INTERCOM

U.S. Army Corps of Engineers
Walla Walla District

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Walla Walla District

Providing Outstanding Value to the Nation

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Distinguished Retiree

Mark S. Summers brought to the Region more than 28 years of experience in a multitude of roles which included Structural Engineer, Technical Manager, Section Chief, and Regional Technical Specialist Structural Engineer. In these capacities, his contributions to the Region have been numerous, combined with selfless service and sacrifice. Throughout his career he was a mentor to many engineers; he oversaw technical analysis and design for numerous fish hatcheries; led engineering design and construction for the Removable and Adjustable Spillway Weirs; assisted the Department of Energy with seismic design requirements for the Hanford High and Low Level Radioactive Waste Treatment Facility; provided expert structural guidance to the NWD Seismic Design Center; developed a unique method to increase load capacity of sheetpile cells for the Department of the Navy Port of Benton Barge Loading Facility; and mentored structural engineers through the complex seismic analysis of Dworshak Dam. His dedication to the engineering profession is evident by all of his accomplishments and he is a role model for all to follow. He brought outstanding notoriety renown to the Walla Walla District and U.S. Army Corps of Engineers.

Intercom

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On the cover

Diver Derrick Burleigh from the Philadelphia District, inspects the fish channel at Ice Harbor Lock and Dam, January 2015. The inspection was part of an annual routine maintenance by the USACE dive team. ***Photo by Rick Bonoit***

Lower Granite:

Project Maintenance Team

Lower Granite's maintenance crew had an excellent year, setting an internal project record, of only six forced outages, with a combined outage time of less than seven days in 2014. This has earned them the Federal Columbia River Power System's Team Excellence Award.

Critical project management completion rate hovered around 99 percent.

The crew achieved a safety record of zero lost time accidents and only one accident requiring medical treatment.

This represents a notable accomplishment for a crew of about 30 working on a wide variety of industrial tasks in all weather conditions.

Ice Harbor:

Project Safety Award

Safety is the Federal Columbia River Power System's most important performance metric and the number one priority for all three agencies of the FCRPS. This award goes to the FCRPS plant that has accrued the most labor hours since its last lost time accident.

Ice Harbor has gone since August of 2012 without a lost time accident, safely accruing more than 260,000 person-hours of labor, more than any other plant in the FCRPS.

In addition to its regular weekly tool-box safety meetings, Ice Harbor has begun quarterly 'all-hands' safety meetings and weekly safety meetings just for operators, as well as posting safety statistics in the powerhouse for its crews to see.

Office of the District Engineer
U.S. Army Corps of Engineers
Walla Walla District

Teammates, Partners, and Stakeholders,

2015 indeed turned out to be another great year for the District and our mission to generate value to this great region and the Nation. We all should take great pride in our successful year be it in our hydropower sustainment and modernization goals, our maintenance of the federal navigation channel, our flood risk reduction efforts, to our environmental stewardship and regulatory efforts, and our recreational operations. The year was marked by great focus of all of the District employees and our partners and stakeholders, truly committed to service to the Nation.

I hope this edition of the Intercom grants you the opportunity to reflect upon the great people we work with every day and the complex challenges we take on each and every day. I'm extremely humbled to be able to command this District and work side by side with so many dedicated public servants.

As for 2016, it is shaping up to be another busy year – but no matter what challenges we have ahead of us, together we'll continue to meet them head on and deliver outstanding service to the American People.

LTC Timothy Vail
Walla Walla District Commander

The Walla Walla District welcomes
Major Ian Davis, New Deputy Commander

Maj. Ian R. Davis assumed duties as the deputy district commander for the U.S. Army Corps of Engineers, Walla Walla District, on Aug. 1, 2015.

Davis was commissioned into the U.S. Army Corps of Engineers upon graduation from Officer Candidate School in 2001.

Davis most recently served as the battalion executive officer and battalion operations officer for the 5th Engineer Battalion, 4th Maneuver Enhancement Brigade, in Fort Leonard Wood, Mo. His previous assignments include: heavy equipment operator, 46th Engineer Battalion, Fort Rucker, Ala.; platoon leader, 70th Engineer Battalion, 3rd Brigade, 1st Armored Division; Aide De Camp, Brig. Gen. Robert Crear, U.S. Army Corps of Engineers, Task Force Restore Iraqi Oil, Baghdad, Iraq; company commander, 73rd Engineer Company, 1st Brigade, 25th Infantry Division Stryker Brigade Combat Team, Fort Wainwright, Alaska with deployment to Iraq, Baqubah, Iraq; small group leader, Engineer Captain's Career Course, U.S. Army Engineer School, Fort Leonard Wood, Mo.

Davis earned a Bachelor of Science degree in 1998 from Northern Arizona University and a Master of Arts degree in Public Administration from Webster's University in 2006.

Davis is a graduate of the Engineer Officer Basic Course, Engineer Captain's Career Course, and the Command and General Staff College. Davis also has a Project Management Professional (PMP) certification from the Project Management Institute.

Davis' military awards and decorations include the Bronze Star Medal; The Meritorious Service Medal with Oak Leaf Cluster; the Army Commendation Medal with three Oak Leaf Clusters; the Army Achievement Medal with three Oak Leaf Clusters; Good Conduct Medal; National Defense Service Medal; Iraq Campaign Medal with two Bronze Service Stars; Global War on Terrorism Expeditionary and Service Medals; Overseas Service Medal with number three device; Valorous Unit Award, Meritorious Unit Commendation; Army Superior Unit Award; Combat Action Badge; and the Bronze Order of the de Fleury Medal.

A native of Williams, Ariz., Davis and his wife Nancy, currently reside in Walla Walla, and have two sons; Devin and Liam, and a daughter Emma.

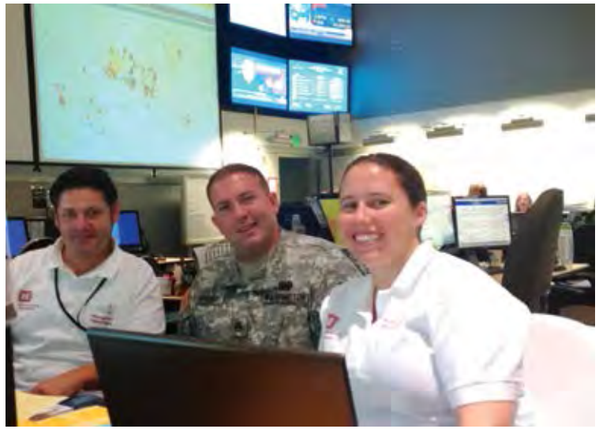
Wild Fires
District members help battle Western blazes

Wild fires flared up in the West in 2015 and the Walla Walla District respsonded by helping establish a fire camp at Mill Creek (right) and by deploying two members.

Jean DesJarlais, Hydropower Business Line manager, and Danielle Fichera, Structural Design Section chief, provided emergency power technical expertise to support requests from the State of Washington. DesJarlais and Fichera have previously served on emergency power-response team deployments at numerous locations across the Nation.

They deployed to Bothell, Washington, in response to the Federal Emergency Management Agency (FEMA) Region 10's request for subject matter experts to support operational planning efforts to provide emergency power to wildfire-impacted areas throughout Washington State, according to Corps emergency management officials.

President Barack Obama signed an emergency declaration that ordered federal aid to supplement state and local response efforts in areas affected by wildfires, beginning on August 13 and continuing, in the counties of Asotin, Chelan, Douglas, Ferry, Klickitat, Okanogan, Pend Oreille, Skamania, Spokane, Stevens, and Yakima and the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, the Spokane Tribe of Indians, and the Confederated Tribes and Bands of the Yakama Nation.



Right: Water from Mill Creek helped extinguish the Blue Creek fire (top). Jean DesJarlais and Danielle Fichera (above) provided emergency power technical expertise to Washington state.

U.S. Army Corps of Engineers photos

DREDGING

Corps completes Snake-Clearwater rivers maintenance

By Bruce Henrickson

Earlier this year the U.S. Army Corps of Engineers completed maintenance dredging of problem areas of the federal navigation channel and two port berthing areas in the Snake and Clearwater rivers where accumulated sediment had interfered with navigation.

Dredging was performed to meet a current immediate need to re-establish the federal navigation channel to its congressionally authorized dimensions of 250 feet wide by 14 feet deep at Minimum Operating Pool (MOP) elevation. Dredging began Jan. 12 and was completed Feb. 26.

Maintenance dredging was completed in accordance with the Corps' comprehensive Programmatic Sediment Management Plan (PSMP) during the annual winter in-water work window, Dec. 15 through Feb. 28, when salmonid fish are less likely to be present in the river. Maintenance dredging last occurred in the lower Snake River navigation channel in the winter of 2005-2006.

"Navigation on the lower Snake River is now safer," said Lt. Col. Timothy Vail, Walla Walla District Commander. "We considered potential alternatives, determined dredging was the only effective short-term tool for addressing problem sediment that had accumulated to the point of interfering with navigation, and successfully completed maintenance dredging during the designated winter work window."

Dredging initially took place at the downstream lock approach of Ice Harbor Dam, then later on the Lower Granite Lock and Dam pool at the confluence of the Snake and Clearwater rivers in the Lewiston-Clarkston area, including Port of Lewiston and Port of Clarkston berthing areas.

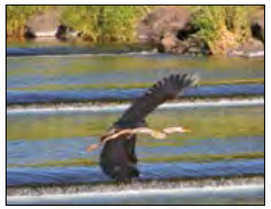
The ports obtained their own dredging permits and paid for dredging of their berthing areas.

Dredged materials were used to construct additional shallow-water fish habitat near Knoxway Canyon (River Mile 116), about 23 miles downstream of Clarkston, Wash.

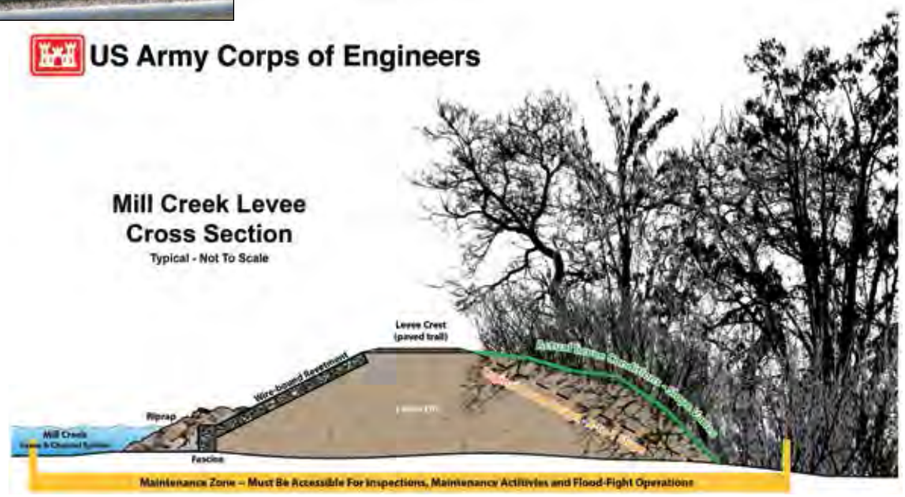
Photos by Elizabeth Lovelady

Dredging the Snake and Clearwater channels helps enable about 9 million tons of cargo worth $3 billion transit the Snake-Columbia River system annually, including about 40 percent of the nation's wheat.

Creates shallow water fish habitat



Mill Creek Levee Maintenance



Photos by Jennifer McFadden Allen

Above middle and right: Interested community members tour the Mill Creek Levee maintenance proposal route following the Sept. 29 public meeting.

By Gina Baltrusch

The Mill Creek Flood Control Project was completed in 1942 and included levees along the improved Mill Creek channel to provide flood protection for the City of Walla Walla. Currently, the Mill Creek Project levees fail to comply with U.S. Army Corps of Engineers vegetation standards used to ensure reliability, resiliency and operability of levee, floodwall, and dam projects nationwide.

Non-compliant vegetation on levees blocks visibility for inspections, restricts access for maintenance, hinders flood fighting, and adds uncertainty to structural performance and reliability, which increases risk. The inability to inspect, maintain or flood fight could contribute to a breach or a delay in emergency response.

