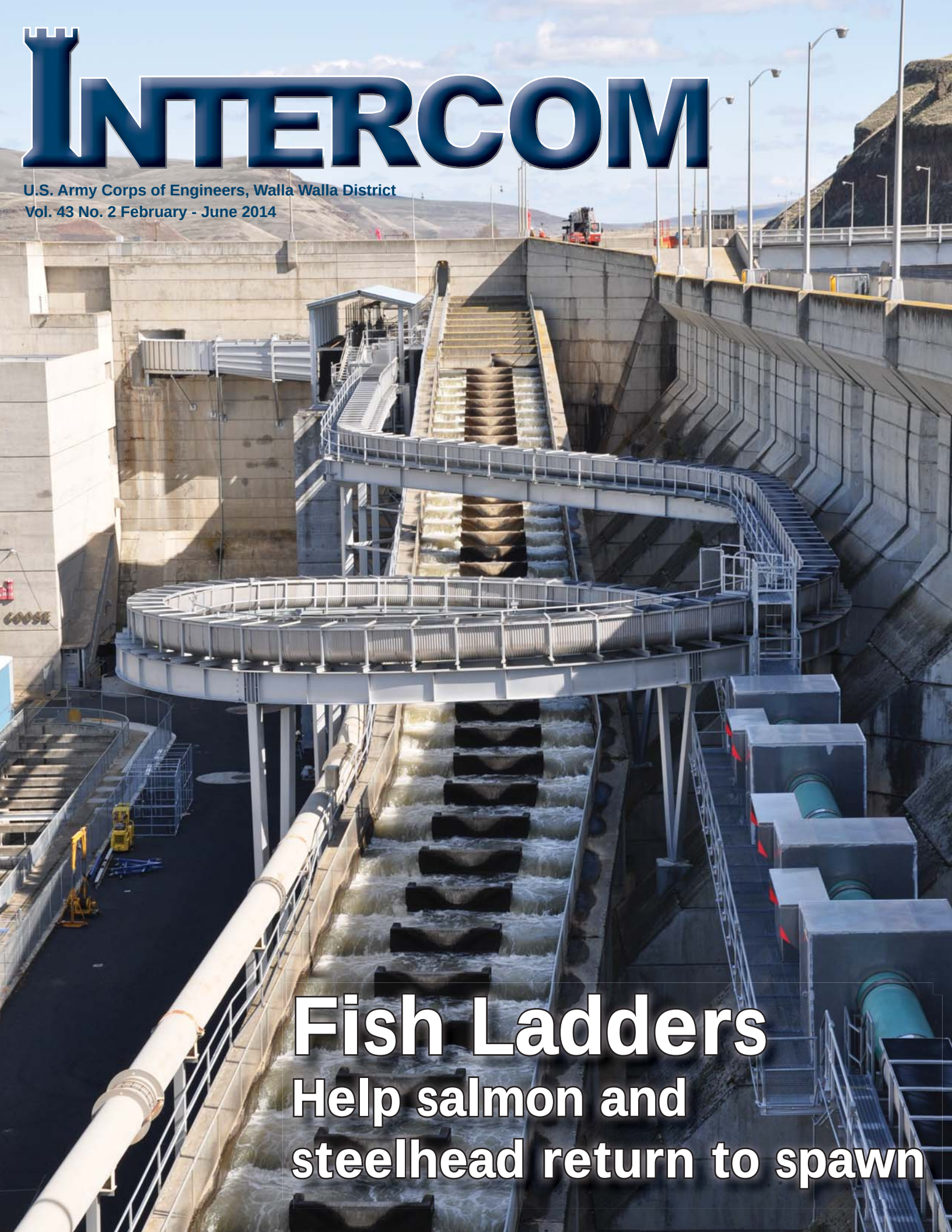

Fish Ladders

Help salmon and steelhead return to spawn

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The Walla Walla District

Serving our Community, the Nation, the World.

INTERCOM

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On the cover

Photo by Joe Saxon

The Walla Walla District has fish passage at all its Snake River and Columbia River dams. Spillway weirs use less water and enable juvenile fish to pass dams with less stress while en route to the Pacific Ocean where they will spend 2-5 years before returning. Fish ladders like the one at Little Goose Lock and Dam enable adult fish to swim through the dam and return to their spawning grounds.

A view on Leadership

Leadership to me is being able to inspire people to work as a team and be the best that they can be.

This includes the act of bringing a group of people together by setting goals, defining expectations, guiding individuals while allowing for growth and inspiring a team to do their best work. As simple as that sounds, it is a difficult thing to do.

Bringing a group of people together who have different views, thoughts and beliefs to work towards a common goal has its challenges.

Communicating a clear goal and ensuring everyone knows the desired result is the first step. To get this group to work as team, requires a leader to help guide and mold the group.

Unfortunately, it's not as simple as saying, "Here's some fruit, make a fruit salad," and somehow the group makes the best fruit salad ever.

While the goal of making a fruit salad is apparent, the leader needs to refine the goal further by identifying milestones like how the salad should taste, look, and when is it done.

These criteria should be illustrated clearly to ensure that everyone works towards the same goal. Communicating the goal clearly and explaining the expectations allows the group to work within the parameters of an acceptable outcome.

Within the process of making this fruit salad, a team member may need assistance in cleaning the fruit, cutting it a certain way, ensuring the ratio of apples to oranges is correct, etc.

A good leader sometimes stands back and lets the team make mistakes and allows them to fix problems on their own, which encourages learning and growth. A good leader also knows when to step in and assist or provide the extra guidance needed to get the group back on track.

Knowing when to step in or back off ultimately allows the team to grow and become more cohesive and independent.

By far the most difficult thing that good leaders do is inspire teams to do the best they can, driving them to set and achieve goals most efficiently and effectively.

However, setting a goal of making a fruit salad and not conveying why this salad is important can result in some group members putting it off since it isn't a priority for them.

By getting members of the team motivated and convinced of the significance of the goal, the leader inspires the team. Without this aspect of leadership, a leader would be ineffective and the group unable to produce the best outcome possible.

John Quincy Adams said, "If your actions inspire others to dream more, learn more, do more and become more, you are a leader."

I truly believe that leaders inspire people to work as a team and be the best that they can be.

This seemingly simple statement can be incredibly difficult to achieve. However, with passion and focus, great leadership can be blossom, and once it does, the possibilities of what a team can do are amazing.

Liz Knudson
Administrative Services Assistant
Little Goose Lock and Dam

REDUCING DISASTER RIS

COST ENGINEERS HELP FEMA REVIEW HURRICANE SANDY RECOV

Story by Gina Baltrusch
Photos by Stephen Doherty

The effects of the Oct. 29, 2012, East Coast landfall of Hurricane Sandy stretched all the way across the country to the Walla Walla District's Cost Engineering Branch in the form of a new customer -- the Federal Emergency Management Agency.

In response to the severity of the storm damage, President Barack Obama signed into law the Sandy Recovery Improvement Act of 2013 (now Public Law 113-2) on Jan. 29, 2013, which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act and authorizes alternative procedures for the Public Assistance (PA) Program (section 428). FEMA is currently implementing these new authorities as pilot programs (www.fema.gov/alternative-procedures).

The alternative procedures authorized under the law pertain to debris removal (emergency work) and repair, restoration, and replacement of disaster-damaged public and private nonprofit facilities (permanent work). The law identifies these goals for the procedures:

- Reducing the costs to the Federal Government of providing Public Assistance.
- Increasing flexibility in the administration of such assistance.
- Expediting the provision of assistance to a State, tribal or local government, or nonprofit owner or operator of a private nonprofit facility.
- Providing financial incentives and disincentives for timely and cost-effective completion of projects with such assistance.

In a nutshell, the law allows those requesting FEMA public assistance to request recovery funding in advance of the work to be done, instead of having to come up with the money, do the work and then seek reimbursement.

Participation in the alternative procedures is voluntary, and applicants must submit a thorough cost estimate and schedule as part of their request. That's where FEMA asked the Walla Walla District's Cost Engineering Branch to lend its expertise.

This branch, somewhat hidden within the Northwestern Division's smallest district, with offices located in a small valley in southeastern Washington, wears two hats -- one supporting the district's cost engineering needs; the other as the U.S. Army Corps of Engineers' National Cost Engineering Mandatory Center of Expertise with Technical Support Duties (Cost MCX), networked with other Corps cost engineering professionals across the globe.

The new law also provides more flexibility regarding how the repairs can be made. Previous assistance was limited to repairing or replacing infrastructure to the same

Top, left: Manhattan, N.Y. Left: Beach renourishment project in Ocean City, N.J. Bottom right: New Jersey boardwalk.

YouTube Beach renourishment video

conditions, configuration and location as it previously existed. The new procedures allow applicants to take that as-was replacement estimate and use it toward the construction of a new facility that would perhaps better meet their current needs. Any difference in cost is borne by the applicant.

That's another reason why accurate cost reviews are critical to FEMA's consideration of public assistance applications, explained Michael Jacobs, a Cost MCX engineer in Walla Walla District. "While the reconstruction flexibility is great for the applicant, the law still limits assistance to the cost for repairs or replacement, whichever FEMA assessed as the effective damage to the original structure."

A proposal to repair a 14-story-tall nursing student residence in New York City was the first Hurricane Sandy recovery project the MCX reviewed. Draper Hall, which is affiliated with the New York City Health and Hospitals Corporation (HHC), suffered exterior damage caused by the storm surge and water-borne debris. The facility's basement was completely submerged in brackish flood water which damaged mechanical and electrical equipment.

The Cost MCX set about reviewing HHC's cost estimate and schedule to determine if the cost and schedule of the repair project was reasonable and valid.

"We worked closely with cost engineers in the Corps' News York District to gather local-market cost data so our review would be as accurate as possible," said Ricardo Guzman, a Cost MCX engineer in Walla Walla District. "Much like performing a double-check on estimates for our own Corps contracts, this is part of being a good steward of taxpayer dollars."

The Cost MCX provided their completed review report to FEMA, identifying several million dollars in various areas of cost.

Cost Engineers manage two five-year $90 million and $10 million cost estimating contracts available to all governmental agencies.

Contain 25 civil, mechanical and electrical engineers, cost estimating specialists and others.

Manage 130 active projects.

6 trainers are available to other Corps districts, agencies and countries.

The Cost Engineering Branch was established in 2002 as the government's National Directory of Expertise (Cost DX) of cost engineering for all U.S. civil works projects and the "support for others" program. Recently the office was upgraded to a National Cost Engineering Mandatory Center of Expertise with Technical Support Duties (Cost MCX).

The branch serves a critical role in the Corps cost engineering community. This role includes certifying all Corps cost products sent to the Corps headquarters Civil Works Review Board for approval before going to Congress for authorization and funding.

The office also provides cost engineering technical support to other federal agencies such as FEMA, Department of Energy and U.S. Department of Veterans Affairs on various product development and technical review efforts.

The branch team, made up of about 25 individuals with varying backgrounds including civil, mechanical and electrical engineering, database specialists, administrative and budget personnel, technical writing, and construction, carry a mission larger than any other cost engineering office Corps-wide. While performing their everyday duties supporting the District, they also work for other organizations around the world, which have included everyone from the Corps Europe District to the Russian government.

While currently working on about 130 active projects around the U.S., the branch also delivers training and mentorship to other district personnel on a request basis.

The branch has six instructors who develop and provide training to other Corps districts as well as other agencies and countries. Instructor-led training topics include dredge estimating, construction equipment ownership rates, cost agency technical reviews, cost and schedule risk analysis, and estimating basics.

Idaho 'SILVER JACKETS' celebrate 5 years of flood risk reduction teamwork

By Ellen Berggren

The Idaho Silver Jackets, an interagency flood risk management team, is recognizing five years of working with the State of Idaho and other stakeholders in developing and implementing solutions to flood hazards.

The Silver Jackets program was established in 2006 by the U.S. Army Corps of Engineers as part of a nationwide initiative under its National Flood Risk Management Program. The Idaho team is one of 41 active state-led teams. In addition to the Corps, the Idaho Silver Jackets includes active participation by the Idaho Bureau of Homeland Security (IBHS), Idaho Department of Environmental Quality, Idaho Department of Water Resources, Federal Emergency Management Agency (FEMA), National Weather Service, Natural Resources Conservation Service and U.S. Geological Survey.

Silver Jackets team members with different areas of expertise provide one-stop information to state and local government to help them identify solutions to flood hazards. Silver Jackets also help educate the public about flood risks so communities can better understand flood-related problems and assistance programs.

"The team uses a patchwork quilt approach, piecing together a solution by combining the resources of many federal, state or local agencies, including funding, data and technical expertise," said Ellen Berggren, Idaho's Silver Jackets coordinator. "The team also engages throughout the flood risk management life cycle, collaborating on activities to prepare for, respond to, recover from and mitigate flood risk."

Agencies comprising the Idaho Silver Jackets are involved in implementation of the National Flood Insurance Program and levee and dam safety programs, development and implementation of Idaho's State Hazard Mitigation Plan, response and recovery from flood events, preparing weather and river flow forecasts, measuring river flows and snowpack, and planning and constructing flood risk reduction projects.

"As temperatures warm, we are reminded that Idaho has a history of flooding," said IBHS director Brigadier General Brad Richy. "We are fortunate to have a great team working to address this hazard, and I invite Idahoans to be part of this process and to be informed and prepared for their flood risk."

Why are they called "Silver Jackets?" Traditionally, different agencies wear different colored jackets when responding to emergencies. For example, the Corps wears red and FEMA wears blue jackets during flood response events. The name Silver Jackets is used to underscore the common mission of the diverse agencies involved.

The Idaho Silver Jackets' service to the state has included:

- Assisting with two separate updates to the Idaho All Hazard Mitigation Plan - Flood Unit
- Conducting levee briefings and no-adverse-impact workshops for local governments and levee sponsors
- Preparing a flood awareness handbook and agency flood risk program guide
- Facilitating formation of local watershed flood-risk-management teams
- Developing a Boise River inundation map library to assist emergency managers with one of the highest flood risk priorities in the State
- Facilitating interagency After Action Reviews to document lessons learned and identify corrective actions for floods that occurred in 2011 and 2012
- Updating flood insurance rate maps for a 6-mile reach of the South Fork Teton through Rexburg, Idaho
- Coordinating an interagency effort to mitigate increased flood risk associated with severe wildfires in Blaine and Elmore counties in 2013

The team is currently developing a non-structural flood risk mitigation workshop for local elected officials, floodplain administrators, and emergency managers that will be offered later in 2014.

More information about the Idaho Silver Jackets and their flood risk management support to Idaho agencies and local governments is available from the Walla Walla District's Boise Outreach Office at (208) 345-2065. The Idaho Silver Jackets team Web page is located at www.nfrmp.us/state/factIdaho.cfm and additional information about the nationwide Silver Jackets program is available at www.nfrmp.us/state/index.cfm.