Since 1975, the Corps has completed several actions at the project related to reservoir and levee seepage. In the mid-1980s, vegetation was removed from inside the creek channel, but not the landward side of the levees. Wind storms in 2008 and 2012 uprooted trees, causing damage to the levee cross section which required repairs to ensure levee integrity.

The Corps regularly inspects its levees to monitor their overall condition, identify deficiencies, verify that needed maintenance is taking place and provide information about the levees on which the public relies. Inspection information also contributes to risk assessments and supports levee accreditation decisions for the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA).

Corps levee vegetation standards require removal of woody vegetation from the levee crown, and to a distance of 15 feet from the levee toe on both sides of the levee or to the project right-of-way, whichever is closer. Roots growing into the cross section provide a path for water to flow through the levee, increasing the potential for seepage to occur, putting the integrity of the embankment at risk of failure.

"This is about public safety – Life safety is paramount for the Corps' operations," said Frank Wachob, a civil engineer in Walla Walla District's Geotechnical Section. "With the trees on the levee, we wouldn't be able to see if problems were developing during a flood event, much less take swift action to place sandbags or operate heavy equipment to construct reinforcements."

Ensuring these levees meet required safety standards is a multiple-year effort. The following tasks need to occur: the maintenance zone cleared, stumps removed, levee structure repaired and grasses planted.

"We are considering the environment – The Corps has gone to great effort to minimize the amount of woody vegetation that needs to be removed," Wachob explained. "We surveyed the levees and measured the maintenance zone from the base of the original design slope (called the toe) instead of the actual physical slope, which extends far beyond the design toe in many locations."

Work began Oct. 8 – outside bird-nesting season – and a qualified biologist inspected the trees prior to removal.

"The Corps maintains about two-thirds of Mill Creek Project lands for habitat purposes (412 of 612 total acres). We estimate less than 6 acres of woody vegetation will need to be removed from the levee maintenance zone. Once the zone is cleared and levee repairs completed, grasses will be planted to improve the aesthetics and benefit insects. Vegetation outside the zone will be allowed to develop naturally," Wachob added.

Photos by Jeremy Nguyen

S.T.E.M.

Science, Technology, Engineering & Math

Supporting women in science at Walla Walla High School

Above, left: Civil Engineer Yvonne Gibbons, (above) Project Manager Margie McGill, and Ruthann Haider, chief of Contracting encourage young women to consider pursuing science and technology fields at Walla Walla High School.

Photos by Joe Saxon

Veterans Job Fair

Lori Penebaker, chief, Civilian Personnel Advisory Center, briefs a veteran on employment opportunities during the Walla Walla Community College's Veterans Job Fair.

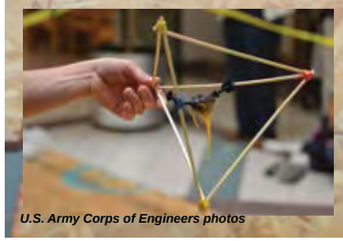
District staff participated in more than a dozen job fairs and college recruiting events in 2015.

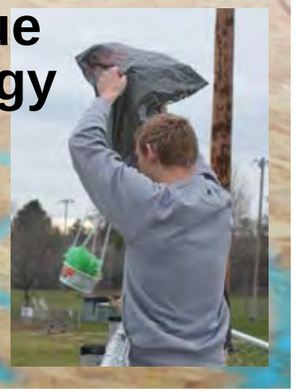
Eggs Away!

Jeff Lyons, an electrical engineer prepares the landing zone for students at DeSales School to drop their eggs. The goal was to see which projects could withstand a drop from about one story high without breaking the egg.

Engineering Week

Encouraging young minds to pursue their dreams in science & technology





U.S. Army Corps of Engineers photos

Walla Walla Industry Day
October 23, 2015

TIME: 9:00 AM to 4:30 PM

The Walla Walla District hosted more than 100 business owners here for the Corps' "Industry Day" on Oct. 23, 2015.

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.

"Our business is to give business to small business" explained Ruthann Haider, the District Chief of Contracting, as she emphasized the importance of small business to the Corps.

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 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"

The Walla Walla District awards contracts for construction projects, Architect-Engineering studies, and supplies and services needed to operate their facilities.

These contracting opportunities total $90 to $110 million annually.

The Walla Walla District has hosted numerous Industry events in both Walla Walla and in Boise, Idaho.

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

Walla Walla District Contracting Actions in FY2015
1,149 Actions
Worth $94,526,930.00

HTTP://WALLA-WALLA-INDUSTRY-DAY-OCTOBER-23.EVENTBRITE.COM

Photo by Jennifer McFadden Allen

Veterans Day Parade

Photos by Joe Saxon

Corps friends and family members on parade. The Walla Walla community saluted its veterans for their service and many sacrifices during the traditional Veterans Day Parade through downtown Walla Walla, Wash.

Diving into Dam Maintenance

Story and Photos by Rick Benoit
District Dive Safety Officer

By the numbers, nine projects visited, 19 dives executed, 10 missions completed, 10 days worked, 1,000 miles traveled. These highlight November's first-ever mobilization by the USACE Forward Response/Technical Dive/ remotely operated vehicle (ROV) Team to Walla Walla District.

In total, the USACE team; comprised of members Thom Stan of Walla Walla, Todd Manny, Terry Vance and Rick Benoit of Portland, Steve England of Philadelphia and Eric Lockington St. Paul Districts, safely completed eight jobs diving, one task utilizing a ROV and another where a diver did not need to get wet.

"This was an exceptional opportunity for our group to demonstrate our comprehensive toolbox of capabilities," said Benoit, the team's Dive Safety Officer and Program Manager. "This mission was extremely diverse and challenging as we needed to perform a complex ROV / SONAR operation, a challenging mechanical repair and a series of intricate inspections by boat and by land."

During the two week mobilization, the team executed a two-day ROV / SONAR inspection of the Removal Spillway Weir at Lower Granite; a National Highway Administration (NWHA) certified inspection at the Lower Granite Construction Bridge and the Chief Timothy Park Access Bridge in Clarkston. Additionally the team replaced a dysfunctional irrigation intake at Swallows Park in Clarkston as well as performed irrigation intake pipe inspections at Skookum, 55-Mile, Lost Island and Big Flat Habitat Maintenance Units (HMU's) along the Snake River.

Diver tender Todd Manny performs an equipment check on diver Marty Crosson prior to beginning the flowering ruch mitigation dive mission at McNary Beach, Aug. 15, 2015.

"Inspecting the RSW with SONAR and a ROV is a great opportunity to accomplish quality work underwater without needing to use divers or to put divers at risk," explained Manny, NWP's Program Manager for ROV operations. "Because of the complexities of diving this large structure and the risk of entanglement to divers, this was a perfect situation to use our ROV."

The team used its ROV / SONAR equipment, which according to Manny cost about $200,000, to evaluate the 10-year old RSW's structural integrity and survey for debris such as logs and trash which interfere with the unit's function of assisting fish pass thru the dam spillway.

"Our Swallows Park job to me was by far was our most challenging and rewarding mission," said Benoit who serves as the Walla Walla and Portland District's Dive Coordinator. "There's nothing like rooting thru 10 feet of silt and working in pitch black water to fix a problem using only your instincts and sense of touch."

Unable to use lights due to black-water conditions, divers were required to locate a pipe connection burred in 10 feet of mud, cut thru the 12-inch wide, half inch thick pipe using a hand-saw, dig a 30 foot trench with an air hose and reconnect new pipe and fittings during the team's two days at Swallows Park.

"One of the most memorable parts of our mission was the look of relief on Rick's face when we finished the Swallows Park job," said team Professional Engineer (PE) Steve England, a civil engineer from Philadelphia District.

Clarkston Natural Resource Management Office Operations Project Manager Jamie Howard called the Swallows Park mission efficient, professional and safe, as well as it illustrated "Great team work from across USACE Districts and Divisions, a dedication to work until the mission was accomplished."

Highlighting this mission's inter-District and Division collaboration were its underwater bridge inspections which required execution in accordance with the USACE Bridge Safety Program and its Engineering Regulation (ER) 1110-2-11. To comply with Federal Highway Administration (FHWA), Army Corps regulations and National Bridge Inspection Standards (NBIS), the team comprised of certified underwater bridge inspectors from USACE Districts in the Northwest and Northeast; Portland and Philadelphia.

Accordingly, all underwater structural surveys will be conducted while directly supervised by a qualified bridge inspection team leader and performed by certified underwater bridge inspection divers every 60 to 72 months or as required by the structure's condition.

"Bridges must be surveyed according to National Bridge Inspection Standards (NBIS) and USACE has a limited roster of qualified divers to accomplish this mandatory task," said England who served as the bridge inspection's certified FHWA Team Lead. "These bridge inspections are a great example of how we can reach across Districts and Divisions to get the job done appropriately according to regulation."

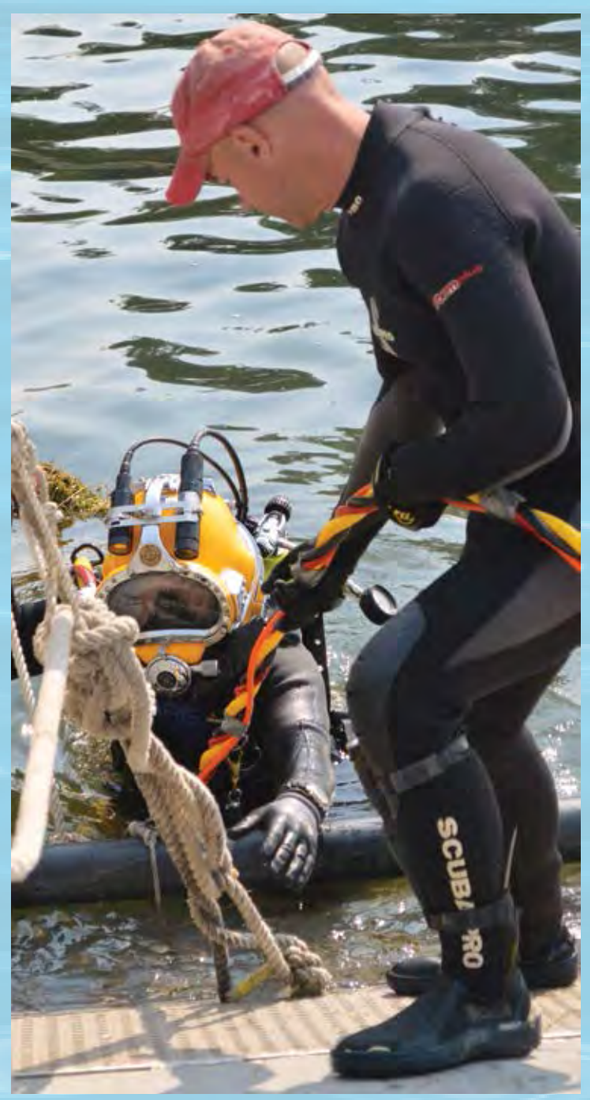
Benoit and NWP Deputy Dive Coordinator and ROV Program Manager Todd Manny rounded out the team of certified and qualified divers who performed underwater and above-water inspections on the Construction Road Bridge at Lower Granite Dam and the Chief Timothy Park Access Bridge in Clarkston, Wash.

"With limited recreation budgets, using the in house dive team was cost effective for these shallow dives that don't require a (recompression) chamber or a need for contracted commercial divers," said Marty Mendiola, who as the Lower Granite Operations Project Manager oversees Swallows Park, as well as the two bridges which span the Snake River. "In addition, these maintenance activities generally run into unexpected conditions. Modifications are much easier with an in house crew (assuming the change is within capabilities of the crew) versus a contract modification that would take more time and money."

Initially, weather greatly assisted the Bridge and Swallows Park missions with unseasonably mild temperatures in the 50's, calm winds and smooth water. However, week two was not so kind when the team performed its underwater irrigation intake pipe inspections on the Snake River between Ice Harbor and Little Goose dams as temperatures plunged to below freezing with wind chills near zero.

In all, five inspections were performed at four HMU's managed by Ice Harbor Dam's Natural Resource Office; three of the Snake River dive sites needed to be accessed from land due to poor weather. One site, 55-Mile HMU, was accessed by boat.

"This was by far the most interesting albeit coldest part of our mission," said dive tender Terry Vance. "Interesting because we were traveling to and diving in water surrounded by some of the most rugged but beautiful scenery the Snake River offers. Unfortunately, the area's beauty did not make up for how cold it was."



After five dives and 156 minutes underwater, USACE Forward Response Technical Dive Team member Todd Manny (from the Portland District) is assisted back on board the day's work vessel by his teammate, Buffalo District's Marty Crosson.

Managing Avian Predation

Above: Biologist David Trachtenbarg observes islands being enhanced in San Francisco Bay. **Above, right:** Caspian terns at seasonal nesting sites on Goose Island in Potholes Reservoir in Grant County, Washington, and Crescent Island in McNary Reservoir on the Columbia River in Walla Walla County, Wash., are major contributors to avian predation on Endangered Species Act (ESA) Columbia and Snake River salmon and steelhead during the spring juvenile outmigration through the mid-Columbia River.

Corps also improves alternative Caspian tern nesting habitat

By David Trachtenbarg

Birds consume more than 20 million migrating juvenile salmon each year from the Columbia and Snake rivers.

In 2008, the National Marine Fisheries Service issued a Biological Opinion (BiOp) to the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation (Reclamation), and Bonneville Power Administration (BPA)—collectively referred to as the federal "Action Agencies"—for operation of the Federal Columbia River Power System (FCRPS) through 2018.

As part of a broad suite of actions identified in the BiOp, the Action Agencies were advised to further evaluate the impacts of piscivorous or "fish-eating" birds on outmigrating juvenile salmon and steelhead through the mid-Columbia River, develop a management plan to decrease predation rates, and implement the plan if warranted.

As a result, the Corps and Reclamation developed an Inland Avian Predation Management Plan (or IAPMP) to address the effects Caspian terns nesting at these sites have on Endangered Species Act (ESA) listed salmon and steelhead.

The Plan, developed using the National Environmental Policy Act (NEPA) process, aims to redistribute Caspian terns from Goose and Crescent Island nesting colonies to other nesting sites in the western U.S. to reduce impacts on Columbia and Snake River ESA-listed salmon and steelhead.

Implementation of the Plan began in 2014 at Goose Island, and resulted in reduced predation on ESA-listed salmon and steelhead during the first year.

The Plan includes attraction measures at alternative nesting habitat and dissuasion of Caspian terns from Goose and Crescent islands. Long-term dissuasion of Caspian terns from these two sites will be implemented through passive measures including installation of rope and flagging, plus planting of native vegetation. Additional active dissuasion measures including bird hazing efforts are anticipated to occur each nesting season through 2018.

As part of the Plan, the Corps and Reclamation, in collaboration with the U.S. Fish and Wildlife Service, created alternative Caspian tern nesting habitat at Don Edwards National Wildlife Refuge (NWR) in San Francisco Bay in California prior to the spring 2015 Caspian tern nesting season.

Creation of this alternative nesting habitat is intended to attract Caspian terns outside of the Columbia River basin to a location where predation on ESA-listed species is known to be lower.

Left: *Tern habitart construction in San Francisco Bay, Calif. This habitat at Don Edwards National Wildlife Refuge is now available along with other alternative Caspian tern nesting habitat throughout the western U.S. range of Caspian terns.*

U.S. Army Corps of Engineers photos

Top: Crescent Island. Two Caspian tern colonies in the Columbia River plateau region are major contributors to predation related losses of Endangered Species Act (ESA) salmonids migrating through the mid-Columbia River. These two colonies, at Goose Island, (Potholes Reservoir, Grant County, WA) bottom left, and Crescent Island (McNary Reservoir, Walla Walla County, WA), are the largest tern colonies within the mid-Columbia River.

The Corps and Bureau of Reclamation developed the Inland Avian Predation Management Plan (IAPMP) to decrease predation on ESA-listed salmonids by terns at these two locations and throughout the mid-Columbia River as necessary.

Implementation of the IAPMP began at Goose Island in 2014 and at Crescent Island in 2015 through use of passive and active tern dissuasion efforts including limited tern egg take under permit.

To help further reduce predation on ESA-listed fish by terns, alternative nesting habitat for terns was constructed in southern San Francisco Bay where predation rates on ESA-listed species by terns is known to be lower.

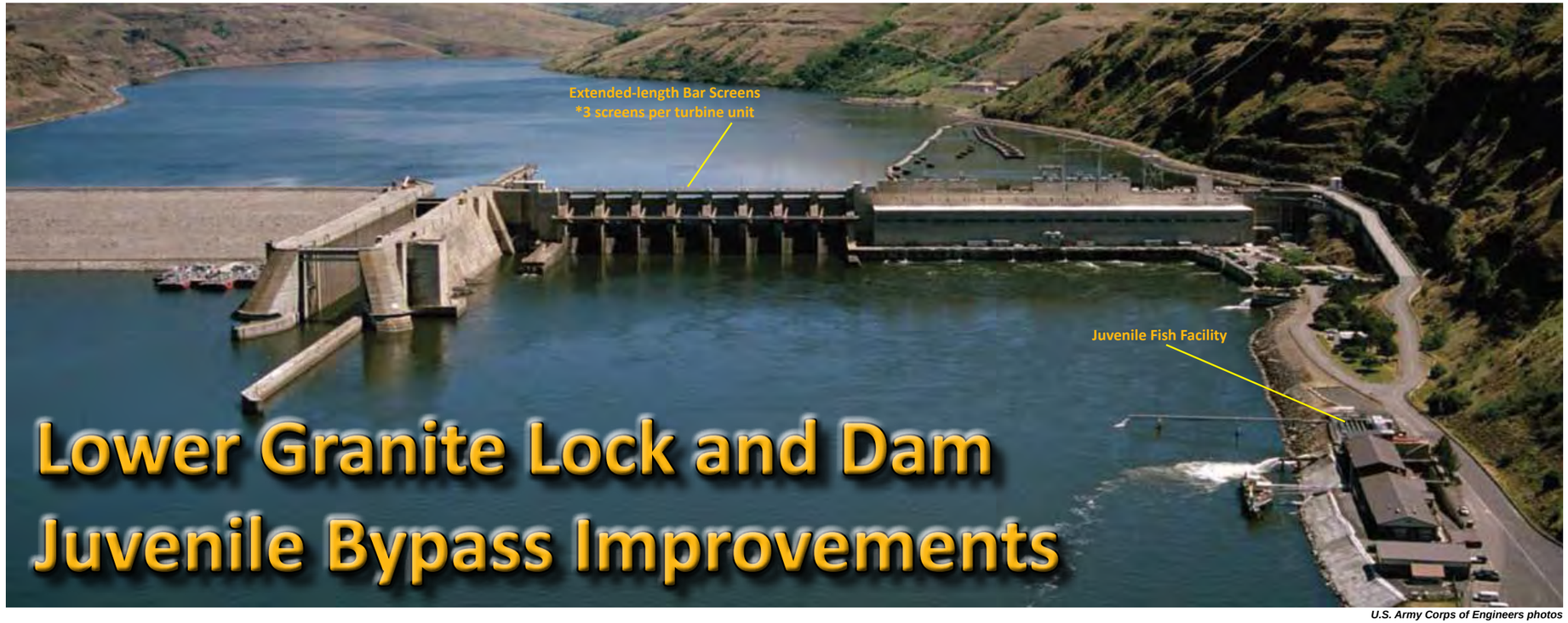
Additional tern nesting habitat is available throughout the western flyway including at other Corps constructed sites, completed as part of a Caspian tern management plan for the Columbia River estuary.

Above: *A Caspian Tern returns to its nest with a juvenile fish (smolt) in tow.*

By Stan Heller

Lower Granite Lock and Dam Juvenile Bypass Improvements

The U.S. Army Corps of Engineers Walla Walla District is upgrading the Lower Granite Lock and Dam Juvenile Fish Facility as part of the Corps' environmental Mission to help recover salmon and endangered or threatened Species.



U.S. Army Corps of Engineers photos

The overall upgrade includes:

- "Daylighting" below-ground juvenile fish transportation piping from the dam to the juvenile fish facility to an above-ground flume.
- Enlarging selected openings and reconfiguring the transportation channel so it will move to an exterior elevated concrete channel.
- Diverting excess water to new piping and valves for adult fish ladder attraction, emergency facility water supply and fish trap water supply.

Millions of juvenile fish pass over, around or through Lower Granite Lock and Dam each year, with an average juvenile survival rate of about 95 to 96 percent. Additional improvements are significant considering how many fish pass through the dam.

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. When upgrades are complete, long-term operations and maintenance costs should also be reduced. Construction of Lower Granite JFF upgrades is divided across two phases, termed "Phase 1a" and "Phase 1b."

Phase 1a Construction

The overall construction effort is significant. Phase 1a construction started in January 2015 and will be complete by February 2017.

The Lower Granite Lock and Dam Juvenile Fish Facility.

Phase 1a construction includes daylighting the juvenile fish transportation piping from the dam to the JFF by replacing underground pressure pipe and replacing it with an above-ground screen-covered channel about 2,700 feet long, or more than half a mile. This above-ground flume is longer than the current 1,800-foot underground pipe to minimize slope for the fish. Parts of this channel will be 25 to 30 feet above ground, or several stories tall.

Debris from dam concrete mining to enlarge the fish transportation channel will be about 1,400 cubic yards, or 265 dump truck loads. The primary dewatering unit is 20-25 feet above ground and is made of about 1,700 cubic yards of concrete, or more than 200 concrete truckloads. There will be more than 65 concrete columns drilled into the ground to support the flume and dewatering unit structure.

The Phase 1a contract for $48.3 million was awarded to Garco Construction, Inc., of Spokane, Washington, in September 2014. Including options awarded in November 2014, the total contract cost is now about $50 million.

Phase 1b Construction

Phase 1b will begin in fiscal year 2016 and be completed in February 2017. Pending completion of project plans and specifications, construction will include fish outfall relocation for primary system bypass and juvenile fish facility release. It also includes a new elevated 36-inch corrugated metal flume and walkway and a bird-deterrent water cannon.

Project Funding

The Corps of Engineers provides hydropower to the Bonneville Power Administration (BPA), which is the lead federal agency for the federal power grid in the Pacific Northwest. BPA subsequently provides funding directly for, or through reimbursement to the Treasury, for various Corps projects and initiatives, including fish recovery implementation. The Lower Granite Juvenile Fish Facility upgrade is one of those efforts. This JFF upgrade project's funding comes from the Columbia River Fish Mitigation (CRFM) program, which is intended to address the Endangered Species Act Biological Opinion.

View of planned above-ground flume for the Lower Granite Lock and Dam Juvenile Fish Facility.

JFF Upgrades include

- Changing the below-ground juvenile fish transportation piping from the dam to the juvenile fish facility to an above-ground flume.
- Enlarging selected openings and reconfiguring the transportation channel so it will move to an exterior elevated concrete channel.
- Diverting excess water to new piping and valves for adult fish ladder attraction, emergency facility water supply, and fish trap water supply.

Photo by Jennifer McFadden Allen

Ken McIntyre, part of NOAA Fisheries' staff at Lower Granite Dam, displays a wild steelhead at the Lower Granite Fish Trap.

Snake River Dams

Ice Harbor, Little Goose, Lower Monumental, Lower Granite

Photos by David G. Rigg

U.S. Army Corps of Engineers photo

Photo by David H. Lewis

providing outstanding

Value to the Nation

By Joe Saxon

The U.S. Army Corps of Engineers operates the four lower Snake River dams, and the best available science and economic analyses clearly show the Snake River dams provide outstanding value to the Nation. Snake River dams deliver clean, renewable hydropower, an efficient marine transportation corridor, and valuable recreation opportunities. They provide these benefits at a very reasonable cost while successfully coexisting with fish and wildlife.

These projects generate about $200 million annually in electricity, and help move 3.5 million tons of cargo, worth $1.5 billion, to regional markets. In 2012, nearly 10 percent of the nation's wheat exports moved through this system. These dams also provide 2.8 million visitors a year with recreation opportunities.

They benefit the environment by avoiding carbon dioxide pollution that coal-fired power plants would emit to generate the same amount of power.

Snake River dams are able to meet peak power loads using turbines that can be adjusted in seconds. The flexibility of hydropower dams makes it possible to integrate highly-variable wind energy into the power grid. When the wind speed changes, some power source has to be immediately ready to add or reduce power to keep the grid stable; hydropower provides that capability. Coal and nuclear power plants require hours for their power output to be adjusted. The energy produced by the lower Snake River Dams is also relatively inexpensive.