Dam Safety

Mill Creek Diversion Dam reclassified as safer

Completed interim risk reduction measures include:

- Increased gate capacity to Bennington Lake.
- Stockpiled emergency supplies and equipment.
- Revised/updated the emergency action plan.
- Performed an overtopping and conveyance study.
- Improved instrumentation: Additional instrumentation was installed at the Diversion Dam dike in September 2012.
- Completed a potential failure modes analysis in September 2013.

By Bruce Henrickson

The U.S. Army Corps of Engineers Walla Walla District's Mill Creek Diversion Dam located upstream of Walla Walla, Wash., recently received a safer "Low Urgency" classification from the Corps following a recent analysis and assessment of the dam and implementation of risk reduction measures.

The Mill Creek Diversion Dam was previously screened and classified within the Corps' Dam Safety Action Classification (DSAC) program as "High Urgency" in January 2009. After completing a potential failure modes analysis and semi-quantitative risk assessment, the Corps recently concluded that risks due to Mill Creek Diversion Dam breach are low.

The Corps has a robust dam safety program which includes multiple dam inspections, monitoring, evaluations and risk reduction measures. The improved classification was made by Corps headquarters in Washington, DC. These classifications assist the U.S. Congress and the Corps in prioritizing funding for dam safety infrastructure improvements, which the Corps has been implementing in recent years.

The Mill Creek Flood Control Project system contains two dams—1) a "Diversion Dam" to divert water from the Mill Creek mainstem to the Bennington Lake storage reservoir, and 2) a 3,050-foot long, 120-foot high "Storage Dam" to safely hold water in Bennington Lake.

Diverting flood water to Bennington Lake during high flows helps reduce potential flood damage to the city of Walla Walla and adjacent downstream areas bordering Mill Creek, Yellowhawk Creek and Garrison Creek. The two-dam system is designed to generally limit maximum creek flows into Walla Walla to approximately 3,500 cubic feet per second (cfs) as long as the Bennington Lake storage reservoir has capacity to accept diverted flows.

While there was no evidence in 2009 to suggest an emergency situation existed at Mill Creek Diversion Dam, the Corps took action to further reduce public risk. The Corps implemented interim risk reduction measures (IRRM), which are short-term or ongoing efforts to reduce public safety risks while long-term solutions are pursued.

In establishing IRRM, the prevention of loss of life is the first and foremost objective, followed by prevention of catastrophic economic or environmental losses. Risk reduction measures may be structural or non-structural.

At the Diversion Dam, other interim risk reduction measures are in progress. The Mill Creek system—including both the Storage Dam and the Diversion Dam—will be advanced into a Dam Safety Modification Study starting in FY2015 to address uncertain performance of the system at high pools.

"Public Safety is our highest priority," said Lt. Col. Andrew Kelly, Walla Walla District Commander. "We can reduce public risk, but we can't totally eliminate risk. So we ask people to know their potential risks and what to do in an emergency."

The U.S. Army Corps of Engineers urges people living near dams to be aware of both the benefits and risks associated with dams. While dams provide hydropower, recreation and more, it's important that residents downstream of a dam be aware of potential consequences if the dam is suddenly breached, doesn't perform as intended, or releases major water flows.

Information for residents living near dams is available at www.damsafety.org/media/Documents/DownloadableDocuments/LivingWithDams_ASDSO2012.pdf. Additional information about the Corps dam safety program is at www.usace.army.mil/Missions/CivilWorks/DamSafetyProgram.aspx.

Additional information about the Mill Creek Diversion Dam is on the District website at www.nww.usace.army.mil/Missions/DamSafety.aspx.

District repairs Little Goose navigation lock gudgeon

Story by Gina Baltrusch
Photos by Terry Zerb

Maintaining aging infrastructure continuously challenges dam operators and maintainers, and when problems with a navigational gate surfaced at Little Goose Lock and Dam, District personnel sprang into action.

During a June 13, 2013, routine inspection of the downstream navigation lock gate, engineers first detected a problem with a gudgeon – the metal arm at the top of the south miter gate leaf that hinges and holds the gate leaf to the lock wall**.** Small cracks appeared to be forming.

Phased-array ultrasonic testing performed on July 25, 2013, determined the extent of the cracking. Conditions at that time indicated the gate could continue to be used with increased monitoring on the gudgeon assembly. Spare gudgeon assemblies for both gate leafs were ordered Sept. 26, 2013.

The lock was kept out of service following the annual maintenance outage during March 2014 when cracks in the steel of a gudgeon arm assembly on the top of the lock's 334-ton downstream south miter gate leaf were tested. The Corps determined the assembly was unsafe for continued operation.

The lock stayed out of service until April 21. During that time, contractors accelerated production of one of the ordered gudgeon assemblies, rescheduling machining and fitting tests to allow shipment of expedited parts to the dam by the first week of April.

"We were fortunate that the developing cracks had already been identified last spring and fabrication of replacement parts had been ordered in September," said Steve Hartman, Corps project manager. "If not for that critical maintenance decision, it could have taken anywhere from three to four months just to have the new pieces forged, machined and delivered under an emergency contract."

If Little Goose lock had not reopened for five months, beginning in April 2014, it likely would have interfered with almost 1.5-million tons of commercial shipping. According to district navigation records from April 1 through Aug. 31, 2013 (5 months), 1,441,327 tons of cargo locked passed Little Goose Dam.

A miter gate looks like a giant set of French doors. One gate leaf at Little Goose lock is about 118 feet tall, 43 feet wide and weighs 334 tons. From 1986 through 2013, the gate performed 35,713 lockages. A gate gudgeon linkage is a key component of this style of gate, holding the gate into position at the top while the gate pivots to open and close (a hinge-like assembly).

The steel gudgeon assembly is an original component of the lock and has not been removed since installation in the late 1960s.

Above: Workers use an air-arc cutter to remove the 50-year-old pins. Above, center: Contractor workers used liquid nitrogen to shrink the new, bronze bushing, allowing it to fit into the new navigation lock gate gudgeon arm assembly. Right: Contractor workers at Little Goose Dam remove components of the cracked gudgeon arm assembly on top of the navigation lock's south gate leaf.

MAINTAINING NAVIGATION
SUSTAINS ECONOMIC VITALITY

Above: Contractor workers take apart the old, cracked gudgeon arm assembly. The pieces were sent to a metallurgy laboratory for a failure analysis. Above, right: Little Goose 118-foot tall, 334-ton miter gate. Below: The dewatered Little Goose navigation lock.

Navigation

Navigation Data

Navigation was the Corps of Engineers' earliest Civil Works mission, dating to federal laws in 1824 authorizing and funding the Corps to improve safety on the Ohio and Mississippi rivers and several ports.

The Corps provides safe, reliable, efficient and environmentally sustainable waterborne transportation systems (channels, harbors and waterways) for movement of commerce, national security needs and recreation.

Northwestern Division maintains 350 miles of navigable waterways from Portland, Ore., to Lewiston, Idaho.

Walla Walla District maintains 173 miles of the navigable waterway from Umatilla, Ore., to Lewiston, Idaho. In 2013, there were over 6,000 commercial and recreational craft lockages, nearly 1,000 of which were recreational craft.

Each year, nearly 10 million tons of cargo worth $1.5 billion pass through the Walla Walla District.

Walla Walla District NavFacts

McNary - 6,070,400 tons
Ice Harbor - 2,812,800 tons
Lower Monumental - 2,526,400 tons
Little Goose - 2,290,200 tons
Lower Granite - 1,312,800 tons

A typical four-barge tow transports one ton of commodities 514 miles on one gallon of fuel, compared to 202 miles by rail and 59.2 miles by truck. Tugs produce only a fraction of the emissions of trucks and trains per ton-mile.

Fuel needed to get 3,000 tons of cargo from Lewiston to Portland.

Barge - 2,000 gallons
Rail - 5,000 gallons
Trucks - 17,000 gallons

Each fully loaded grain barge contains the equivalent of 35 rail cars, or 134 truckloads of grain. A full tow (four barges) with the equivalent cargo-carrying capacity exceeding that of an entire train, or more than 538 semi-trucks.

Maintenance engineers perform critical duties at dams

Maintenance engineers support dam operations and maintain its equipment. They are the first-line support when a failure occurs, and conduct daily maintenance activities as well as capital improvements. Maintenance engineers identify proper equipment condition, maintenance plans, and maintenance cycles. A maintenance engineer can advance to various positions at a dam to include: Chief of Tech, Chief of Maintenance, Chief of Operations or Operations Project Manager.

Maintenance engineers:

Are the focal point for monitoring performance indicators for maintenance management programs and analyzing equipment operating data.

Ensure that equipment is properly designed, selected and installed based on life cycle philosophy.

Periodically make cost-benefit reviews of maintenance management programs for areas of responsibility and exchange information across asset teams.

Review deficiencies noted during corrective maintenance.

Provide technical guidance for the computerized maintenance management system (CMMS).

Maintain and advise on use and disposition of stock, surplus and/or rental rotating equipment.

Promote equipment standardization, recommend spare parts levels and coordinate sharing spare parts with other asset teams.

Ensure equipment is performing effectively and efficiently.

Consult with maintenance technicians.

Develop standards and procedures for major maintenance jobs.

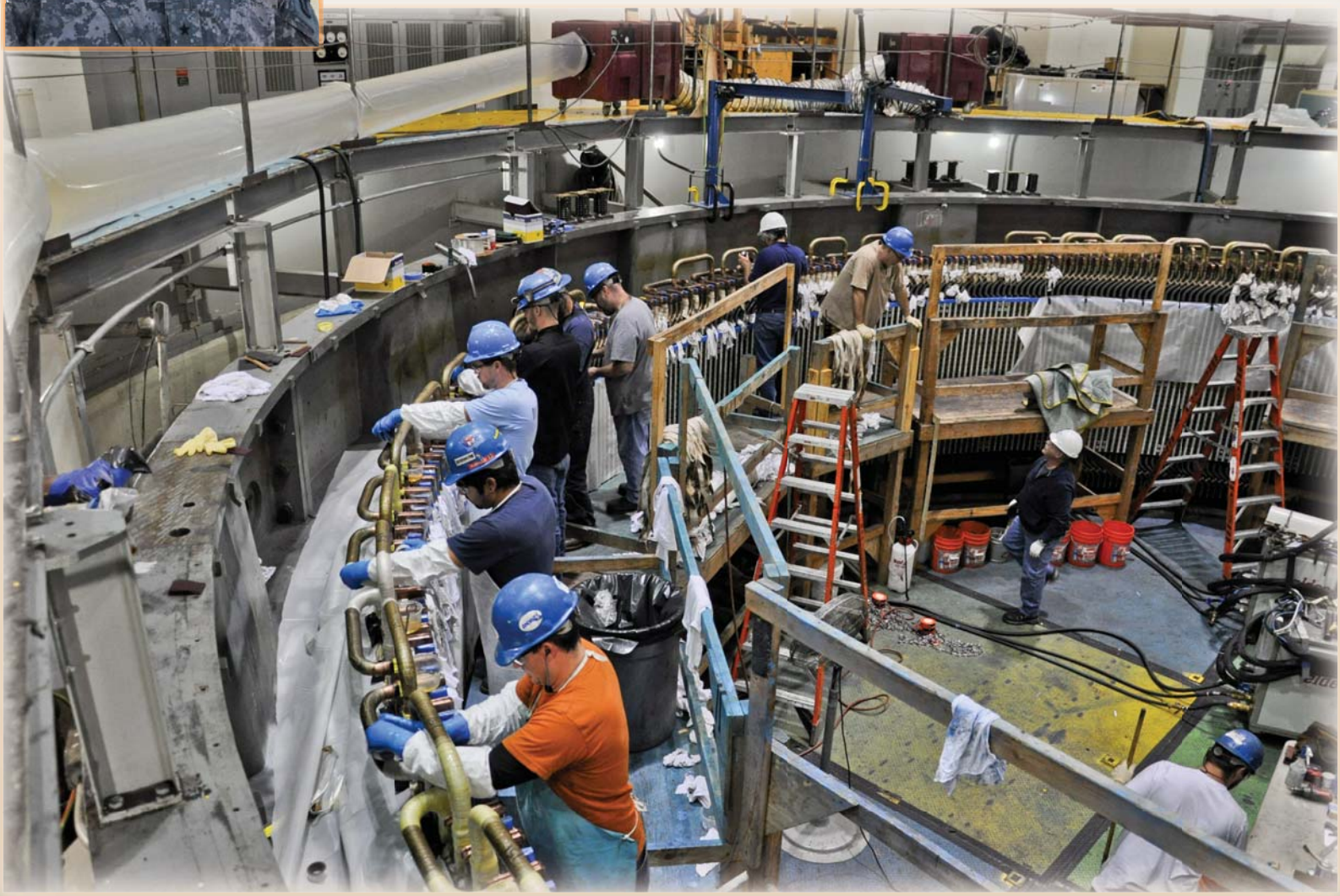
Optimize maintenance strategies.

U.S. Army Corps of Engineers photos

Top: Crane load testing at McNary Lock and Dam. Above: A worker inspects McNary's navigation lock crane.

The Walla Walla District welcomes

NWD Commander Brig. Gen. John Kem



Brig. Gen. John S. Kem assumed command of the Northwestern Division, U.S. Army Corps of Engineers, on July 15, 2013.

In this position, he oversees an annual program of more than $3 billion in civil works, environmental restoration, and military construction in more than a dozen states, primarily within the Columbia and Missouri river basins.

As division commander, he is responsible for providing guidance and direction to five operating district commands located in Portland, Ore.; Seattle, Wash.; Walla Walla, Wash.; Kansas City, Mo.; and Omaha, Neb.; with a combined professional workforce of nearly 4,800. Key missions include managing the nation's water resources infrastructure for economic growth and environmental sustainability, timely response to natural disasters, support to military installations and civilian communities throughout the region, and strengthening national security.

Brig. Gen. Kem was born in Chicago and commissioned in the U.S. Army Corps of Engineers after graduating in 1985 as a distinguished cadet from the U.S. Military Academy with a Bachelor of Science in civil engineering.

As a junior officer, he served in the 16th Engineer Battalion, 1st Armored Division, and in the 1st Squadron, 1st U.S. Cavalry, as the Patrol Leader for the VII Corps team that won the 1988 Boeselager NATO Cavalry Cup. From 1989 to 1993, he served in the 307th Engineer Battalion, 82nd Airborne Division, including service during operations Desert Shield and Desert Storm.

From 1993 to 1995, Brig. Gen. Kem attended the Kellogg Business School, Northwestern University, with follow-on duty as an assistant professor of economics in the Department of Social Sciences at West Point.

From 1998 to 2000, he served as the operations officer, 10th Engineer Battalion, at Fort Stewart, Ga., and later as the Engineer Brigade operations officer.