The region experienced record fish returns during the past decade including in 2014 when Chinook, sockeye and coho salmon had record fish returns past Bonneville Dam. Since 2009 there have been record returns for steelhead, sockeye and coho past Lower Granite Dam.

Some blame the decline of fish in the NW on the Snake River Dams, but fish runs were decimated in the Northwest starting in the 1800s due to pollution and silting from mining operations; habitat destruction from logging; and overfishing when Columbia River cannery operations grew from one cannery in 1866 to more than 50 by 1900. Also, numerous private and public dams cut off access to traditional fish spawning grounds because those dams don't have fish ladders, unlike the lower Snake River dams.

Corps scientists, biologists and engineers reduced the effects of dam building and operations by researching, designing, building and equipping the lower Snake River dams with the world's most advanced fish passage systems. Spillway weirs, which have a fish survival rate of 95-100 percent, help juvenile fish get downstream to the ocean. After spending two to five years in the ocean, adult fish return to their spawning grounds using fish ladders to swim through the lower Snake River dams. Adult fish survival through the Snake River dams' fish ladders exceeds 99 percent.

Corps scientists, biologists and engineers team with many partners to prove dams and fish can coexist and this science-based approach is working. The Walla Walla District is on track to meet performance standards of 96 percent survival for spring migrating juvenile fish and 93 percent for summer migrants through each lower Snake River dam.

The next generation power turbines are coming to Ice Harbor Dam starting this spring (below), while District staff upgrade the Lower Granite Dam's Juvenile Fish Facility (page 18).

The lower Snake River dams provide outstanding value to the Nation, and the Corps of Engineers is committed to ensuring these important national resources are well maintained to serve future generations in an environmentally responsible manner.

Next Generation Turbines

Photo by Voith Construction

New turbines like the one pictured above, will come online at Ice Harbor Lock and Dam's powerhouse starting this spring. The new turbines ***are more efficient and are safer for fish.***

Top left: Ice Harbor Lock and Dam. Left: about 3.5 million tons of goods worth $1.5 billion transit Snake River Dam locks annually. Middle: Lyons Ferry. The Corps' recreational sites along the Snake River host about 2.8 million yearly visits. Right: These dams generate about $200 million in power each year.

Spillway Weirs

Celebrating 10 years of service to the Nation

Photo by David G. Rigg

Above: Terry Flores, Northwest River Partners, addresses the audience. Right to left: Lt. Col. Timothy Vail, Commander, Walla Walla District; Elliot Mainzer, Bonneville Power Administration; Lesa Stark, United States Bureau of Reclamation; Rob Lothrop, Columbia River Inter-Tribal Fish Commission; and Rob Rich, Columbia River Towboat Association.

A revolution in fish passage

The U.S. Army Corps of Engineers, Walla Walla District, marked a decade of safe fish passage over Ice Harbor's spillway during a commemorative event on July 15 that celebrated the 10th anniversary of the installation of a spillway weir at the dam.

In 2005, the first full production spillway weir was installed at Ice Harbor Dam. The era of surface passage began, revolutionizing fish passage and providing one more tool to improve juvenile fish survival at the dams. Testing at Ice Harbor noted about 98 percent survival for fish passing the dams via the spillway weir.

By 2010, all eight Corps dams on the lower Columbia and lower Snake rivers put surface passage modifications in place for out-migrating juvenile fish, providing an effective route past the dams on their way to the Pacific Ocean. Spillway weirs and smart spill operations benefit juvenile salmon and steelhead by providing safer passage, faster migration, higher in-river survival rates and better water quality.

As the largest fish-conservation initiative in the Nation, results are evident by improved fish survival and productivity.

Each of the Snake River stocks have shown marked improvements since aggressive efforts to overhaul the Federal Columbia River Power System began in the mid 1990s. Fish runs in the Columbia Basin, including on the Snake River, have seen record returns in recent years.

Federal, community and industry officials representing fish-management, hydro-power and navigation in the Pacific Northwest joined Corps leaders, including the Corps' Deputy Commanding General Maj. Gen. Richard L. Stevens, to observe the spillway weir in operation and get the latest facts about the Federal Action Agencies' efforts to improve ESA-listed fish survival.

What is a Spillway Weir?

Spillway weirs are huge structures that help fish pass through dams more safely and efficiently.

They can measure upwards of 84 feet wide, 88 feet long and weigh up to 2 million pounds.

They are manufactured in a factory, shipped on a barge and are attached to a dam's spillway where they act as giant fish slides.

Tests where spillway weirs have been installed indicate survival through these structures ranges from approximately 95-100 percent.

How do Spillway Weirs work?

Spillway weirs, or fish slides, allow juvenile salmon and steelhead to pass the dam near the water surface under lower accelerations and lower pressures, providing a more efficient and less stressful dam passage route.

Most Columbia River Basin juvenile salmon and steelhead tend to stay in the upper 10 to 20 feet of the water column as they migrate downstream to the ocean.

The configuration of juvenile fish passage routes at the Corps' lower Columbia and Snake river dams causes juvenile fish to dive to depths of 50 to 60 feet to find passage routes.

Spillway weirs are mounted onto a dam's forebay where they draw fish toward their smoother water flow over the spillway.

Spillway weirs at Ice Harbor, Lower Granite and Lower Monumetal Dams are designed to be 'removable,' by controlled descent to the bottom of the dam forebay. This capability permits the spillway to perform to its original flow capacity during major flood events.

What are the types of Spillway Weirs?

The Corps began the spillway weir program in 2001 to improve juvenile fish passage over spillways and reduce the number of juveniles entering the powerhouse. 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.

Removeable

A prototype Removeable Spillway Weir was installed at Lower Granite Dam on the lower Snake River in 2001, followed by the Ice Harbor Spillway Weir in 2005 and the Lower Monumental Dam Spillway Weir in 2007.

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.

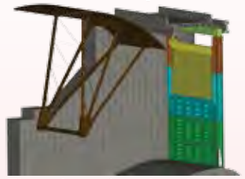
2nd Generation

In 2007, the Corps developed the 2nd Generation Spillway Weir. It is lighter, more portable than an RSW, can easily be shipped in sections, and is easier to maintain.

2nd Generation Spillway Weirs were installed at Little Goose and McNary Dams. They use a gantry crane to change weir segments to adjust the weir's height to change the amount of water flowing over it.

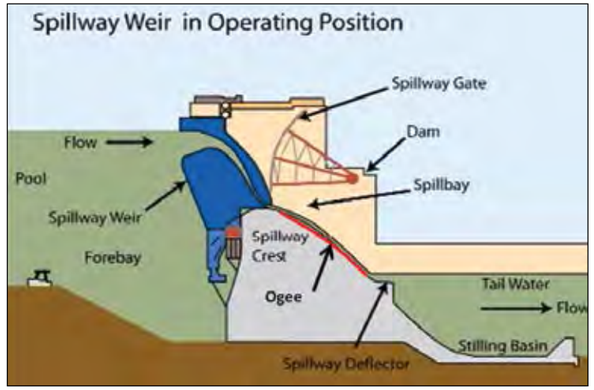
Adjustable

The next generation of weirs is the Adjustable Spillway Weir (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.



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. Surface passage structures are now in place at all the Corps' Columbia and Snake River dams.

U.S. Army Corps of Engineers Photos



Spillway Weirs help increase fish survival

By Brad Trumbo

To improve the effectiveness of spillway operations for fish passage, Walla Walla District biologists and engineers came together to design and install spillway weirs at the District's lower Snake River and McNary dams. The District's first permanent spillway weir was installed at Lower Granite in 2001.

Juvenile anadromous salmonids (i.e. salmon and steelhead [smolts]), in the Columbia River Basin generally migrate in the upper 10 to 20 feet of the water column.

However, passage routes at dams on the lower Columbia and Snake Rivers require smolts to dive to depths of 45 to 60 feet to enter a passage route, such as a powerhouse intake.

Differences between the depth of migrating smolts and the depth of traditional dam passage routes can result in delays in migration and increased exposure to predators as smolts search for a passage route.

Generally, spillway weirs draw spill from the top 10 to 15 feet of the water column providing a constant velocity draw with a hydraulic signature extending upstream to 400 feet into the forebay encompassing the depth of out-migrating smolts.

The hydraulic influence of a spillway weir provides significant attraction flow for smolts, thus increasing the proportion of smolts passing a dam via spillway compared to powerhouse and generally decreasing passage and migration delays.

A removable spillway weir (RSW) was installed in spillbay 2 at Ice Harbor Dam in 2005. As with all new construction and configuration changes for fish passage, District biologists evaluated injury and survival of smolts passing the new RSW.

Study results estimated smolt injury rates at two percent for fish released at mid-depth and nearly 16 percent for fish released near the RSW crest. The injury rates for fish at the mid depth were similar to post construction evaluation results for other spillway weirs; however, the injury rates for smolts passing close to the crest were much higher than expected relative to spillway weirs at other Projects.

Forty eight hour survival was estimated at approximately 96 percent and the high injury rate for smolts passing close to the crest may translate to delayed mortality and increased predation in the tailrace.

Approximately 25 percent to 75 percent of out-migrating smolts pass Ice Harbor Dam via the RSW, thus identifying the cause of and addressing the high injury rates for smolts passing near the RSW crest is important to improving survival for Snake River fish.

District hydraulic engineers compared Ice Harbor Dam RSW passage data from sensors and hydraulic modeling to spillway weir conditions at other projects. These comparisons indicated that the RSW flow was separating from the ogee above the deflector due to the steep slope of the Ice Harbor Dam spillway chute resulting in an increased injury rate for fish passing close to the RSW crest.

To address the high injury result from the 2005 study, District engineers designed a new ogee and deflector shape for Ice Harbor's spillbay 2 in 2014.

The new shape included decreasing the slope of the ogee and providing a gentler transition into the deflector and tailrace. Spillbay 2 construction was complete in March, 2015 and biological testing occurred in April.

Yearling Chinook salmon supplied by Dworshak National Fish Hatchery were balloon and radio tagged and directly released into spillbay 2 to pass the RSW at one and a half feet above the crest, identical to the 2005 study.

Researchers recaptured 335 fish resulting in estimated 48 hour survival of approximately 98 percent and only one and a half percent injury. Relative to the 2005 study results, it is clear that the redesign and reshaping of spillbay 2 was a tremendous success and will provide a substantial fish passage benefit for out-migrating smolts passing Ice Harbor's most effective fish passage route.

Juvenile fish (smolts) were balloon and radio tagged to validate survival and assist in redesigning and reshaping Ice Harbor Lock and Dam's spillbay #2.

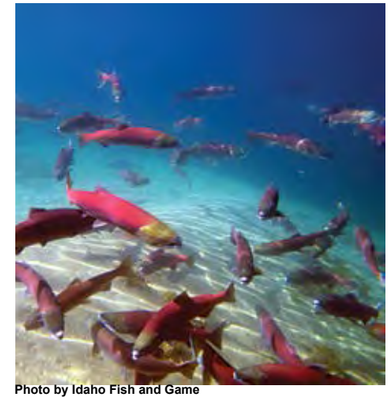
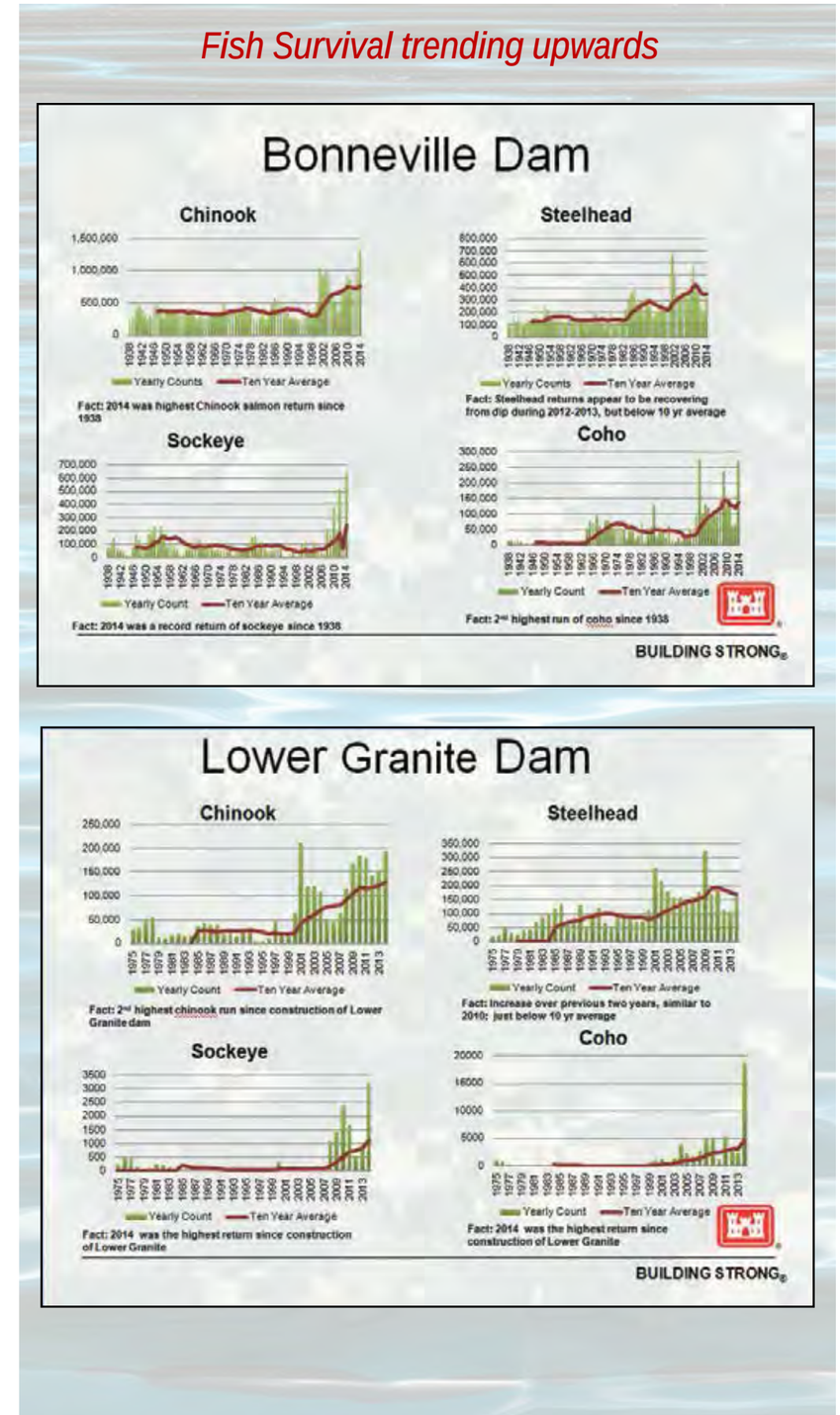
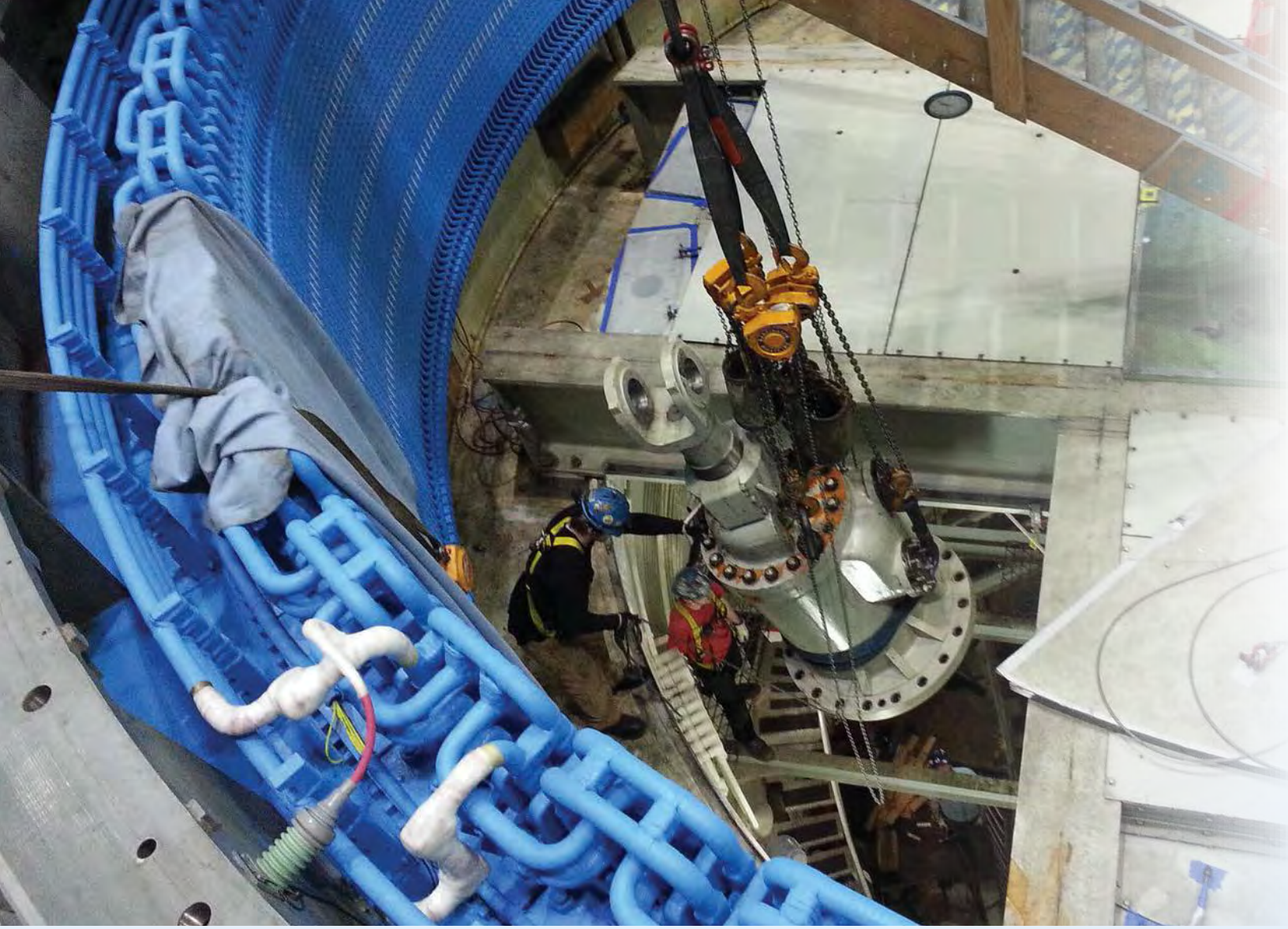


Photo by Idaho Fish and Game

Fish survival through each spillway weir at Corps Snake River Dams is 95-100%





U.S. Army Corps of Engineers Photos

McNary Dam Hits the Rewind

To the untrained eye, it's a box of copper planks.

But these wands, called stator bars, are where the magic happens in hydroelectric generation.

Kathy Spillane says stators are the hidden key to transforming the muscle of the Columbia River into the low-cost, carbon-free electricity used across the Pacific Northwest. And Spillane – who has successfully led an $86 million federal project to replace 1,044 of them at McNary Dam – would certainly know.

"The stator windings are the invisible piece of the hydro plant, part of the mystery people don't understand," says Spillane, a project manager with the U.S. Army Corps of Engineers. "But they're really the heart of the generator."

Tim Roberts, the dam's chief of maintenance, agrees: "It is like magic. It's magnetic theory – you can't see it; you just have to believe it. And that's where it happens."

McNary's original stator windings had been producing electricity virtually 24/7 since the dam went into full service in 1957 near Umatilla, Ore. Its powerhouse, at mile 292 from the mouth of the Columbia River, produces 980 megawatts at full capacity – enough to support about 686,000 homes. That's more than the households in the cities of Seattle and Portland combined.

After half a century of service, the trusty magic of McNary's stators began to fade in the early 2000s. The old insulation wrapping the metal bars had deteriorated, raising the risk of high-voltage faults (electrical shorts) that jeopardized safe and reliable operations. Several of the generating units had to be indefinitely de-rated. That means they could only be safely operated at partial capacity, something akin to always having to drive 20 mph below the speed limit.

That's why the ratepayers of the Bonneville Power Administration are investing $86 million at McNary Dam to install new stator windings on 10 generators, helping secure its dependable value for the next half century. A nonprofit federal agency, BPA markets wholesale electricity from the region's 31 federal dams, and in return funds the operations, maintenance and capital improvements at the hydropower plants.

Above: Workers apply electrical insulation to the stator bar jumper.

The Corps of Engineers, McNary Dam's owner, and its partners are now in the home stretch of the project to replace the original Eisenhower-era windings with state-of-the-art components. Besides BPA, the project partners are contractor Andritz Hydro and the Corps' own Hydroelectric Design Center in Portland, Ore.

The labor-intensive project is expected to wrap up this fall. During the painstaking installation process, the 1,044 bars must be bonded by hand in a high-temperature process called brazing, using a torch at more than 1,000 degrees.

"We had a steep learning curve on the project, but we improved every year," Spillane said. "We've had some really great teamwork with BPA and HDC (the hydro design center). When we've hit challenges, we've done a lot of effective problem-solving. We've been tested over and over, and our team unity is very strong."

To have a revolving roster of two generators disassembled and out of service over the course of five years makes it more challenging to meet an array of vital and often competing objectives. Beyond producing a certain amount of electricity to serve the Northwest's demand hour to hour, McNary Dam also provides the voltage support that keeps the regional transmission grid stable in the era of variable wind power, as well as the calibrated water flows to support endangered fish. At times of peak demand, when every available generator is needed for operational flexibility, subtracting units can compound an already difficult juggling act.

"When I saw the original schedule for the stator replacements, I said, '10 units in five years? Wow, that's an aggressive schedule,'" Roberts said. "To get this done even close to five years is pretty impressive."

The project is part of a sequence of capital investments in the 31 dams of the Federal Columbia River Power System, which provide nearly a third of the electricity consumed in the Pacific Northwest. As part of their broader asset strategy, BPA and the Corps decided it would be cost-effective to invest in better stators, with the capacity to produce 18 percent more power from the same amount of water. The insulation material is also next generation, with more protection in a thinner epoxy material. Streamlined insulation makes more room for larger, more powerful copper stator bars nested in the same space.

Each piece of copper contains the potential to generate a particular amount of electricity, BPA electrical engineer Jack Kolze explained: "The plant at McNary has 1,044 bars of copper. Each one produces about 67 kilowatts – enough power to run 45 hair dryers. Put all of them together and you would be able to operate 46,980 hair dryers at high heat at the same time."

The next-generation stators are sized to accommodate the likely replacement of McNary's 14 aging hydroelectric turbines with more efficient models in the coming decade.