In 2001, he was selected for a Congressional Fellowship and served for

Northwestern Division Commander Brig. Gen. John S. Kem visited the Walla Walla District on Oct. 22, 2013. During a tour of McNary Lock and Dam, he had the opportunity to observe stator winding replacement work inside the dam's powerhouse (far-left, upper-left and middle-left), a multi-year project replacing the copper stator windings of 10 generators. His tour included a walk along the juvenile fish bypass channel which runs through the dam (bottom-left), an overview of the navigation lock facilities (upper-right), and other aspects of dam maintenance and operations.

one year as a staff fellow on the U.S. Senate Appropriations Committee, Subcommittees on Defense and Military Construction, followed by service as a Congressional Budget Liaison in the Office of the Assistant Secretary of the Army (Financial Management and Comptroller).

From June 2003 to June 2005, he commanded the 16th Armored Engineer Battalion, 1st Armored Division, and led the battalion for 13 months during combat operations in Baghdad and Karbala, Iraq.

After command, he served as a military assistant and speechwriter for the Secretary of the Army and later as the Executive Officer to the Director, Joint Improvised Explosive Device Defeat Organization.

From 2008 to 2011, Brig. Gen. Kem commanded Europe District of the U.S. Army Corps of Engineers, and was responsible for construction and engineering support for U.S. European Command and U.S. Africa Command.

From 2011 to 2012, he was deployed to Afghanistan as the Director of Engineering, NATO Training Mission - Afghanistan, responsible for a $10.5 billion program to build facilities for the Afghan Army and Police.

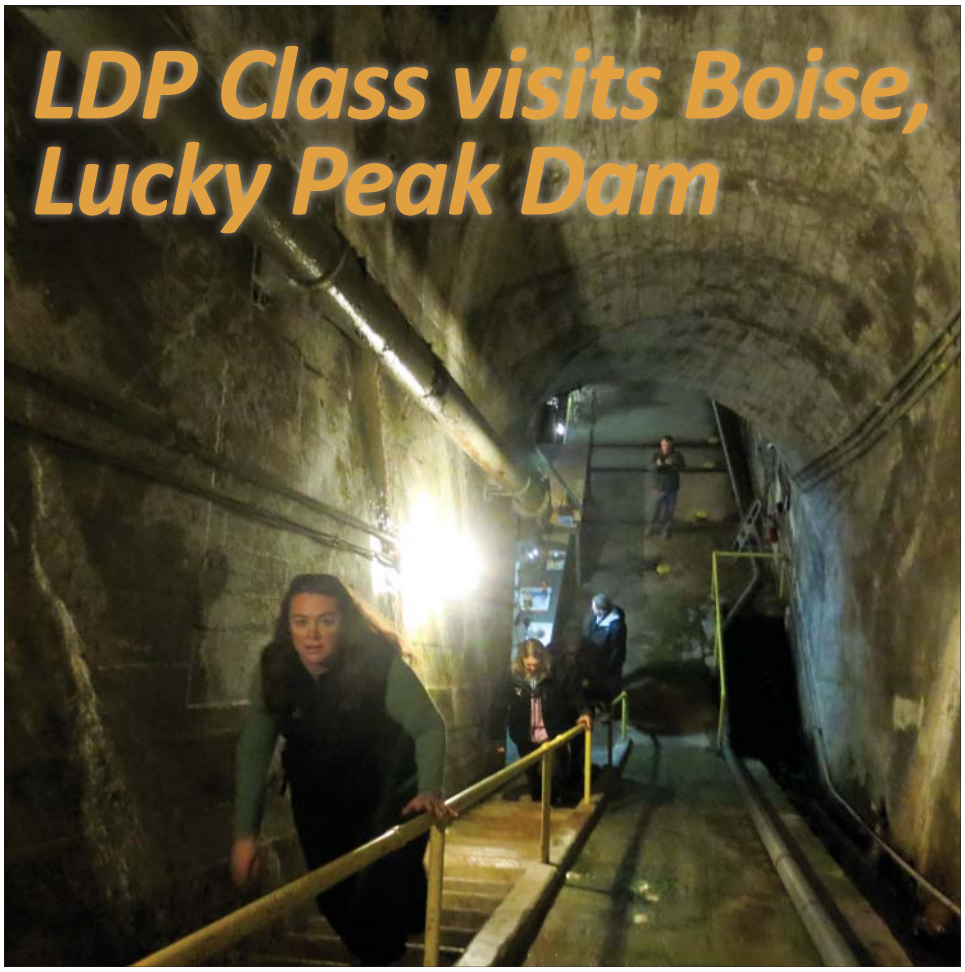
Brig. Gen. Kem holds a Master of Business Administration from Kellogg Business School and a Master of Science in environmental engineering from Northwestern University.

His awards and decorations include the Defense Superior Service Medal, Legion of Merit, two Bronze Star Medals, Senior Parachutist Wings, Pathfinder Badge, Combat Action Badge and Ranger Tab. He is a registered Professional Engineer (Virginia) and a Chartered Financial Analyst.

Brig. Gen. Kem is married and has three children.

photos by Gina Baltrusch

LDP Class visits Boise, Lucky Peak Dam



The Leadership Development Program seeks to prepare employees for future leadership roles. Part of that process includes an annual visit to Boise to interface with District Outreach and Regulatory staff on stakeholder issues and cost share programs. The class also explored Lucky Peak Dam.

LDP Goals

Increase knowledge of yourself and your leadership style.

Learn to build and maintain professional relationships.

Improve communication skills – verbal and written.

Learn to be better team leaders and team members.

Build your conflict resolution and problem-solving skills

Improve your presentation skills.

Increase your understanding of leadership and the issues our leaders face.

Learn about personal and organizational change.

Understand Corps culture, values, initiatives and priorities.

U.S. Army Corps of Engineers photos

Front row, Left to Right: Carol Bogdanowitz, Jason Achziger, Margie McGill, Lisa Klicker, Liz Knudson, Edie Adkins.
2nd Row: Nick McHenry, Scott Stolz, Beth Reinhart, Karen Zelch, Sam Handcox, Mike Burgan, Joyce Dunning.

STEM
STAFF ENCOURAGE STUDENTS TO PURSUE TECHNOLOGY CAREERS

Walla Walla High School

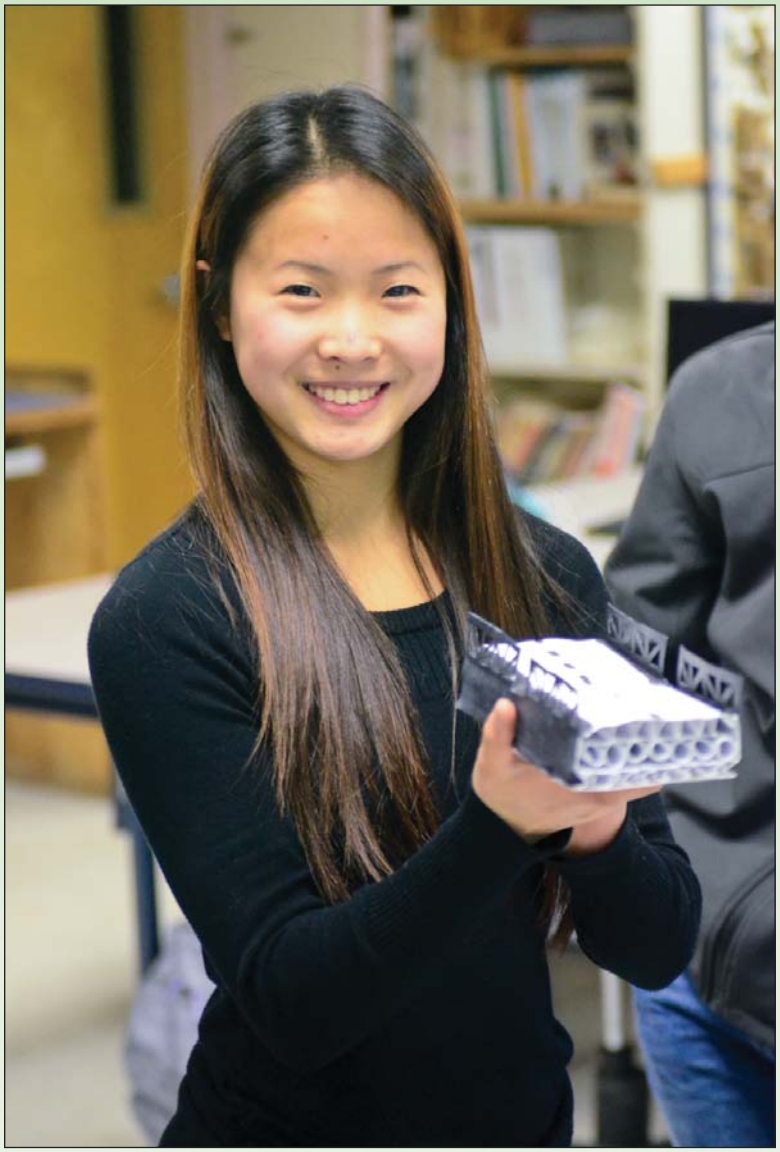
Photos by Stephen Doherty

Ruthann Haider, chief of contracting, Margie McGill, project manager, and Yvonne Gibbons, chief of geotechnical participated at Walla Walla High School's career day focused on careers for women students.

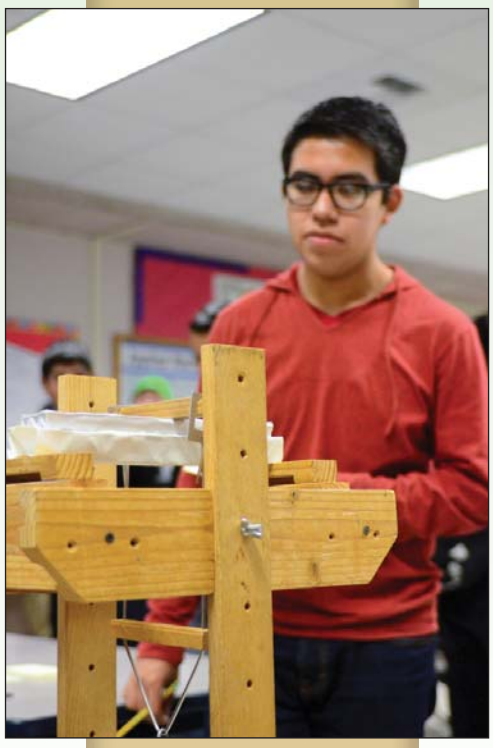
Assumption Elementary School


Photo by Andrew Dankel-Ibanez

Jeff Lyons, Andrew Dankel-Ibanez and Evan Heisman participated in a career day at Assumption Elementary School in May.



Engineer Week



District builds bridges with area schools

Story and photos by Stephen Doherty

On Feb. 18, engineers from the Walla Walla District rallied at Walla Walla High School to break some bridges.

U.S. Army Corps of Engineers Walla Walla District employees tested the students' bridges for the highest strength coefficient, which is calculated by dividing the maximum weight the bridge supported during the test by the weight of the bridge.

This year, the Corps celebrated E-Week with seven schools, Feb. 18-21, by participating in the bridge construction contest.

Walla Walla District engineers traveled to the following Walla Walla-area schools during E-Week: Rogers Adventist School, Walla Walla Valley Academy, Walla Walla High School, Central Middle School, DeSales High School, Garrison Middle School and John Sager Middle School

Using just paper and glue, students constructed bridges that spanned an 11-inch gap.

"Giving students the time to work in teams and test out a real world project is a great opportunity," explained John Herr, teacher at Walla Walla High School.

Engineers from the Walla Walla District put 395 bridges, representing 575 students, to the test. The best bridge was from Central Middle School in Milton-Freewater.

"Celebrating Engineering Week here in the Walla Walla District is so much fun for all involved because we get to experience the engineering process," said Jeff Lyon, Electrical Engineer. "I am impressed with the amazing feats of engineering done this year by our contestants! This year confirmed that great engineering solutions can come from anywhere."

Left Page: Lisi Dobson excitedly waits for her team's bridge to be tested. Left Page Top: Dillon Brown watches as Jeff Lyon and Wayne Jousma put pressure on his bridge. Left Page Middle: Quinn McHie hopes for the best as his bridge is put to the test. Left Bottom: Adolfo Garcia steps back and watches his bridge take a load. Right Page: Madyson Gabriel, Calum Close and Joe McKiernan watch as Wayne Jousma ratchets up the pressure.

Contracting and Small Business host Industry Day in Walla Walla, Boise

Businesses learn about federal contracting opportunities and procedures

Some of the over 100 attendees at the Walla Walla Industry Day event. Bottom: Marcus Palmer, Walla Walla District's chief of general engineering, talks about architect-engineer contracts during a roundtable discussion

Photos by Stephen Doherty

The Walla Walla District hosted more than 100 business owners for the Corps' "Industry Day" in Walla Walla on March 25.

The event was open to those interested in learning about tools needed to do business with the Corps, upcoming contract opportunities, competing for contracts or showcasing capabilities to Corps personnel. The programs ran from 8:30 a.m. to 4:30 p.m.

"The Walla Walla District is an economic driver in this region and actively seeks contractors to support our efforts," said Kay Baltz, Small Business Programs Manager for the Walla Walla District. "I am excited with the interest industry showed in the Walla Walla District."

As a small business owner, Jennifer Aylor understands the value of a government contract, not only for the increase in business but also for increased opportunities doing business with the Corps provides.

"Industry Day is an opportunity for me as a small business owner to build relationships, fine tune our contract proposal process and follow-up on past contract bids," explained Aylor, CEO of Eldred & Associates.

District personnel presented informational briefings, discussed upcoming contracting opportunities and provided companies with staff interfaces during a roundtable discussion.

Covered topics included how to respond to a sources sought and solicitations notices, how to register in the online contractor management system, and where and how to find Corps contracting opportunities.

The Walla Walla District hosted a previous "Industry Day" in Boise, Idaho, on March 20.

Future Industry Days are planned for October 2014 when the main training topic will be "What happens to your proposal after you turn it in."

The Walla Walla District's Contracting Facebook page (www.facebook/com/wallawallacontracting) will keep prospective attendees updated on these future events.

The Walla Walla District awards contracts for construction projects, Architect-Engineering studies, and supplies and services needed to operate facilities. These contracting opportunities total $90 to $110 million annually.

Photo byBruce Henrickson

Ruth Johnson up to any task

District employee doesn't consider herself 'disabled'; she just does some things differently

By Bruce Henrickson

Walla Walla District Purchasing Agent Ruth Johnson has Osteogenesis Imperfecta (OI) or "brittle bone" disease, uses a wheelchair, and is shorter than most adults (and toddlers, too, she says). But that didn't stop her from experiencing childhood, graduating from high school and college, having friends, traveling and doing many things just like people that don't have brittle bone disease. Those with the disease just do some things differently because of physical differences.