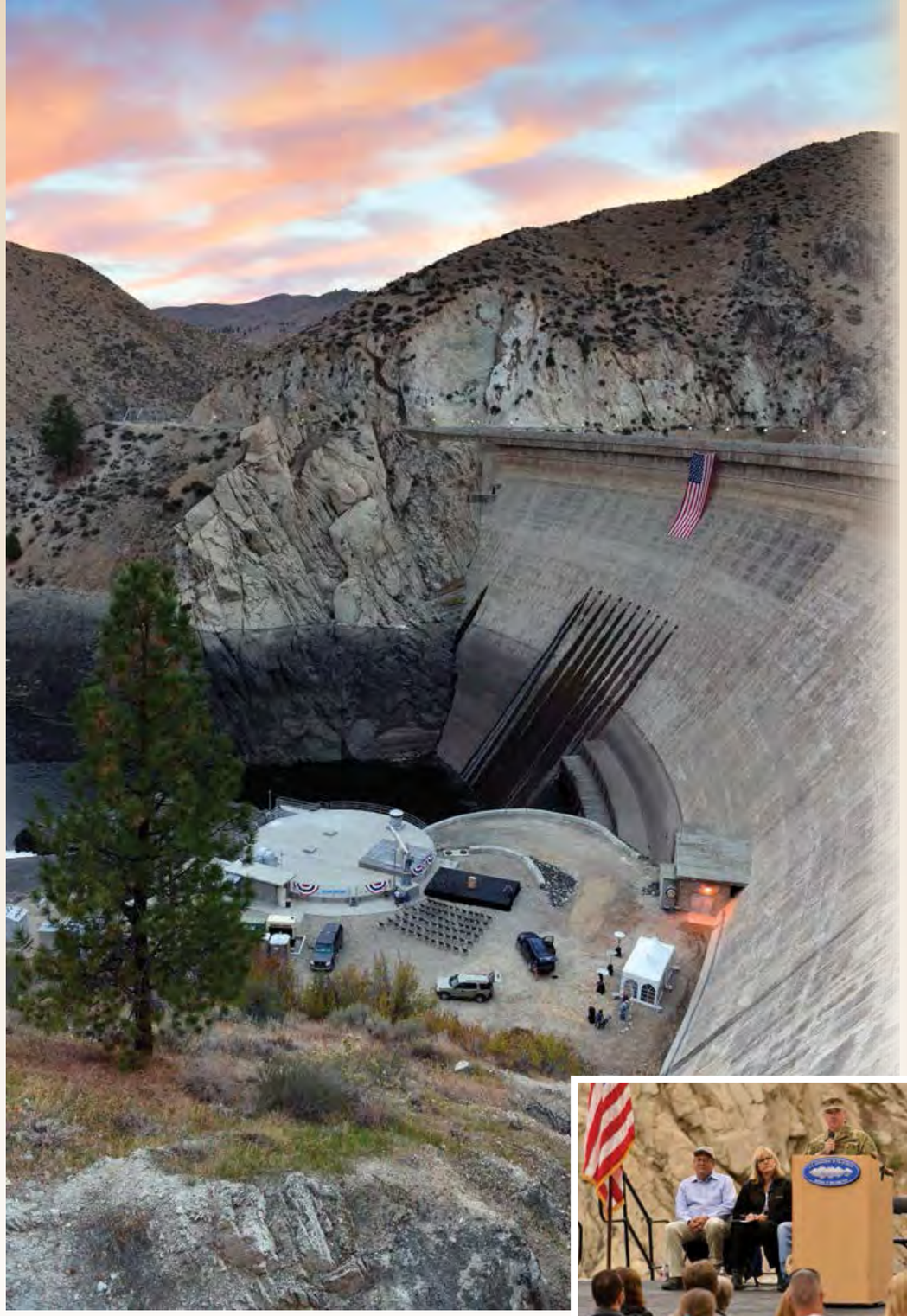
"This shows foresight for the future," Roberts says. "McNary is a really robust plant. They built it to last. With this project, you've reset the asset, as far as windings, for another 50 years and you've also provided the potential for increased capacity. That's a win-win."

Left: McNary Dam powerhouse team preps for the replacement project. Above: McNary Lock and Dam 10 unit Stator Winding Replacement.

Supporting partners and stakeholders

Photos by Dean Holecek

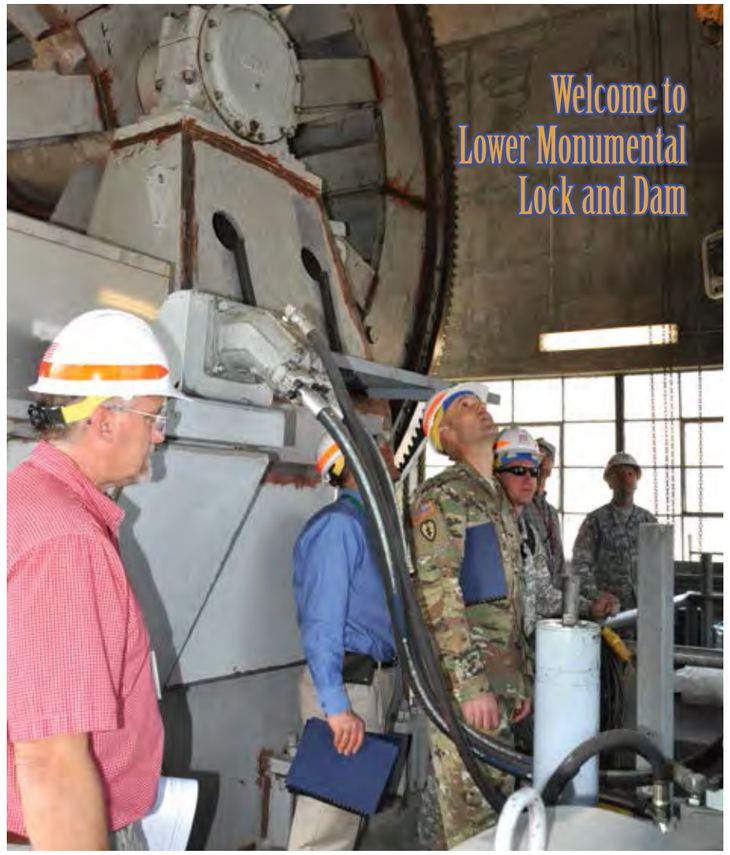
Top left: Meeting with City of Pocatello Mayor and staff to discuss Portneuf River visioning PAS study. USACE and City of Pocatello recently signed an agreement to develop an environmental improvement vision plan for the Portneuf River which includes a USACE Flood Control project constructed in the 1960s. **Top Right:** Lt. Col. Vail and Shoshone Bannock Tribe Chairman Nathan Small signing a Section 595 rural infrastructure partnership agreement to support construction of improvements to Fort Hall reservation water systems. **Above:** Corps staff meet with Heise-Roberts Levee System sponsor, Flood Control District #1, on the Snake River to discuss levee operation and maintenance challenges.



Photos by David Walsh, Bureau of Reclamation

Right: Lt. Col. Vail addressed a crowd of Reclamation employees, Arrowrock Dam water users and invited guests to mark the 100 year birthday of the dam. Seated behind him (left to right) are Bureau of Reclamation Snake River Area Manager Jerry Gregg, Regional Director Lorri Lee, and Brad Little Idaho Lieutenant Governor.

Brig. Gen. Spellmon visits the Walla Walla District



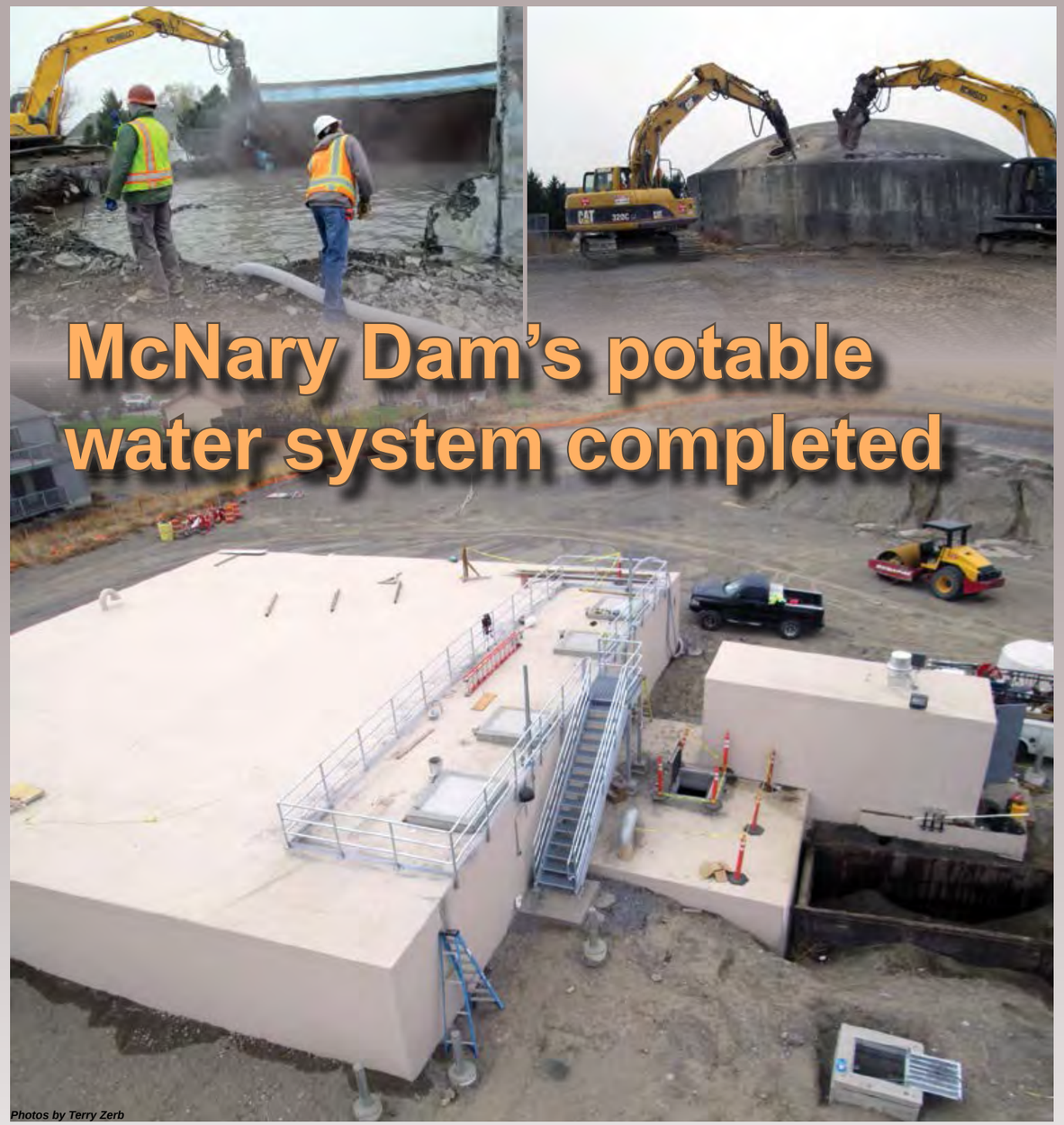
Photos by Jennifer McFadden Allen

Above, right: Brig. Gen. Scott Spellmon, Northwestern Division commander, and John Oberhelman, chief of maintenance, watch a recreational vessel lock through during his visit to Lower Monumental Lock and Dam. Above: A briefing by Fish Biologist Ann Setter and Mechanical Engineer Kimberly Oldham. Left: Maj. Ian Davis and Oberhelman. The visit was part of a three-day information gathering trip.

U.S. Army Corps of Engineers Photos

Leadership Development Program 2015 Graduates

Top: Environmental Resource Specialist Anneli Colter, Power Plant Mechanical Planner Gerry Giedeman, Power Plant Electrician Joe Walker, Project Manager Nic Ivy, Electrical Electronic Crafts worker Travis Jensen, Natural Resources Specialist (Ranger) Brandon Frazier, Small Business Program Deputy Kay Baltz, Mechanical Engineer Wes Brown, Senior Accountant Sergio Chavez, Front: Planning Study Specialist Karen Kelly, Administrative Assistant Tandy Taylor, Class Facilitator Lauri Murphy. Not pictured: ***Natural Resources Specialist (Ranger) Jeremy Nguyen, District Training Officer (Acting) S. Hap Enzi, District Chief of Contracting Ruthann Haider, Mission Support Officer (Acting) Carol J. Bogdanowitz.***
Above: The LDP class visits Arrowrock Dam in Boise.



McNary Dam's potable water system completed

Photos by Terry Zerb

Construction of McNary Lock and Dam's new potable water distribution system was completed and put into service on Nov. 20.