Her story is noteworthy, yet normal, and she's up to any task. About 15 years ago, she volunteered at the Corps in order to get work experience on her resume. She did so well her supervisor urged the District to hire her, and the District did. She's worked in District headquarters as an office support assistant, security specialist, and purchasing agent. She also earned her Bachelor of Science degree in Interdisciplinary Studies at Liberty University. She's well-known by her colleagues for her dedication, enthusiasm and sense of humor.

She doesn't consider herself "disabled." As for doing things differently than most people, she finds a way to do what she wants. "It's not what a person looks like that's important," she emphasizes, "it's about the person inside each of us."

The Corps of Engineers is an Equal Opportunity Employer and supports and other Equal Opportunity Employment Program observances throughout the year. Johnson spoke at a District National Disability Employment Awareness Month luncheon, sharing her experiences, perspectives and sense of humor.

Ruth Johnson fishing and cutting wood. Photos courtesy of Ruth Johnson.

LTC Drew Kelly
salutes the Walla Walla District

By Lt. Col. Drew Kelly

It's been a quick but great two years here in the District. As I prepare to move on, I want to thank you for many successful efforts during my command, and share a few outstanding memories.

I had the opportunity to come here for about ten days prior to first assuming command. It was a pleasure to meet many of you then. My first impression of the District was of an exceptionally professional and dedicated organization. I could see employees here were very competent in their trained field, and well-credentialed. Even more important than the professionalism and dedication was your team orientation. The District certainly was and is one of the most team-oriented organizations I've ever seen.

I appreciated the extra effort and patience by all who trained me in all our processes, which have served us exceptionally well. We're very data-driven, technically oriented, and deliberate in our approach. Facing increasing uncertainty in our future program and budgets, we improved our flexibility to carry out our missions. We did a deliberate scrub during the past couple of years to better understand our governance systems and decision-making structure and processes.

Through this effort, we gained a better awareness and understanding of the many things we do, and learned better ways of synchronizing those efforts so we avoid "double work" and keep each other informed.

We also decided to focus more energy on external communications not only with the public and media, but also with various elected officials, tribes, governments, agencies, non-governmental organizations, partners, and other stakeholders and their constituents. I felt that sometimes there was a better way to say things as we interacted with others about our capable, highly technical, and definitely wide and deep organization. Sometimes it's difficult to see the Corps unless you help them look "behind the curtain" at our processes, people and systems.

Photo by Joe Saxon

To inform and coordinate with others, we improved our External Communications Management Team. It used to be about five people, but now has ten or more around the table, meeting monthly to put our heads together about how best to communicate with other agencies in order to better accomplish our missions. It's a holistic approach. It seems to be working well, judging by positive feedback I receive.

This District continues its significant accomplishments, way too many to list in this limited space. Memorable successes include the Little Goose gudgeon repair, fish friendly turbines, Boise River GI study to reduce flood risk, Cost Engineering Mandatory Center of Expertise (Cost MCX) support of FEMA, power team support to others, working through a government shutdown, and many more.

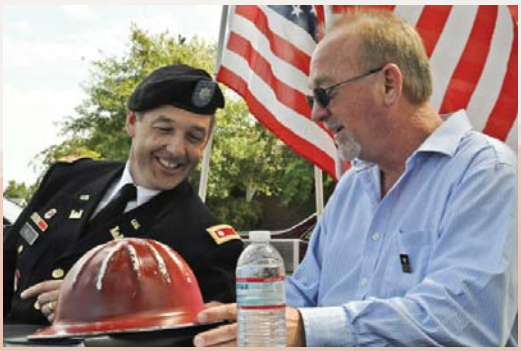
Our workforce shows an immense collective ability to handle unusual challenges as well as day-to-day missions. In my mind, we've provided tremendous value to the Nation.

My best memory will be standing in front of any audience talking about the District—Rotary, Kiwanis, Richland Historic Streets Project, and others. Great audiences. Everyone wanted to hear what the Corps was doing. Almost without exception, when I was done speaking, there would be folks that just walked up and wanted to shake my hand and say "I had no idea the Walla Walla District did so much stuff. You're awesome. I'm really glad you're there."

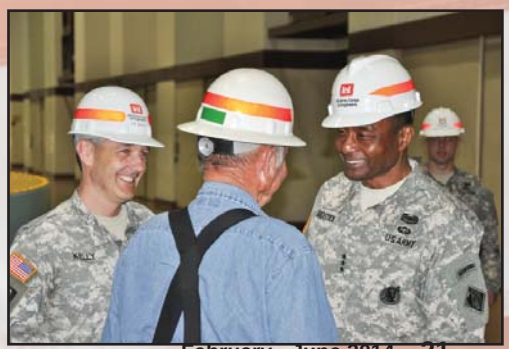
For all this and more, I salute you. Keep up the great work, and thanks for making me part of this great team.

Above: Lt. Col. Andrew Kelly speaks at a National POW/MIA Recognition Day at Jonathan M. Wainwright Memorial VA Medical Center. Right page top plus 2nd row: Lt. Col. Kelly speaks at Col. Franklin T. Matthias monument dedication in Richland, Wash., with Michael Matthias, Col. Matthias' son, plus Richland Historic Streets Project completion ceremony. Col. Matthias was the first commander of the Hanford Engineer Works in WWII. Right page: Lt. Col. Kelly leads Corps contingent during the 2013 Veterans Day parade in Walla Walla. Right page bottom, left to right: Lt. Col. Kelly meets with N. Kathryn Brigham of the Confederated Tribes of the Umatilla Reservation; recognizes Wendell Greenwald for his former service to the Corps; along with Lt. Gen. Thomas Bostick, Army Chief of Engineers, he recognizes Al Orman on his retirement from McNary Lock and Dam.

Photos by Bruce Henrickson



U.S. Army Corps of Engineers photos



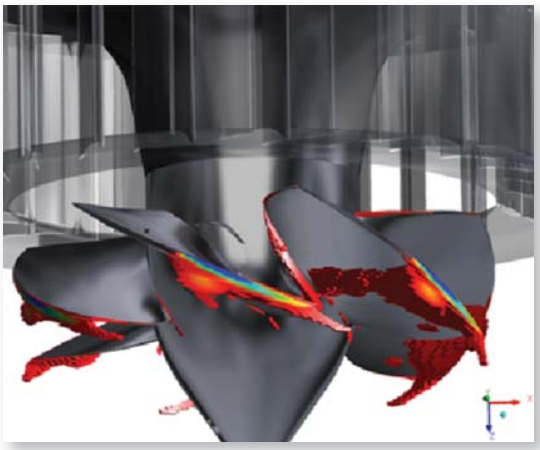
Hydraulic Design and Hydrology

Where water flows

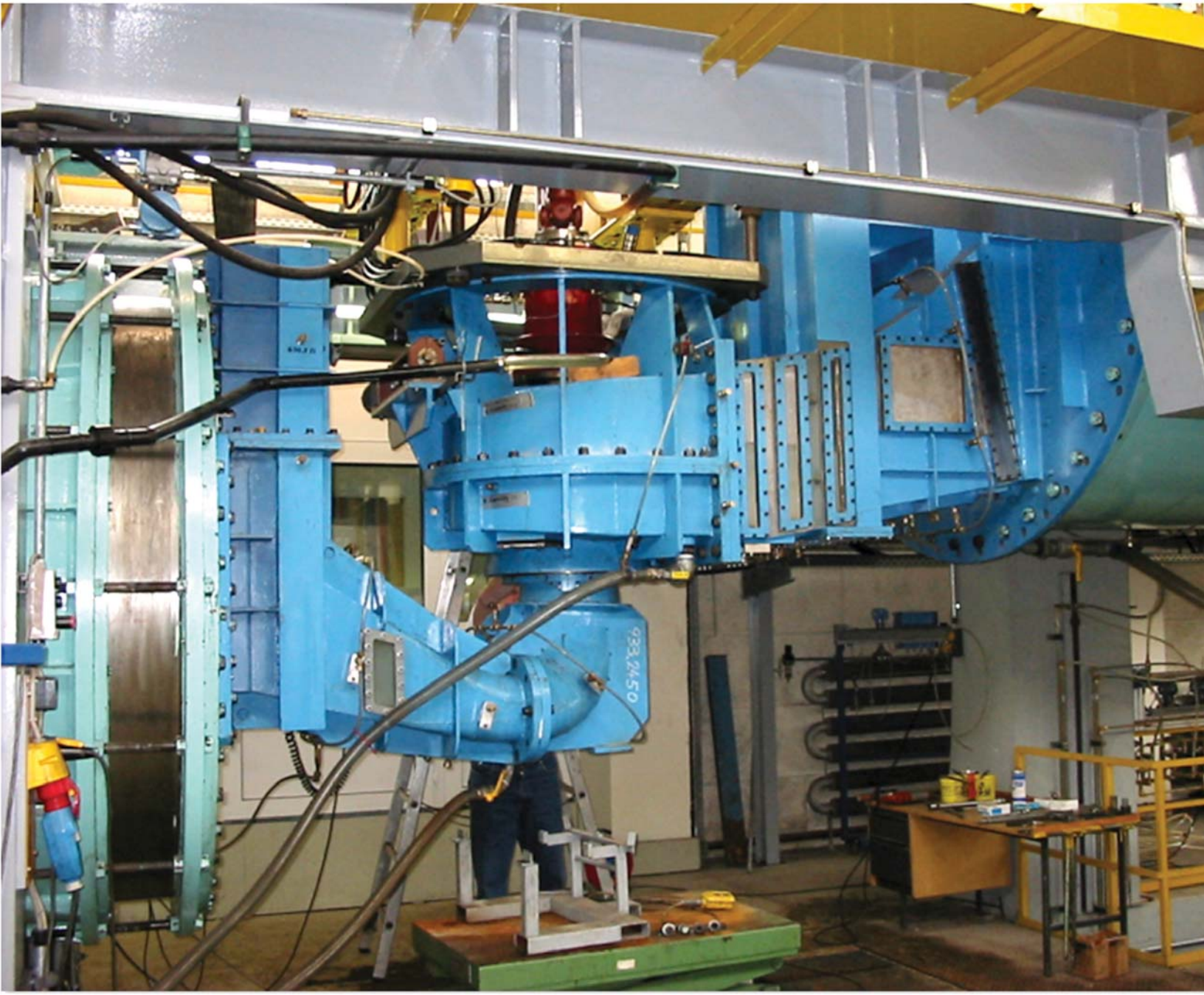
Hydrology and Hydraulics (H & H) are fields that attempt to understand how water works, how it relates to critical resources and what are the best ways to control it. Almost every major area that the Corps of Engineers is involved has key elements related to water. Flood risk management, navigation, environmental restoration and regulation, hydropower, and emergency operations all rely on having strong technical understanding of water engineering issues. The branch has two main sections, hydrology and hydraulics.

The Hydrology Section has expertise in three main areas – hydrologic studies, water management, and water quality. The hydrologic studies group provides expertise to the District in flow frequency analysis, river hydraulics and sediment transport, ice engineering, dam break analysis, and field measurements. The water management group provides flood risk management regulation for 13 non-Corps projects, provides flood risk management regulation for Lucky Peak and Mill Creek, maintains water control manuals, and collects snow, precipitation and flow data for use in regulating the system projects.

The Hydraulics Section has responsibility for preparing, reviewing and inspecting all phases of hydraulic analysis and designs as it relates to man-made structures within the District. This includes hydraulic design and evaluations for such things as spillways, outlet works, stilling basins, navigation locks, flood control channels, diversion structures and juvenile fish transportation and bypass facilities, fish hatcheries and acclimation ponds, and adult fish passage facilities. The water quality group oversees a major D-gas data collection effort; the group also provides collection and analysis of other water quality related information for dredging, planning studies and construction.



Top: Test model for Ice Harbor Lock and Dam's new turbine runner. Above: Computer computational fluid dynamics model of John Day Lock and Dam's turbine runner at the Corps' Engineer Research and Development Center (ERDC). Right: Contractor VA Tech testing a turbine model for Lower Granite Lock and Dam.



U.S. Army Corps of Engineers photo

Corps focusing on fish recove

Federal dams on the lower Columbia and Snake rivers helped shape the modern Northwest, fueling the economy with affordable electricity, reducing the risk of flood damage and irrigating crops to feed the Nation. But they also affected the habitat of salmon and steelhead that migrate from the Columbia River Basin to the ocean and back. These fish had already been affected by more than a century of commercial fishing, mining and other human development.

In the 1990s, NOAA Fisheries listed the first Northwest salmon and steelhead under the Endangered Species Act (ESA). Eventually, 13 stocks were listed as threatened or endangered.

Under the Endangered Species Act, the U.S. Army Corps of Engineers, the Bureau of Reclamation and the Bonneville Power Administration, collectively called the Action Agencies, must consult with NOAA Fisheries to avoid jeopardizing listed fish.

Photo by Jim Wade

ery

NOAA Fisheries' Biological Opinion guides operation of these dams, known as the Federal Columbia River Power System, to protect listed fish.

Today, federal agencies are working with states, tribes and others across the region to protect those fish affected by the dams, which in turn continue to provide great value to the Northwest.

ENVIRONMENTAL STEW

DISTRICT DEDICATED TO FISH RECOVERY

The Endangered Species Act

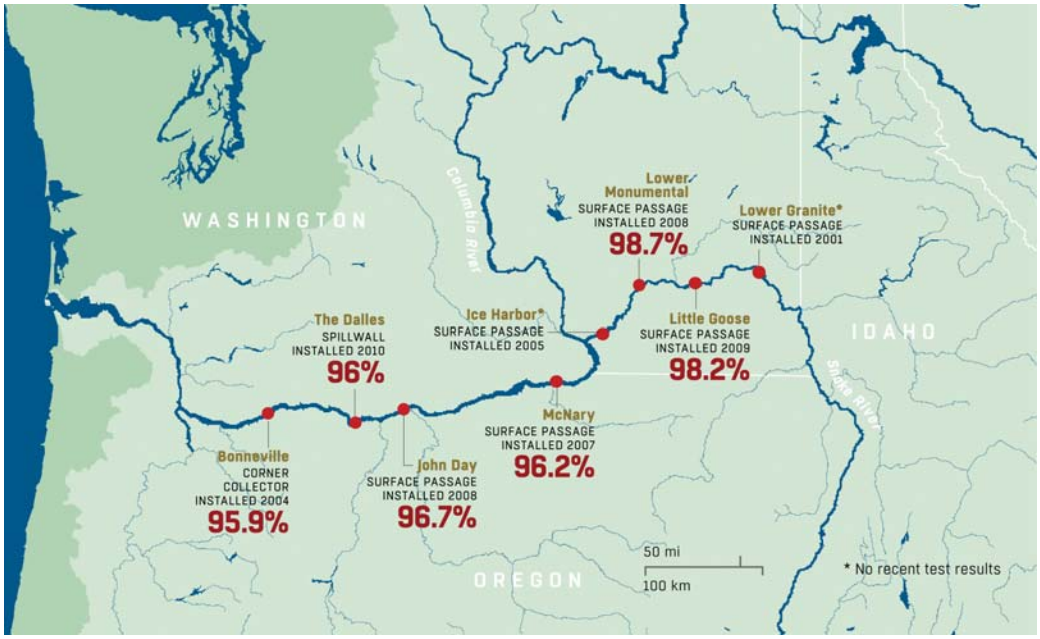
The Endangered Species Act (ESA) was signed on December 28, 1973, and provides for the conservation of species that are endangered or threatened and the conservation of the ecosystems on which they depend.

The ESA replaced the Endangered Species Conservation Act of 1969. It has been amended several times.

A "species" is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. A species is considered threatened if it is likely to become an endangered species within the foreseeable future.

In the Columbia River Basin, there are 13 ESA-listed species of fish.

NOAA Fisheries and the U.S. Fish and Wildlife Service share responsibility for implementing the ESA. Generally, USFWS manages land and freshwater species, while NOAA Fisheries manages marine and "anadromous" species and has jurisdiction over 82 listed species.



Shown are the dates surface passage was installed and 2010-2012 test results where available for juvenile spring Chinook overall dam passage survival.

Safe Fish Passage at the Dams

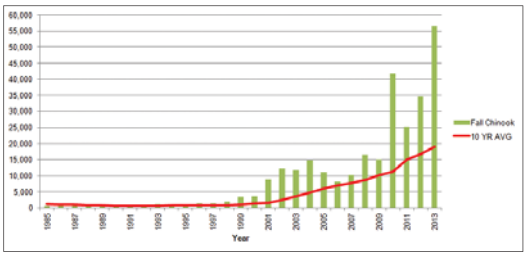
The federal dams in the Columbia River Basin (known as the Federal Columbia River Power System) provide nearly 40 percent of the region's electricity. In addition to clean hydropower, they also provide flood risk management, irrigation, navigation and recreation. Like salmon and steelhead, these dams are treasured resources, vital to the region's culture and economy.

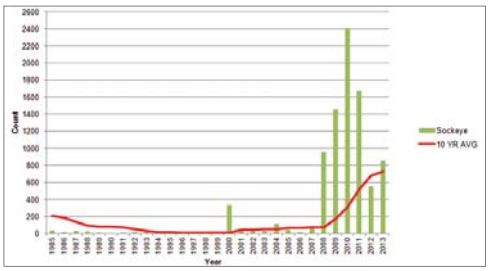
Most salmon and steelhead in the Columbia River Basin encounter one or more hydroelectric dams as they migrate to and from the ocean.

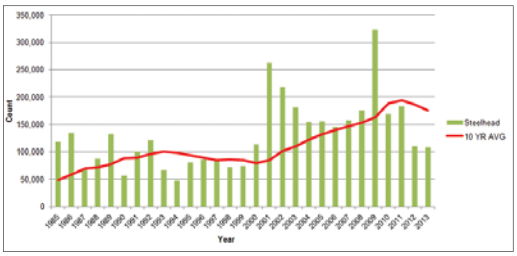
All Walla Walla District dams which include McNary on the Columbia River and Ice Harbor, Lower Monumental, Little Goose and Lower Granite on the Snake River have fish passage, like spillway wiers to help juvenile fish migrate to the Pacific Ocean. They also have fish ladders that help returning adult fish pass through dams en route to their spawning grounds. The FCRPS BiOp sets high standards for juvenile fish passage - 96 percent average per dam survival for spring migrating fish and 93 percent for summer migrants.

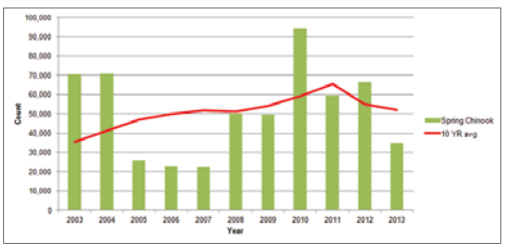
Meanwhile, federal agencies continue to research and implement improvements at the dams that increase survival for both adult fish and juvenile fish.

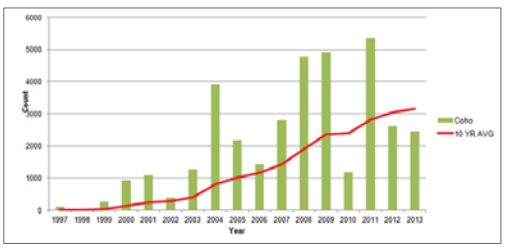
Fish survival rates

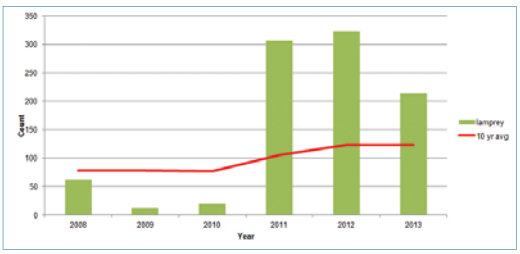


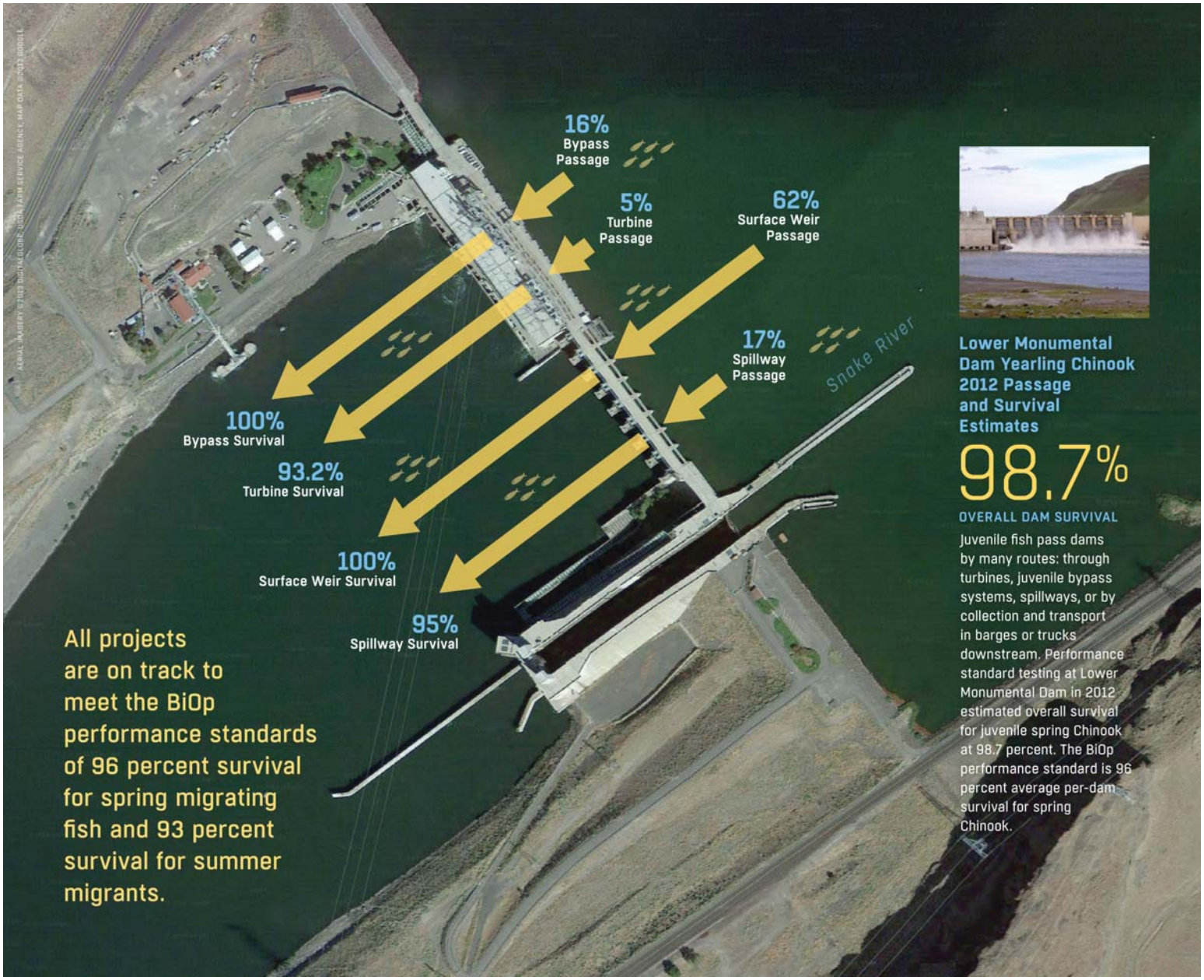






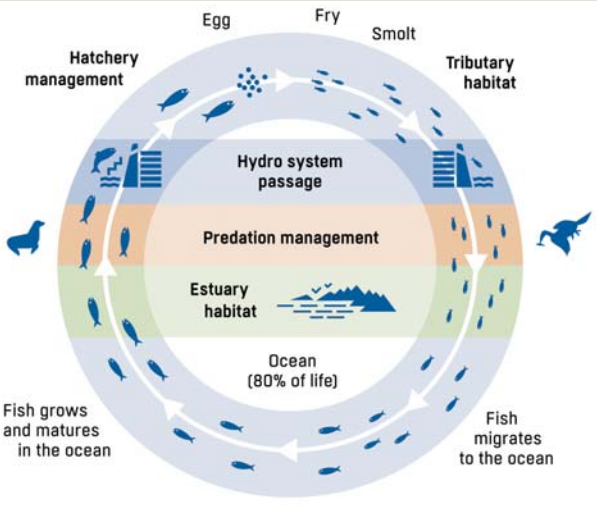






Helping salmon and steelhead throughout their life cycle

Salmon and steelhead rely on many environments as they grow and mature, each with its own survival challenges. The Action Agencies take a comprehensive approach to address impacts, with hydro system passage, predation management, and improving habitat and hatcheries.



You Tube Fish Passage Video

Fish Facilities

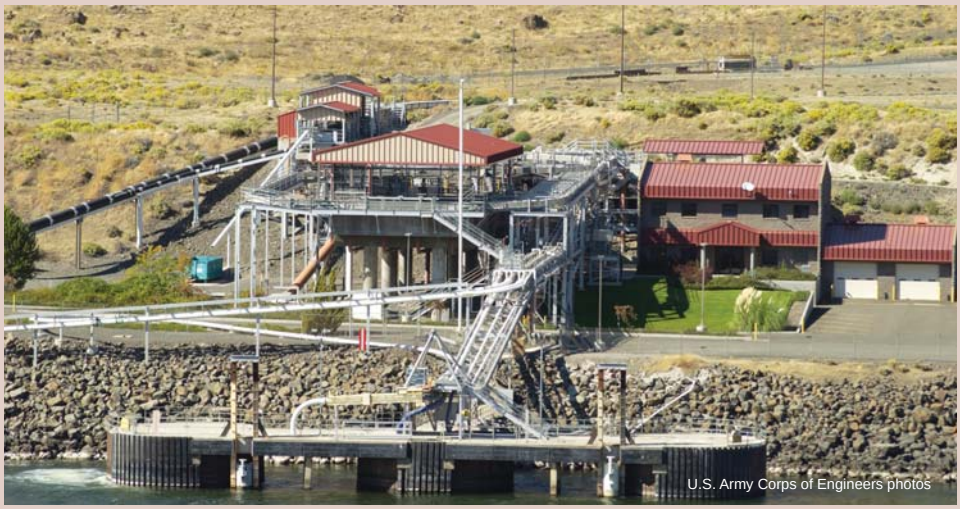

U.S. Army Corps of Engineers photos


Photo by Idaho Fish and Game

Top Left: Lower Monumental Lock and Dam's fish facility. Above: Jerry Harmon, fisheries research biologist, moves a fish across the adult fish trap at Lower Granite Lock and Dam. Left: Sockeye salmon.

Walla Walla District operates fish facilities at McNary Lock and Dam, Ice Harbor Lock and Dam, Lower Monumental Lock and Dam, Little Goose Lock and Dam, and Lower Granite Lock and Dam.

Lower Granite Juvenile Fish Facility

The Walla Walla District of the U.S. Army Corps of Engineers is upgrading the Lower Granite Lock and Dam Juvenile Fish Facility (JFF). Fish facility improvements are an important part of the Corps' mission to save salmon and other endangered or threatened species. The overall upgrade includes "daylighting" the current below-ground juvenile fish transportation piping from the dam to the juvenile fish facility to an above-ground flume configuration

Upgrades are planned to occur in phases. The intent is to improve juvenile fish survival and increase operational reliability of the bypass and collection system. When upgrades are complete, long-term operations and maintenance costs should also be reduced.

Annually, millions of juvenile fish pass over, around or through Lower Granite each year, with an average juvenile survival rate of about 95 to 96 percent. Any incremental improvement in juvenile fish survival is significant when this many fish are migrating over, around or through the dam.

In addition to juvenile survival benefits, the Corps is also addressing reliability of a system that was built in the early 1970s. We have learned much since that time, and National Oceanic and Atmospheric Administration (NOAA) Fisheries criteria has evolved largely in part to advancements made in screened bypass systems on the Snake and Columbia rivers. Many of the features that were state of the art in the 1970s no longer comply with NOAA Fisheries criteria for these types of facilities. The Corps is addressing Lower Granite improvements to improve both fish survival at the dam and longer-term system survival, with the ultimate goal of improving adult fish returns.

The Corps previously upgraded its lower Snake River juvenile fish facilities at Ice Harbor Lock and Dam, Lower Monumental Lock and Dam, and Little Goose Lock and Dam during the 1980s and 1990s. These improvements contributed to juvenile survival improvement, which leads to the ultimate goal of improved adult fish returns when those juveniles return from the ocean several years later.

NOAA Fisheries Biological Opinion for operation of the Federal Columbia River Power System

The 31 federal dams in the Federal Columbia River Power System (FCRPS) have fueled the region's economic growth for more than 70 years, providing nearly 40 percent of the region's electric power supply as well as flood control, irrigation, navigation and recreation.

The FCRPS is operated to support multiple species of listed and unlisted fish. Numerous biological opinions have guided these operations since the first Columbia Basin stocks were listed. NOAA Fisheries, as the regulatory agency for ocean fish, is responsible for BiOps for anadromous fish (salmon and steelhead). US Fish and Wildlife Service is the regulatory agency for native fish, including bull trout and sturgeon, and issues BiOps governing actions for those fish.

But an approach that relies on hydropower operations alone will not recover the species. Many other factors have contributed to the salmon's decline, including overharvest, hatchery practices, degraded habitat and ocean conditions.