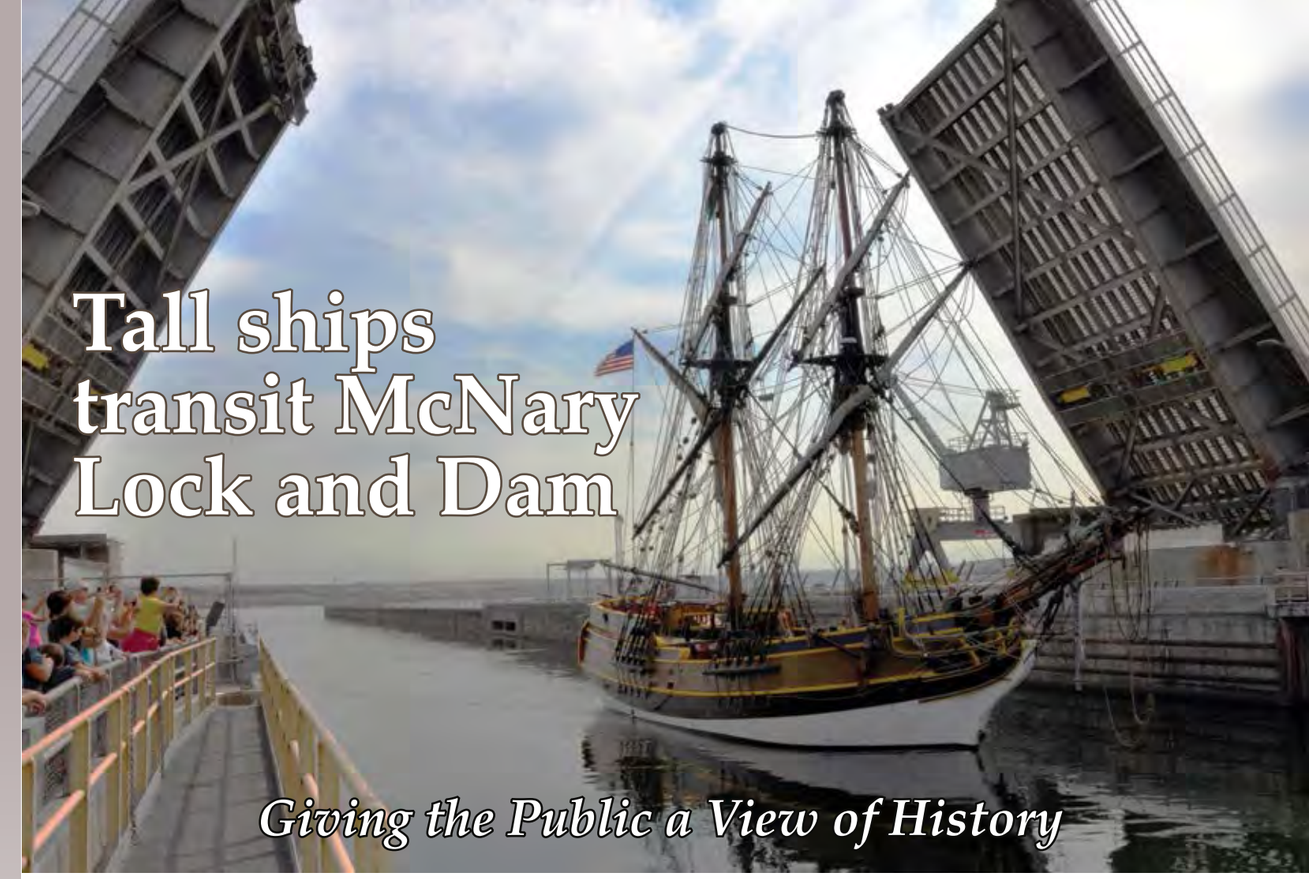
The old water tank (Top) was demolished.

The nearly year-long construction effort replaced McNary's original potable water distribution system, located on the southern shoreline of the Columbia River, just east of the City of Umatilla, Ore., which had been in use for more than 50 years.

As the old system neared the end of its design-life, pipes and valves deteriorated, pressure capability decreased, and it no longer met the dam's fire-protection water supply, irrigation water system and other operational requirements.

Work to build the new water system began in January and included extensive planning to meet current construction-design standards.

About half of the 22-foot-tall new concrete water tank was buried below ground and an earthen berm placed on three sides, up against the tank, to present a lower water tank profile and more aesthetically pleasing and natural view to nearby homeowners.



Tall ships transit McNary Lock and Dam

Giving the Public a View of History

Story and Photo by Jennifer McFadden Allen

As the Lady Washington emerged from the hazy mist, the crowd, which was now gathered at McNary Lock and Dam, began to clamor. More than 75 visitors, as well as countless children, waited with anticipation along the railing, as the Lady Washington locked past the dam on its way to Arlington, Ore. Dam officials allowed visitors to view the 'tall ship' from the north side of the navigation lock, allowing onlookers an up close and personal experience with the 'tall ship,' as well as the navigation lock passage process. McNary is a single-lift lock, standing 86 feet wide and 683 feet long, with a 75 foot vertical lift, more than 5 million tons of commodities pass through each year, consisting primarily of grains, petroleum products, fertilizer and wood products.

"It's really unusual to see this type of sailing ship this far up the Columbia River; the last time it came through our navigation lock was in 2013," said Dave Coleman, Operations Project Manager at McNary. "We thought it would be nice to create an opportunity for the public to get a really close look as it passes by."

The 112-foot, 400,000-pound Lady Washington is a full-scale reproduction of the original Lady Washington built in the British Colony of Massachusetts in the 1750s. It is also the official ship of the State of Washington. The original vessel carried freight between colonial ports until the American Revolutionary War, when she became an American privateer. In 1787, after the war, she was given a major refit to prepare her for an unprecedented trading voyage around Cape Horn. In 1788, she became the first American vessel to make landfall on the west coast of North America.

Visitors were also encouraged to tour the fish ladder and viewing room, which showcases McNary's efforts to support the Army Corps of Engineer's mission. Although this time of year is not peak season for the fish ladder and view stations, the visiting children did not seem to mind as they sat in the windows looking for the next fish to swim by.

There are two fish ladders for adult migrating salmon and steelhead to use. The juvenile fish facility (JFF) and bypass system was completed in 1994 and during 2009 about 3.8 million juvenile salmon and steelhead were collected at the JFF. About 3.3 million fish were bypassed back into the river, and about 448,833 transported for release past Bonneville Lock and Dam. In 2007, spillway weirs were installed in two spillway bays. The weirs are designed to create a surface-oriented route for juvenile salmon passage at the dam. In 2010, fish ladders were modified to accommodate lamprey passage.

For more information about other recreational opportunities at McNary Lock and Dam, call 541-922-2268 or visit McNary Dam's recreation webpage www.nww.usace.army.mil/Missions/Recreation/McNaryDamandLakeWallula.aspx. For more information about these ships, go online to www.historicalseaport.org.

The District's parks, lakes and reservoirs provide recreational opportunities during the nearly 8 million visits each year.

Lyons Ferry Park Back in Business

Lyons Ferry Park formally reopened during a June 5 ceremony, under a new Corps lease with the Washington State Parks and Recreation Commission.

"Our natural resources staff and dedicated volunteers worked hard to keep this beautiful and historic park from permanently closing during the past 13 years of dwindling recreation budgets," Walla Walla District Commander Lt. Col. Timothy Vail told ceremony attendees.

"All of their efforts were worth it to be able to have Lyons Ferry Park once again become part of the State Parks' showcase Southeastern Washington visitor destinations near the state's official waterfall, Palouse Falls. As parks go, it's a gem, with something to offer all types of outdoor recreation enthusiasts.

"Recreation is a big part of the region's economy, especially for rural towns visitors drive through on the way to emote parks.

Visitors come for the stunning scenery, cool waters and outdoor recreation opportunities, and often buy food, drinks, gas, bait, fishing equipment, boating accessories and more while they're here. It can add up fast for a boost to community businesses," Vail added.

Dworhak's floating docks provides visitors a relaxing venue for recreation. Bassmasters Magazine named it as one of their Top 100 Best Bass Lakes in 2015.

U.S. Army Corps of Engineers Photos

McNary Dam, with it's unique trail signs, offer visitors a fun, trailblazing experience through its rec sites.

Corps ramps up volunteer support

Hood Park gets recycled fire hose fender

Three years ago, the Walleye Anglers Unlimited added bumpers to the two wooden docks at the Hood Park Boat Ramp, but for the metal dock, they had to go back to the drawing board. Once the club came up with a plan, they coordinated with Ice Harbor Natural Resources to complete the work.

Club members built the new bumpers off site, which were created out of old fire hoses donated by the City of Richland, Benton County; Fire District #1 and Benton County Fire District #6 station #1. The rest of the materials needed to complete the bumpers were supplied by the U.S. Army Corps of Engineers, Walla Walla District.

The Walleye Club worked with the Ice Harbor, Natural Resource maintenance staff to install the last of the bumpers. Ice Harbor maintenance staff prepped the dock by removing old bumpers, sanding beams and welded anchors to mount the new bumpers. All the work was conducted in waist high cold water. The project took two days to complete, which was longer than expected, but was well worth the time.

Ice Harbor Natural Resource Staff would like to thank the Walleye Anglers Unlimited club's volunteers' for the time and effort they spent working on this project. Club members that had put time into the project was President Steve Seeman, Vic Parks, Tom Ford, and Jim Newburn.

The Walleye Anglers Unlimited was founded to promote the sound and ethical support of Walleye fishing, to enhance and preserve the Walleye population through education and reasonable biological findings, and to serve in an advisory capacity to increase public understanding and awareness of Walleye fishing.

President Steve Seeman, maintenance work leader Dave McDonald, maintenance worker Ryan Fisher, club member Vick Parks, maintenance workers Bill Simon and Abelino Garcia prepare, build and install the new fender at Hood park with donated materials. *Photos Courtesy of the Walleye Anglers Unlimited*

Around the District

Retiree Day

Back row: Dave Chandler, Dave Parker, Rose Marie Moore, Betty Asbjornson, Nick Moramarco, and Dave Opbroek. Front row: Lt. Col. Timothy Vail (with Josie Vail), Dave Dankel, Jim Brown, Shirley Fowler, and Gary Willard.

Rep. Newhouse visits Ice Harbor Dam

Kevin Crum a civil engineer, center, briefs Congressman Dan Newhouse and Tribal Liaison Dean Holececk on the next generation turbines that are coming to Ice Harbor Dam this spring.

U.S. Army Corps of Engineers photos

Walla Walla County Fair Booth

Ranger Cady Tryon staffs the fair booth educating children who stop by and answering questions from on-lookers. Mill Creek's Natural Resources staff operated the District's booth at the Walla Walla Fair.

Toni Minthorn-Cordell, Veteran Service Representative and Program Manager with the Consolidated Tribes of the Umatilla Indian Reservation, was the keynote speaker at the District's Native American Heritage Day.

Holiday Gift Giving

Jennifer Rand and Tonya French from the Association of Corps Employees (ACE) show the holiday packages Walla Walla District employees are donating to needy families. They said, "This holiday season we would like to thank all the generous employees of the Walla Walla USACE. The giving tree donation drive was organized by ACE, which is a non-profit organization run by and for Corps Employees. Through our employees' kindness, generosity, and gift giving ACE will be putting smiles this year on the faces of 47 children from Friends of Children of Walla Walla and 50 seniors from Powerhouse, Eagle Run and Quail Run. Our employees have also donated a record number of hats, gloves and scarves this year for a variety of local charities. ACE facilitates several events throughout the year to build morale of our employees and their families, and also gives support to local charities during the holiday season."

Halloween Surprise

Above from left to right: Sarah Donaldson, Alicia Neher, Charlene grass, Nancy Herres, Jennifer Rand, Brittney Haupert, Leanne Stewart, Allison Needham, and Cristina Vega.

Commemorating Breast Cancer Awareness

Right, back row: Debra Kendall, Pat Thomas, Annette Carter, Sandy Shelin, Nancy Herres, Marcus Ziemke, Allison Needham, Stephenie Renshaw,

Rodney Huffman, Terri Peterson, and Elisa Huffman. Front row: Larry Gesler, Kevin Renshaw, Brittney Haupert, and Tonya French.

Top: Corps employee get competitive with a friendly lawn bean bag game.
Left: Kids line up to get their faces painted, adding a little flair for the day
Below: Greg Brooks uses a bicycle pump to build pressure and launch a soda bottle rocket.

Photos by John Dodd

Top left: Kids, young and old, enjoy the Corps Day water slide.
Middle right: children enjoy making large bubbles. Middle left: Corps employees have a blast in the annual volleyball competition Bottom right: Miss Vail smiles and shows off her butterfly face paint. Bottom left: LeAnne Walling enjoys her lunch and spending time with her friends and coworkers.

Employees of the Quarter

First Quarter

Martin J. Evans was award for outstanding efforts while serving as Mechanical Engineer at Little Goose Lock and Dam.

Evans was instrumental to the success of the project during the 1st quarter. He provided sound technical support, coordination, and leadership to the project on a variety of technical issues.

Martin was critical in working with maintenance, to resolve a multitude of issues affecting the projects Waste Water Treatment Plant. Evans is a credit to himself, the Walla Walla District, and the U.S. Army Corps of Engineers.

Greg P. Moody is the District's expert for critical Adult Fish Passage Program and one of a few trusted professionals, on the topic, within the Northwestern Division. Greg was selected as employee of the quarter for going above and beyond his typical great job to an exceptional job!