Under these BiOps and other laws and authorities, the federal action agencies carry out a wide range of actions to help listed fish at all stages of their lifecycle. This includes habitat restoration, hatcheries to jump-start nature, improved river conditions, better survival past dams and harvest management.

Jan. 17, 2014: The 2014 Supplemental BiOp. NOAA Fisheries issued a supplemental biological opinion confirming that improvements at federal dams on the Columbia and Snake rivers, rehabilitation of habitat, and other actions are benefiting federally protected salmon and steelhead as much as or more than anticipated five years ago. The supplemental BiOp analyzed research and monitoring results from the first five years of work under the original biological opinions.

Predator Management

Birds, fish, and marine mammal predation are a major cause of mortality for ESA-listed juvenile and adult fish in the Columbia River Basin. Populations of Caspian terns and double-crested cormorants have increased over the past two decades in the Columbia River estuary and in the mid-Columbia region. Northern pikeminnow and bass also prey on juvenile salmon and steelhead.

California sea lions and stellar sea lions consume substantial numbers of adult spring Chinook salmon, sturgeon and winter steelhead below Bonneville Dam.

Federal and state agencies are cooperating to reduce predation. Programs to redistribute Caspian terns, deter and block sea lions from fish ladders, and reduce the northern pikeminnow population through sport angling have been successful in decreasing the loss of adult and juvenile salmon to predation.

Avian Predation

Caspian terns and double-crested cormorants are a growing threat to juvenile chinook and steelhead in the Columbia River estuary,consuming an estimated 24.6 million juvenile Chinook and steelhead that reached the estuary in 2010.

Caspian terns nest primarily on East Sand Island. Since 2009, the Corps has built four alternative nesting sites to help lure the birds out of the estuary. As a result, the Corps has been able to reduce the size of the nesting acreage on East Sand Island.

Cormorants are a more recent threat. In 1989, the cormorant nesting population on East Sand Island totaled only about 100 pairs. By 2010, there were 13,596 breeding pairs on the Island – the largest double-crested cormorant colony in western North America.

The Biological Opinion

The Endangered Species Act (ESA) requires that any federal agency proposing an action that may have an effect on an ESA-listed fish – issuing a permit, spending money, taking a direct action on fish habitat – consult with the U.S. Fish and Wildlife Service or NOAA Fisheries (i.e., regulatory agencies).

The agency proposing the action (known as the action agency) will commonly complete a biological assessment on potential effects to the fish or its habitat and submit it to the regulatory agency(ies). The regulatory agency then renders a Biological Opinion to the action agency making the proposal.

The intent of a BiOp is to ensure that the proposed action will not reduce the likelihood of survival and recovery of a ESA-listed species. A BiOp usually also includes conservation recommendations that further recovery of the specific ESA-listed species. The BiOp includes Reasonable and Prudent measures as needed to minimize any harmful effects, and may require monitoring and reporting to ensure that the action is implemented as described.

Adaptive Management

Adaptive management is the process of adjusting management actions and/or directions based on new information. Because adaptive management uses program results to help design and implement new actions, monitoring, evaluation and feedback are the foundation of its design. Stakeholder participation and input is a key part of the process.

Caspian terns feeding on salmon. Terns and double-crested cormorants consumed an estimated 24.6 million juvenile Chinook and steelhead that reached the estuary in 2010.

Caspian terns and double-crested cormorants also nest on islands in the mid-Columbia River, where they also prey on juvenile salmon and steelhead. Key nesting sites in the mid-Columbia are Crescent Island in Lake Wallula+, Goose Island in Potholes Reservoir and Foundation Island at the north end of Potholes Reservoir.

Avian predation wires installed at dams are an effective deterrent to gulls and other birds that hunt near the tailraces of dams to prey on the juveniles as they pass. Wires installed at John Day Dam in 2010 reduced gull predation by an estimated 76 percent.

District exploring Adjustable Spillway Weir

the next evolution in fish passage

By Russell Smith

The next evolution of fish weirs is coming — the Adjustable Spillway Weir (ASW).

In 2001, the U.S. Army Corp of Engineers started installing spillway weirs to improve downstream juvenile fish passage , beginning with the Removable Spillway Weir (RSW). In 2007, the Corps developed the Temporary Spillway Weir (TSW), leading to an outmigrating juvenile salmon and steelhead survival rate of 95 to 100 percent.

Today, the next generation of weirs is the Adjustable Spillway Weir (ASW). This new technology in spillway weirs provides a more surface-oriented, less-stressful downstream passage route for juvenile fish. This new weir provides more options because a hoist mechanism is self-contained within the weir.

This hoist raises and lowers the weir crest structure, which will not only control the amount of water going over the weir, but can also be raised high enough to completely shut off the flow, doubling as a flow gate.

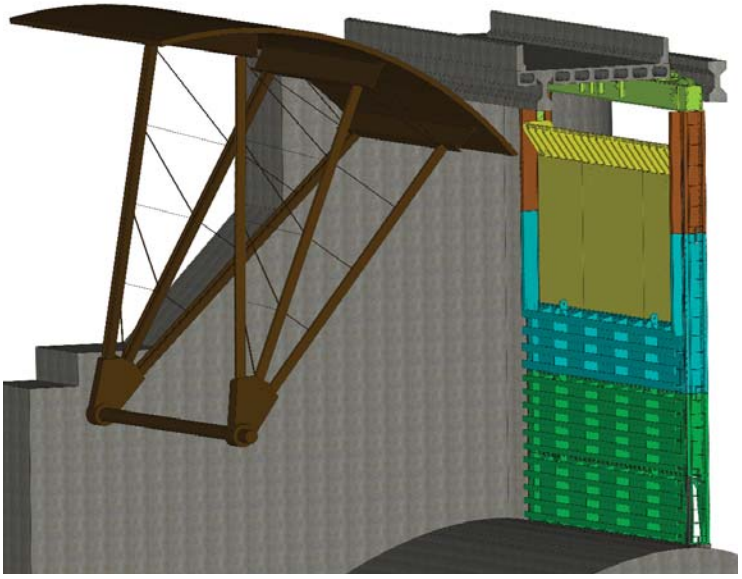
The Corps began the spillway weir program in 2001 to improve juvenile fish passage over the spillway and reduce the number of juveniles entering the powerhouse, where they might be injured or killed. Juvenile fish tend to stay in the top 10 to 20 feet while migrating downstream. Spillway weirs allow migrating juveniles to forgo diving 50 to 60 feet to get under the partially raised spillway gate and freely pass over the weir and dam. Also, weirs help fish transition down into the tailrace.

One problem with installing a weir in a spillway bay is the weir structure reduces the discharge capacity of the spillway. Since the full capacity of the spillway may be needed during flood conditions, any type of weir placed in the spillway must be removable in some manner.

The Removable Spillway Weir was the first type of spillway weir—a fixed, semi-permanent structure that occupies one spillway bay. Air is added or removed from tanks incorporated into the structure to either raise it up to its operational position in the spillway, or lower it to its stowed position on the riverbed. Moving an RSW would require significant effort, likely a construction contract including many hours of diving. So it can't readily be moved to other spillway bays or dams.

RSWs present other problems. They are expensive, weigh up to two million pounds, are very costly to transport, and do not provide an uncomplicated way to adjust the discharge over the weir, which requires changing the height of water in the entire forebay.

The TSW, which is less expensive because it is lighter, more portable, and can easily be shipped in sections, is easier to maintain.



Concept drawing of the Adjustable Spillway Weir

But one drawback to the TSW is the need to use a gantry crane to change weir segments, which increases or decreases the height of the weir to change the amount of water flowing over the weir.

The gantry crane was also required to operate a closure gate to shut off the flow over the TSW.

This led to the creation of the Adjustable Spillway Weir or ASW.

The ASW is similar to the TSW in some respects. Both are portable with segmented components that slide into position inside the spillway.

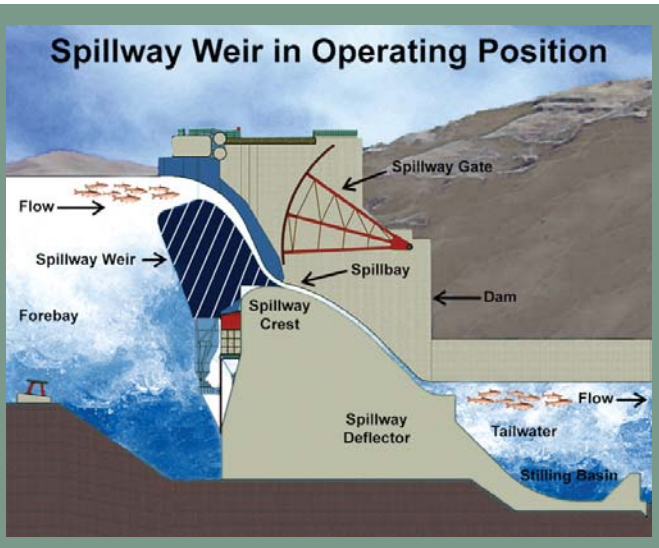
The biggest difference is the ASW has its own dedicated and self-contained hoist structure installed at the top of the weir.

It lifts and lowers the weir using cables. Initially installing the ASW will require a gantry crane. But once its installed, the built-in ASW hoist will lift or lower the weir crest structure inside the weir.

No external gantry crane is needed during normal operations.

The weir crest can be raised and lowered as needed to change discharge over the weir to manage water levels during spring run-off or summer flows, or possible night operations.

Juvenile fish are more likely to move at night, so the Adjustable Spillway Weir crest may be readily lowered during the night to allow full flow over the weir, then raised during the day to stop flow over the weir, depending on fish passage operations needs.



U.S. Army Corps of Engineers photo

Improving fish survival

Story and photos by Stephen Doherty

The Corps continues its march toward improving fish survival.

The Walla Walla District conducted a study recently on the survival rates of fall-back and downstream migrating, overwintering adult steelhead at McNary Lock and Dam.

As adult steelhead migrate up the Columbia River, some fish migrate past, or overshoot, their natal tributaries and pass upstream of McNary Dam. These fish may stay in the McNary pool until spring with other mid-Columbia and Snake River steelhead, while others may fall back or actively migrate downstream through the dam.

"The goal of the study at McNary was to determine if adults falling back or migrating downstream during the winter would benefit from migrating over the dam's spillway weir rather than through the powerhouse and turbine environment," said Lead Corps Fisheries Biologist Marvin Shutters. "The Corps is a good environmental steward, and studies like these help the Corps improve fish passage."

Surface passage structures such as spillway weirs provide more natural river passage conditions. Most juvenile salmon tend to travel in the upper 10 to 20 feet of the water column as they migrate downstream to the ocean. When approaching the dams without surface passage structures, juvenile fish need to dive to depths of 50 to 60 feet to access passage routes such as a spillbay opening or a guidance screen that will guide them into a juvenile bypass channel. Surface passage structures allow downstream migrating fish to pass the dam at the surface. This reduces juvenile fish passage delay, improves water quality, makes more efficient use of spill and improves juvenile fish survival.

While spill is mandatory for juvenile fish passage at the District's projects from April 1 – Aug. 31, spill is not required September - March. With increased energy demand and reduced flows during winter, water is typically directed through the powerhouse to generate power.

To determine the best passage route for adult steelhead, the Corps performed "direct releases" of specimens into the two migration pathways — through the powerhouse vs. over the spillway weir. Direct releases involved pipes that were installed in the turbine intake and at the spillway weir to introduce fish directly into the passage route of interest.

The test begins by preparing fish for recovery by boaters downstream of the dam. Each fish is outfitted with a radio tag, and 6-8 balloons, each containing two tablets which dissolve and inflate the balloons in about 3-5 minutes. The fish are then placed in a pipe, which guides them directly into either the turbine environment, or over the spillway weir. After passing through the dam, boats collect the fish in the tailrace. Once onboard, biologists remove the radio tags and balloons and take the fish to shore for 48 hours to observe and document immediate and extended survival.

"We calculate fish survival rates for each type of passage over or through the dam, which helps improve our decision making on dam operations and benefits out migrating or fall back salmon and steelhead," explained Fisheries Biologist Brad Trumbo.

"We follow where the science leads and studies like these increase our understanding of the complexities of fish passage, and help advance the Corps' environmental stewardship and fish missions by shaping future dam operations," he said.

Above, middle: Steve Adams of Normandeau prepares a fish for testing at McNary Lock and Dam. Above: Inflated balloons help researchers recover fish to determine survival.

Lamprey passage upgrades insta


Photo by Steve Juhnke


Photo by Josh Davin


Photo by Steve Juhnke


Oregon Department of Fish and Wildlife photo by Brian Jenkins

To learn more about the Corps' efforts to improve passage conditions for lamprey and ESA-listed fish species, visit the Federal Caucus website at www.salmonrecovery.gov.

By Gina Baltrusch

Pacific lamprey migrating up the Columbia River will find their route past McNary Lock and Dam a bit easier to travel, thanks to a prototype lamprey-passage structure installed in the downstream entrance of the Oregon-shore fish ladder.

The 40-feet-long structure, fabricated in several sections, was installed in February. In August 2013, Marine Industrial Construction of Wilsonville, Ore., was awarded a $336,542 contract to build, deliver and install the device.

Lampreys belong to a primitive group of fishes that are eel-like in form, but lack the jaws and paired fins of true fishes. Lampreys have a round sucker-like mouth, no scales and breathing holes instead of gills.

"Lampreys are very important to the health of the inland aquatic ecosystem," said Corps Project Manager Mark Smith. "As larvae, they're the vacuum cleaners of our streams and rivers, spending the first four to seven years of their lives in freshwater, filter-feeding among the sands and fine silt."

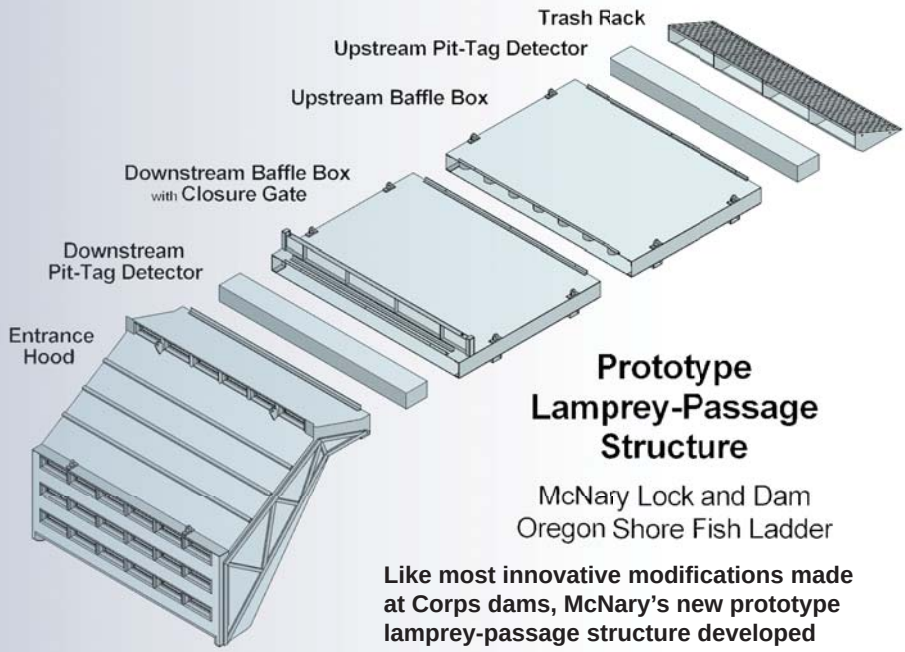
Although not formally protected as an ESA-listed species, lamprey abundance has diminished in the Columbia Basin during the past 30 years. Lampreys are anadromous -- migrating from fresh to ocean waters and returning to spawn -- and were once common in the Snake, Clearwater and Salmon river drainages.