Greg provided extraordinarily strong guidance, worked collaboratively and found success with NOAA Fisheries, U.S. Fish and Wildlife Service and local Tribes to resolve challenges of water temperature and fish ladder issues at Lower Granite Dam.

These efforts ensured the return of adult ESA-listed Snake River Sockeye to Stanley Basin spawning grounds, the Nez Perce Tribe's and the Washington State Department of Fish and Wildlife's hatchery programs.

Additionally, Greg restructured and wrote a multifaceted, nearly half a million dollar, interagency agreement with the U.S. Department of Agriculture's Animal and Plant Health Inspection Service to reduce the predation of threatened and endangered juvenile migratory fish and small mammals at all NWW dams in Washington and Oregon.

Greg has earned the respect of his team, the District, the Division and his professional counterparts in our partnering agencies. He is not only a team player, but a solid leader, and an attribute to the Walla Walla District USACE!

Second Quarter

Joe W. Rosenthal. The 2nd quarter of FY15 at Lower Granite Project was the beginning of significant contract work at the facility. Approximately 100 contractor employees working for multiple primary and subcontractors have descended upon Lower Granite. Beyond supervising a crew of 17 mechanics, Joe interfaces with construction and the contractors on a daily basis. Every day Joe and the mechanical crew accommodate contractor activities to assist with shifting priorities.

He does a great job juggling priorities of the Project with the extensive construction work. His most impressive quality is his high energy, positive attitude while getting through the busy fishway and navlock work season. Rosenthal provides the 'glue' to keep all these activities held together and moving forward in unison to accomplish the mission.

Ricardo Guzman provided the level of expertise in electrical substation design we were hoping to gain, but he also provided a thorough knowledge of what should be included in the cost estimate for the substation and the reasonableness of the project schedule. Ricardo's support to NNSA for this technical review was impeccable.

Third Quarter

Cheryl A. Chatman, for outstanding efforts while serving as administrative support assistant for mission support section. Chatman was pivotal in bringing Mission Support up to standards with limited resources. She single-handedly processed and distributed 298 Time In Service Awards; 18 Commander's Award for Civilian Service; 14 Spousal Awards and numerous no notice retirement and achievement certificates.

She selflessly volunteered to take on additional workload due to manning constraints at other projects and performed more than $30,000 in government purchase card (GPC) transactions while maintaining currently assigned duties. Ms. Cheryl Chatman is a credit to herself, the Walla Walla District, and the U.S. Army Corps of Engineers.

Tommy Pangelinan has distinguished himself as a leader and team member on many projects at McNary Lock and Dam. His innovation and dedication to the Corps of Engineers have resulted in notable savings and improved efficiency.

Fourth Quarter

Ruth Johnson successfully completed 48 contract actions in the quarter, double the number of actions of the next closest purchasing agent. The estimated dollar value of these actions exceeds $90 million more than the base and potential option years. That compares to the $94 million total obligations for FY15 as accomplished from the 32-member contracting team. The majority of the $90 million awarded was comprised of the 18 master Blanket Purchase Agreements valued at $1 million each for the base and four option years ($5 million ceiling x 18 agreements). Ruth volunteered to take on this new initiative by researching and establishing tools for the first time throughout NWD which provides the ability to place orders up to $15,000 at decentralized sites for recurring maintenance supplies. No other District within NWD has been able to implement such a process and they are eager to model similar programs off the successes trail blazed by Ms. Johnson.

Stacie Roff, is an absolutely fantastic Administrative Assistant; she happily takes on any task I given her and ensures the continued operations of the front office. She is organized, efficient, eager, and always willing to help in any way she can. More importantly than that, she is always very friendly, positive, and respectful to every employee who asks her for help. Due to severe personnel shortages, Stacie has been providing additional administration, time keeping, errand running, and purchasing assistance to the JFF staff so that their biologists can maintain their focus on their mission. She tackles every deadline in an organized, efficient manner; she prioritizes her work, and all of the extra work that comes to her, and she does everything in her power to take care of the people that keep Little Goose running. Stacie has handled all of these extra stresses and responsibilities with enthusiasm and boundless energy.

Corps Day Awards 2015

Engineering Excellence

Phil Auth is a registered Professional Engineer who possesses the aptitude, personality and work ethic which epitomizes Engineering Excellence. Auth began his career with the Walla Walla District in 2002 after receiving his master's degree.

Since his arrival, Auth has been an involved community member and an extremely valuable representative of not only Mechanical Design, but of the Walla Walla District.

More importantly than the success of the projects, Auth's efforts have helped established the case studies and standards that will be the basis of future designs and ensure sustained success.

As an illustration of the district's increasing expertise in fish passage, Phil has been instrumental in the design of the Lower Granite JFF last year and the Little Goose Prototype Adjustable Spillway Weir this year. Phil's design illustrates Engineering Excellence through environmental stewardship, simplicity of operation, and end user coordination.

Outstanding Achievement

Douglas Weldy is a GS-12 Lead Construction Control Representative for Construction Branch, Upper Snake/Clearwater Resident Office and is assigned to the field office in Clarkston, Wash. He has been with Construction Branch for six and a half years, but has worked for the Federal Government for 11 years, including a position as the Environmental Compliance Coordinator at Lower Granite Dam.

He excels at monitoring contractor performance, documenting issues, enforcing safety standards, and coordinating the contractor's activities with customers.

Over the last year, Weldy has gone over and above, offering assistance on special projects and operating policy issues for the branch, such as assisting with scheduling, workload management, mentorship, and office space/logistical issues. His skill and capability has served Construction Branch and the District very well.

Becky Crump is an Engineering Technician in the Geotechnical Design Section. She is a significant part of the team responsible for a variety of tasks including several critical Dam Safety and Instrumentation tasks. This year has had some unique challenges and significant accomplishments in this area.

Becky executed her normal instrumentation monitoring and reporting duties in her typical, high quality manner.

She stepped in ensuring that the collection schedule was maintained, coordinated with the project, and then trained incoming personnel on the requirements.

Becky is an outstanding asset who always puts forth maximum effort. She has the responsibility of maintaining the Emergency Action Plan notification lists and verifying points of contact and their information for the annual updates.

Becky is an asset whose unassuming positive influence and impact are felt at many levels of our organization.

Daniel Byrd is one of Walla Walla District's key team members, demonstrating exceptional technical skills along with a dedicated attitude toward his co-workers, McNary Dam, and the USACE mission. His performance went beyond the expectations of his positions and resulted in keeping personnel and equipment safe through all aspects of the un-watering process, outage repairs and re-watering the Navlock.

Byrd has also been a lead for the General Maintenance section on the head gate rehab job. His ability to think ahead and plan lifts around outages and rewinds has saved a number of man/hrs and reduced the number of overtime hours need to support this projects.

Byrd has continually demonstrated his excellent abilities and professionalism as a General Maintenance Dual Rate Rigger. His outstanding support on the Headgate Rehab, Main Unit 14 upper bearing bracket repair, and Navlock 2015 outage was exceptional.

He is a credit to himself, McNary Project, the Walla Walla District, and the U.S. Army Corps of Engineers.

Public Outreach/ STEM Support

Brian Schnick is officially nominated for the Public Outreach and STEM Support Award. He is a physical scientist in the General Engineering Section, Design Branch, Engineering and Construction Division. Brian leads numerous Enterprise Geographic Information System (eGIS) activities.

He has established his commitment to get the eGIS knowledge out and to encourage others to take an interest in its related physical sciences. He routinely educates others about the vital roles of the Walla Walla District eGIS efforts by collaborating, coordinating, and outreach with local, regional, and national committees, local agencies and schools.

The most significant contributions have been his direct collaboration with the local Walla Walla Community College Engineering Technical Program and its students, his involvement with the regional SE Washington and NE Oregon GIS Professional User Group, and his participation with the USACE National Committee on Spatial Data Standards for Facilities, Infrastructure, and Environment.

Support Employee of The Year

Teresa Murphy as Secretary and Timekeeper within Engineering & Construction Division for Design Branch. This is a new position to her after being secretary for the H&H Branch within E&C. She has excelled in fulfilling the normal functions of this position, as well as extra responsibilities required during challenging staff transition periods within E&C. Murphy provides exemplary clerical support for 74 employees during which time she received high audit scores for both timekeeping (including overtime) documentation and for purchase card use.

Murphy, while in her new position as Design Branch Secretary after leaving H&H Branch, provided excellent side-support to H&H Branch (directly and indirectly working with student interns) for more than a month before a new secretary could be hired as her replacement.

She is still helping H&H Branch with small procurements using her credit card authority to make sure their needs are accounted for.

New Employee of The Year

Bill Dull spent several years working on navy ships as Lead Technical Engineer. His days as a civil service electrical engineer started on Feb. 24, 2014. Bill showed much courage and technical abilities to become the voice of McNary on several large capital projects. Dull's significant contributions to the overall quality of the design and the efficient and professional coordination efforts during the onsite construction.

Dull was commended for his selfless act of courage when he was witness to a very serious accident when the vanpool was heading to work from Walla Walla in April 2015. Bill immediately went to help the severely injured person and began first aid treatment to stop the bleeding as two others from the vanpool directed traffic around the incident for about 30 minutes until the ambulance arrived.

Bill consistently comes to work early before his duty hours to prepare for the day's activities. Mr. Dull continues to increase his leadership qualities through his initiatives and commitment for excellence. Bill's leadership abilities and his technical insight into improvement on equipment and process have proven to be invaluable.

PMBP Proponent

Steven Hartman is dedication to significantly improving the value and sustained mission focus for numerous projects is recognized throughout all offices within NWW.

Steve's focus on quality products, active project oversight throughout the life of the project, from kick-off to close-out leads to success on all of his projects. He helped Design Branch communicate the need to HDC to have all designers work on one server when developing specifications. His commitment to the Powerhouse Bridge Crane projects has been exemplary as the contractor has been difficult to work with in providing final product.

Steve has been dedicated not only to his assigned projects, but has been called upon to respond to emergencies during the districts navigation lock outages at Little Goose and at McNary.

Quality Proponent

Lori Corbett is an outstanding asset in performing reviews of engineering plans and specifications. She is extremely familiar with the arrangement of the specification information and is well versed in the requirements unique to each section and part covered within a complete engineering plans and specification package. The demands on the technical staff at the operating projects have always made it a challenge to get quality reviews from their perspective (the "O" in BCOES).

This past year a notable review she did for her sister project, Ice Harbor dam, was a prime example. The Ice Harbor Turbine Installation and Rewind of Units 1-3 is an important project to the successful installation of the new turbine runners. Her review was thorough and surely will save the Government future modification costs. Lori's desire to see a quality product and her dedication to ensuring a quality review is accomplished make her an invaluable asset to the team.

CFC gets the big thumbs up

from 2015 Combined Federal Campaign Coordinator Sarah Donaldson and her buddy the piggy bank. This year's contributions raised about $9,500.

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Larry Roberson

Position:
Emergency Management (EM) Specialist in Operations Division in the Emergency Management Branch

I started working for the Corps of Engineers as a student aide during my junior/senior year at WA-HI. After graduation I started my first permanent position in Contracting as a File Clerk in 1973. A few years later I accepted a position in the Office of Administrative Services which years later became Information Management Office which provided me the opportunity to become an Information Technology Specialist. In 2008 I was given an opportunity to become an Emergency Management Specialist in Operations Division in Emergency Management Branch which is now Readiness Office.

Describe your job.

My job as an EM specialist entailed supporting deployment of employees overseas through the Army Overseas Contingency Operations program. I also supported the Walla Walla Power Team (PRT) to disaster areas to restore power by distribution of generators.

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

The biggest challenges I faced were deploying employees and teams out during emergencies within a very short time frame to meet mission requirements.

Describe accomplishments you've experienced with your job.

- Deploying the Walla Walla PRT to Hurricane Sandy.
- Receiving HQ and NWD Commander Coins for having one of the highest levels of USACE employees deployed under the Overseas Contingency Operations program.
- Deployment of NWW-REACT mass notification system at the Walla Walla District.

What is the most rewarding part of your job?

The most rewarding part of my job was helping people in disaster areas and being able to be a part of my team member's successes. Being able to get our people where they needed and getting them back home safely.

Please share a notable milestone or memory with the Corps.

I was proud to be able to serve and support my Walla Walla District team for 42 years.