As adults migrating to ocean environment, Pacific lamprey become parasitic and feed on a variety of salt-water prey. After two to three years, they stop feeding and return to the freshwater rivers and streams to spawn, said Smith. Lampreys are also culturally significant to the Pacific Northwest tribes who use these fish for food and medicine.

Recent studies indicated adult lamprey were unable to efficiently enter McNary's fish ladder because lamprey, which move primarily along the bottom of the river, prefer lower passage routes with reduced water flows to negotiate the entrance weir, Smith explained. The fish ladder entrance was set high in the water column and uses higher velocities to attract salmon and steelhead.

In May 2008, the Corps of Engineers entered into agreements with the other action agencies (the Bonneville Power Administration and the Bureau of Reclamation), four tribes and one state for 10-year commitments to benefit fish, particularly Columbia River Basin salmon and steelhead stocks.

Those agreements, known as the Columbia Basin Fish Accords, later expanded to include a total of seven tribes and three states. As part of those agreements, the Corps committed to plans and actions designed to improve lamprey passage.



Like most innovative modifications made at Corps dams, McNary's new prototype lamprey-passage structure developed from ideas, drawings and models into its final welded-aluminum form.

lled at McNary Dam fish ladder


Photo by Terry Zerb

Improvements in dams that allow for lamprey passage are critical to improving their mobility up the rivers to reach spawning areas. Although the Columbia Basin Fish Accords put lamprey on the Corps' radar as a species that needed help to pass the dams, much is yet unknown about which in-water conditions best accommodate these unique fish. The new McNary lamprey-passage structure is fitted with pit-tag detectors at both ends. The one-foot-high flume between the entrance and exit contains circle- and half-circle-shaped baffles to produce a range of reduced water velocities across the width of the structure's interior.

"We plan to conduct video monitoring to observe which velocity is preferred by migrating lampreys," said Smith. Tagging operations at Bonneville and John Day dams will help researchers track lamprey as they pass through the structure.

The McNary prototype is the latest of many modifications made to fish ladders at Corps dams to improve lamprey-passage conditions without negatively affecting fish passage. At Walla Walla District dams on the Snake and Columbia rivers – McNary, Ice Harbor, Lower Monumental, Little Goose and Lower Granite -- metal plating attached along ladder floors and lamprey-friendly pass-through orifices in weirs provide smoother surfaces for lamprey to attach to as they move upstream.

Corps dams in the Portland District on the Columbia River – John Day, The Dalles and Bonneville – have also made modifications to improve conditions for lamprey in their fish passage facilities.

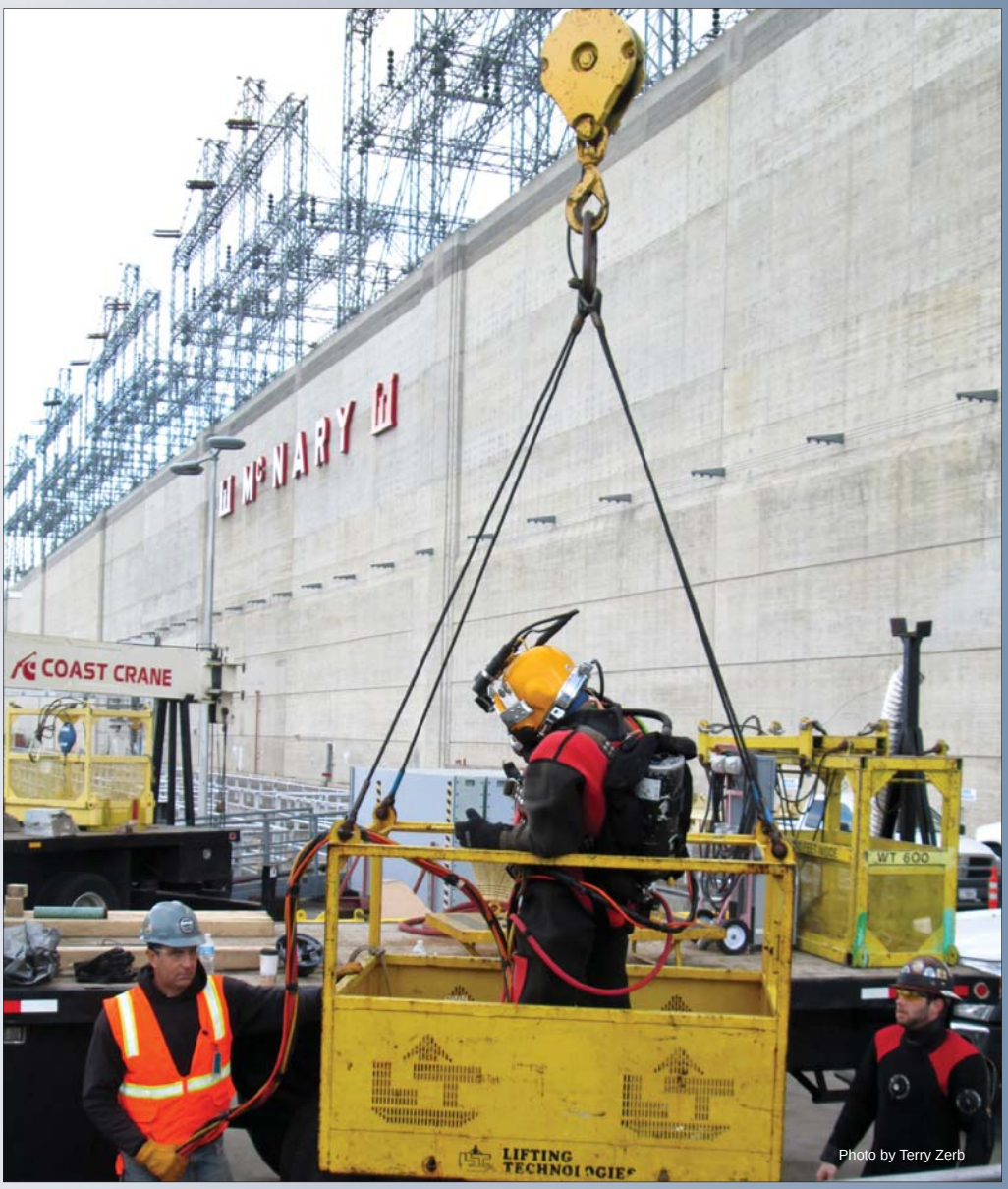


Photo by Terry Zerb

Top Left: NOAA Fisheries Biologist Trevor Conder and Bart Bartelme, fabrication sub-contractor at Waite Specialty Machine in Longview, Wash., ensure the exclusion bars welded in front of each entrance orifice of the prototype lamprey-passage structure meets minimum-clearance specifications to allow lampreys through, but prevent salmon and steelhead from attempting to enter and possibly getting stuck.

Left: During a mid-point inspection Jan. 15 at a fabrication facility in Portland, Ore., Corps engineers checked out an arrangement of baffles welded into the floor of a one-foot-high box-like section. The circle and half-circle baffles create a variety of flow velocities for lampreys entering the fish ladder. Future studies will help researchers determine which velocities are most preferred by migrating lampreys.
The entrance hood of McNary Lock and Dam's prototype lamprey-passage structure fits perfectly into place at the front of the Oregon shore fish ladder.

Above: Underwater construction and welding experts were brought in by the prime contractor, Marine Industrial Construction of Wilsonville, Ore., to modify the existing fish ladder entrance sill. These skilled divers worked under 20-30 feet of water, removing concrete and rebar to allow precise fitting of the new prototype lamprey-passage structure.

Above Left: Crane operators prepare to install the trash rack section of McNary Lock and Dam's prototype lamprey-passage structure into the Oregon shore fish ladder.

To protect and increase riparian habitat

Story and photos by Stephen Doherty

At the base of the Teton Mountains in Western Wyoming, the Snake River flows through Jackson Hole.

The terrain in this region is steep, causing fast water flows that increase shoreline erosion. Over time, this can dramatically alter the landscape around the river and also affects wildlife ecosystems in and around the river.

"The Corps is identifying sites where we are trying to protect pretty high-quality habitat for both birds as well as native fish populations," explains Mark Mendenhall, U.S. Army Corps of Engineers project manager.

In the 1950s, the levees in this area were constructed to protect the city of Jackson and surrounding areas from flooding, but these levees also make the Snake River flow even faster.

The Corps is working to solve this problem, and reduce flood risk to the city while restoring affected areas to a more natural state. The purpose of the ecosystem restoration project in Jackson Hole is to adapt various techniques to determine the best way to protect, enhance, and increase the native habitat and growth areas.

During a recent trip to Jackson, Wyo., Corps officials worked closely with local officials and landowners to identify the best areas to protect.

River habitat of trees, shrubbery, and grasses are in danger of being washed away by erosion. Techniques the Corps is using to channel water into small streams not only protects these natural growth areas, but also creates a viable habitat for native fish and birds.

The Corps, along with its partners – county officials and local landowners – are working to protect this critical wildlife habitat along the banks of the Snake River, and in the river itself.

By uncovering areas of the river buried by years of erosion and soil movement, the Corps hopes to create more quality fish habitats and support surrounding river bank ecosystems.

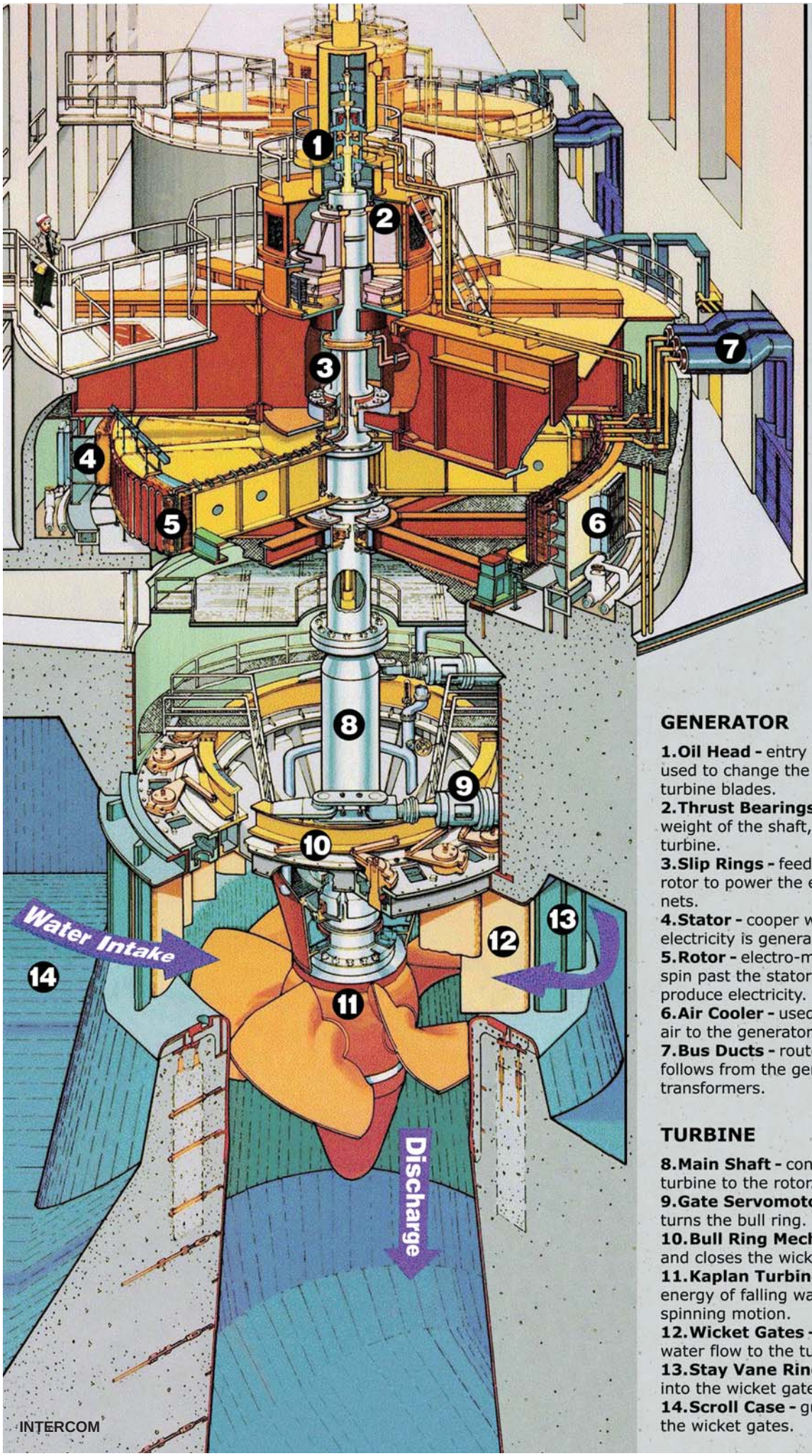
It's all part of the Corps' environmental stewardship effort.

You Tube Ecosystem restoration video

Top: Mark Mendenhall, Corps project manager. Top Right: Snake River near Jackson, Wyo. Below: Snake River and quality habitat the Corps is hoping to protect. Bottom Left: Corps and County officials meet with local landowners on the bank of the Snake River. Bottom middle: Snake River near Jackson, Wyo. Bottom right: Curtis Been, Corps hydraulic engineer, talks to Dave Gustafson from Teton County Road and Levee while overlooking the Snake River.

Corps developing ecosystem restoration project at Jackson Hole

HYDROPOWER



GENERATOR

1.Oil Head - entry point for oil used to change the angle of the turbine blades.
2.Thrust Bearings - supports the weight of the shaft, rotor and turbine.
3.Slip Rings - feeds current to the rotor to power the electro-magnets.
4.Stator - cooper wire where the electricity is generated.
5.Rotor - electro-magnets which spin past the stator in order to produce electricity.
6.Air Cooler - used to provide cool air to the generator.
7.Bus Ducts - route the electricity follows from the generator to the transformers.

TURBINE

8.Main Shaft - connects the turbine to the rotor.
9.Gate Servomotor - motor that turns the bull ring.
10.Bull Ring Mechanism - opens and closes the wicket gates.
11.Kaplan Turbine - converts energy of falling water into a spinning motion.
12.Wicket Gates - used to control water flow to the turbine blades.
13.Stay Vane Ring - guides water into the wicket gates.
14.Scroll Case - guides water to the wicket gates.


U.S. Army Corps of Engineers photo

You Tube Hydropower Sustainability Video

Hydropower is a clean, renewable, reliable, efficient, and flexible energy source. The Walla Walla District is capable of producing 4,400 megawatts of power, which generates from $400 to $850 million annually.

How electricity is generated

Water flowing downstream at dams produces electricity. As the water passes through the dam's powerhouse, it falls from the upstream level behind the dam to a lower downstream level. The water is moving with tremendous force and is guided down to the turbine. As it strikes the turbine blades, the water turns the turbine like a propeller. The turning turbine spins coils of wires inside a large generator mounted above it, converting the mechanical energy of falling water into electrical energy. Transmission lines then carry the electricity to homes and businesses.

Goats return to manage vegetation along Mill Creek channel

by Gina Baltrusch

Two herds of goats came to Mill Creek to remove weeds and other vegetation growing on levees that border the creek shoreline extending from the Mill Creek diversion dam downstream to the metal division works foot bridge near the Mill Creek Office.

The first herd (about 200 goats) grazed on the south side of the Mill Creek channel. The second herd (about 450 goats) gnawed away amongst the rip rap slopes on the north side of the creek.

Once areas downstream of the diversion dam were cleared of vegetation, the herds relocated upstream to tackle vegetation on the forebay levee.

The forebay levee was closed while the goats are grazing there, although the paved trail remained open along the toe of the levee. The entire job took about two weeks to complete.

This project is necessary to allow U.S. Army Corps of Engineers staff to safely inspect the levee later this year during periods of flood risk. A $6,025 contract for the vegetation removal was awarded to Lazy H Livestock of Grangeville, Idaho.

"We're really excited about having the goats back to do this work again. Goat grazing is an effective way to control vegetation without using herbicides or burning," said Mill Creek Park Ranger Chris Alford.

Grazing also lessens future maintenance by reducing seed production, added Alex Colter, project manager for Mill Creek's vegetation management project.

The company uses electric fencing, shepherds and professional working dogs to keep the goats corralled while working in the vegetation-maintenance zone. The metal division works footbridge near the Mill Creek Office was open for use during grazing.


U.S. Army Corps of Engineers photo

In-water recreational activities in the Mill Creek channel along the vegetation removal zone were temporarily suspended during this time, because the working dogs might perceive visitors as a threat to the herd. Visitors and their dogs could play in the water downstream of the metal division works footbridge or at Bennington Lake.

"Visitors should never attempt to approach the goats or working dogs -- young goats are present and the mamas are pretty protective. So are the working dogs," said Alford. "These are not pet goats; they can be pretty skittish if people get too close. We asked the public to keep their distance and let them do their job of eating the weeds and brambles off of the levee."

Last year, a herd of about 70 goats was first used by Mill Creek staff to control vegetation along a small section of the south levee. The goats' effectiveness prompted staff to broaden this year's work area.

Outdoor Living

Photo by Connie Grant

Photo by David H. Lewis

Photo by David H. Lewis

Natural Resources & Recreation

MANAGING & CONSERVING RESOURCES & PROVIDING OUTDOOR RECREATION

As the nation's largest federal provider of outdoor recreation, the U.S. Army Corps of Engineers (USACE) provides an abundance of recreational resources and opportunities at more than 400 operating lakes and river projects in the United States.

The Walla Walla District includes eight operating projects located in Washington, Oregon and Idaho. Every day, we are working with our partners and the public to manage, improve and preserve the precious land and water resources associated with the Walla Walla District.

The Walla Walla District also operates 37 recreation areas that include visitor centers, campgrounds, picnic areas, playgrounds, beaches, marinas, boat launches, day-use parks and nature trails.

There are also concession areas and more than 30 recreation areas operated by other government or private agencies at our lakes. The Walla Walla District also provides hunting opportunities on approximately 20,000 acres of public land.

Each year, our operating projects host nearly 8 million visitors who come to enjoy the many recreational opportunities available at our rivers and lakes.

Whether it is fishing, camping, boating, picnicking, swimming, sightseeing, bird watching, hunting or a variety of other recreation activities, Walla Walla District has it all. So bring the whole family and enjoy the outdoors.

Whatever your favorite outdoor activity, one thing is certain: recreation can enrich your life. Visit one of our recreation areas to connect with nature and create unforgettable memories. And remember to always wear your life jacket when riding in a boat.

Photo by David H. Lewis

Photo by Mike Carilli

Photo by Andrew Singer

Photo by Neil Perry

Recreational opportunities and nature are available throughout the District.

Always wear your life jacket when you're in a boat or in water. Just like a car's seat belt, your life jacket won't work if you don't wear it.

Rangers and biologists remove barbed wire

Walla Walla District rangers, wildlife biologists and volunteers are collaborating to remove historic barbed wire fences from the interior of Wildlife Habitat Management Units (HMUs).

This fall, employees and volunteers from the Lower Granite Natural Resources Office collaborated to remove a little more than one kilometer of old, deteriorated 4-strand barbed wire fence from the interior of the John Henley HMU, just below the Little Goose Lock and Dam along the Snake River.

The Corps of Engineers acquired the land that currently comprises the Habitat Management Unit complex as part of the Snake River Compensation Plan following development of the Snake River dam system.

With this land the Corps also acquired many miles of interior pasture fence. These fences historically delineated ownership boundaries and facilitated management of cattle grazing.

Now abandoned and deteriorating, these barbed wire fence create movement obstructions and hazards to a large variety of wildlife.

Deer, birds, and other animals are often injured—and sometimes killed—when they become entangled in barbed wire fences.

A study conducted at Utah State University found that, on average, 0.25 mule deer were killed annually on every kilometer of traditionally designed barbed wire fence. Other studies have noted mortalities to birds, including raptors and grouse, and other species of wildlife.

As part of the Corps commitment to wildlife conservation, the Walla Walla district is gradually improving boundary fences with more wildlife friendly designs while removing any unnecessary barbed wire fence from Corps properties.

To this end, Walla Walla district rangers, wildlife biologists, and volunteers spent a cold day in December removing the unnecessary barbed wire fence from the interior of John Henley HMU.

"What I'm most satisfied and happy about is that it was a stewardship endeavor that involved interdisciplinary teamwork!" said Natural Resources Specialist Connie Grant, "It also brought back a lot of fond memories of my ranch-girl days," Grant added.

Walla Walla District rangers, wildlife biologists and volunteers are collaborating to remove historic barbed wire fences from HMUs.

and wildlife hazards from landscapes

"In my opinion this was important work, we have a responsibility to safe guard our lands for the wildlife. Secondarily, the merging of Park Rangers and Wildlife Biologists made a seamless cohesive team, mix in a little sarcasm and light ribbing and you have a lot of fun. For those of us that do not engage in fence removal on daily basis, we did an extraordinary amount of work," said Park Ranger Carey Tolleson.

"Removing this unnecessary, remnant barbed wire fence not only saves a few individual animals from injury and a torturous death, but as part of a broader, landscape-wide effort, we are protecting wildlife populations and reducing an unnecessary loss of valuable wildlife," commented Biologist Neil Perry.

Corps contractors have removed an additional 4 kilometers of fence this fall, contributing to a broader initiative to protect wildlife populations across Corps lands. Next spring, staff and contractors will continue to remove these forgotten wildlife hazards.

Concurrent with this project, the Corps is improving boundary fences and incorporating wildlife friendly designs. As maintenance is conducted on deteriorating fence sections, the Corps will replace or repair these areas by utilizing combinations of smooth and barbed wire that will reduce the risk to crossing wildlife. As the fencing projects progress over the next several years, we expect wildlife to migrate and move to and from Corps properties freely and safely.

After a long day of work, Volunteer Heather Perry expressed her satisfaction. "It is tremendously rewarding to look up onto a hill that had been transected by a tangle of barbed wire this morning, and now it is clear and open."

Trailer loaded with barbed wire after removing it from John Henley HMU.

U.S. Army Corps of Engineers photos

Volunteers load a trailer full of wire and fencing materials.

Many hands make light work

Volunteers at Mill Creek Dam and Bennington Lake help rangers and project staff plant trees.

Nature abounds at Mill Creek

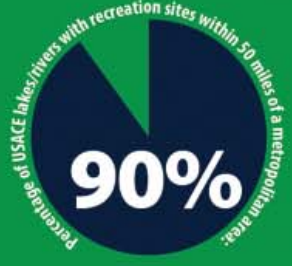
Top: Great blue heron soars close to the water. Top Right: Killdeer wading through the water near Mill Creek. Left: A mink carries a stick while swimming through the water. Left Bottom: A playful dog retrieves a hot orange bumper. Bottom Center: Swallowtail butterfly gracefully lands on a bunch of flowers. Bottom Right: Bull snake warms itself on a rock. Right: Mill Creek channel downstream of the Diversion Dam.

Photos by Cassie Meelhuysen

Program Statistics
Recreation

The recreation program provides quality outdoor public recreation experiences to serve the needs of present and future generations and contribute to the quality of American life, while managing and conserving natural resources consistent with ecosystem management principles.

#1 USACE rank among federal providers of outdoor recreation



370,000,000 VISITS PER YEAR

4,057 at 404 USACE Projects
Number of recreation sites

55,390 Miles of Shoreline

9,506 Miles of Trails

90,773 Number of Camp Sites

3,671 Number of Boat Ramps

12 million acres Land and Water Used for Recreation

20,000 Fishing Tournaments Per Year

16 billion Money Spent by Visitors

270,000 Total Jobs Supported by Visitor Spending

585 Marinas Concession Areas on USACE Projects

$1 Billion Gross Fixed Assets

- Volunteers at USACE projects: **51,195** worked more that **1.6 million hours** providing **$35 million** value of service
- Percentage of U.S population that visits a USACE project at least once a year: **10%**

US Army Corps of Engineers®

For more on USACE recreation sites and opportunities, visit us at www.CorpsLakes.us

Egg rolling with the Big Bunny

Nearly 100 Corps children showed up with their families for the annual Easter egg roll.

Photos by Stephen Doherty

Around the District

Above: Walla Walla District Commander Lt. Col. Drew Kelly and Northwestern Division Commander Brig. Gen. John S. Kem present the Real Estate Achievement Award to Nancy Herres.

Photo by Rita Greene

Turkey Bowl
Congratulations Team Butterballs!

Photos by Stephen Doherty

Above: It was Team Gobblers vs. Team Butterballs in the fall classic. Above, left: When the dust settled, Maj. Nelson's "Butterballs" bounced Lt. Col. Kelly's "Gobblers." Right: The gladiators. Far right: The Kellys: Kay Kelly, Andrew Kelly, Lt. Col. Kelly, Sheila Kelly and son Drew Kelly.

Columbia River Treaty Review Team


U.S. Army Corps of Engineers photos

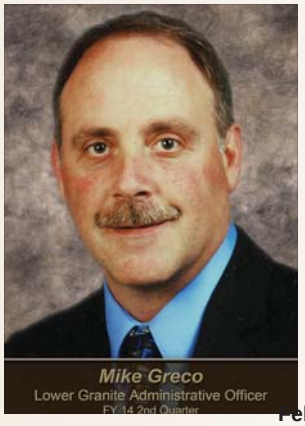
Above: The Walla Walla District team getting recognized for their exceptional contribution to completion of the Columbia River Treaty Review. Working with the Bonneville Power Administration in consultation with the Sovereign Review Team, regional stakeholders, and the public, the team was able to develop a regional recommendation for the U.S. Department of State on the future of the Columbia River Treaty. Left to Right: Sean Redar, Nick Emigh (back), Pete Poolman, Alice Roberts, Margie McGill, Dave Ponganis, Evan Heisman, Jeremy Giovando, Tracy Krause, Dean Holecek, Steve Juul, and Tracy Schwarz.

Right: Kimberly Oldham, Jeannette Wilson and Andy Valentine present on "Celebrating women of character, courage and commitment."

employees of the quarter *Fiscal year 2014*

First Quarter

Second Quarter



Brandon Hobbs
Hydraulic Engineer
Christopher Kelnhofer
Project Engineer
Eric Walton
Structural Engineer
Mike Greco
Lower Granite
Administrative Officer

I'M WITH THE CORPS

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Cindy Boen

Position:
Chief, Plan Formulation Section, Planning Branch

Describe your job.

I supervise a staff of eight planners. Our job is to write the decision documents that justify federal investment in water resources projects. We are required by Congress to document problems, opportunities, develop alternatives, and identify benefits to justify federal investment to solve water resources problems. Essentially, you need planning to get to construction.

What are some of the biggest challenges you've faced in your current position?

Since 1986, the Corps has been required to cost-share planning studies with non-federal sponsors. A non-federal sponsor may be a city, county, tribe, or non-governmental organization. This partnership can add a layer of complexity to Planning studies that you don't always have with something as straightforward as a construction project at a dam. Planning studies often are political and controversial because of the requirement to look at alternatives, evaluate effects, and coordinate with stakeholders (and often, members of Congress). The final answer is not always a straightforward technical answer, but may be infused with politics. Planning requires a high level of diplomacy and collaboration.

Describe a few accomplishments you've experienced with your job.

I have spent my entire career with the Corps in Planning Branch, where I've been fortunate to work on a number of interesting studies, both small and large. I learned a lot of lessons about collaboration and public outreach working on the McNary Shoreline Management Plan. I also worked on the Dam Breaching Plan of Study, which was a fast-track product for the Obama administration. That one required significant dedication from the team to meet administration deadlines – which meant my team worked right up until Christmas (during use-or-lose season!) to get it done. That project was an excellent introduction to the politics, collaboration and coordination that the Corps participates in regionally and nationally to make things happen on the Federal Columbia River Power System.

What is the most rewarding part of your job?

I am always happy when we deliver a quality product to help a community. Most of the communities in our district are small, so receiving federal assistance is a big deal for them and may help them solve a problem they've struggled with for a long time.

Please share a notable milestone or memory with the Corps

In FY 2009 I was selected to participate in the Corps' Planning Associates training program. It's an intensive one-year training with representatives from each Division in the Corps. There were twelve of us in the class, and we travelled to a different Division or District every 2-3 weeks to learn about the Corps mission areas, policies, and processes. I met a lot of excellent and dedicated professionals from Headquarters and from Districts across the county, and I learned a lot. I am one of three Planning Associates graduates in the District (Tim Fleeger and Mark Mendenhall are the other two), and I encourage everyone to take opportunities for training and developmental assignments!