

Intercom

Vol. 33

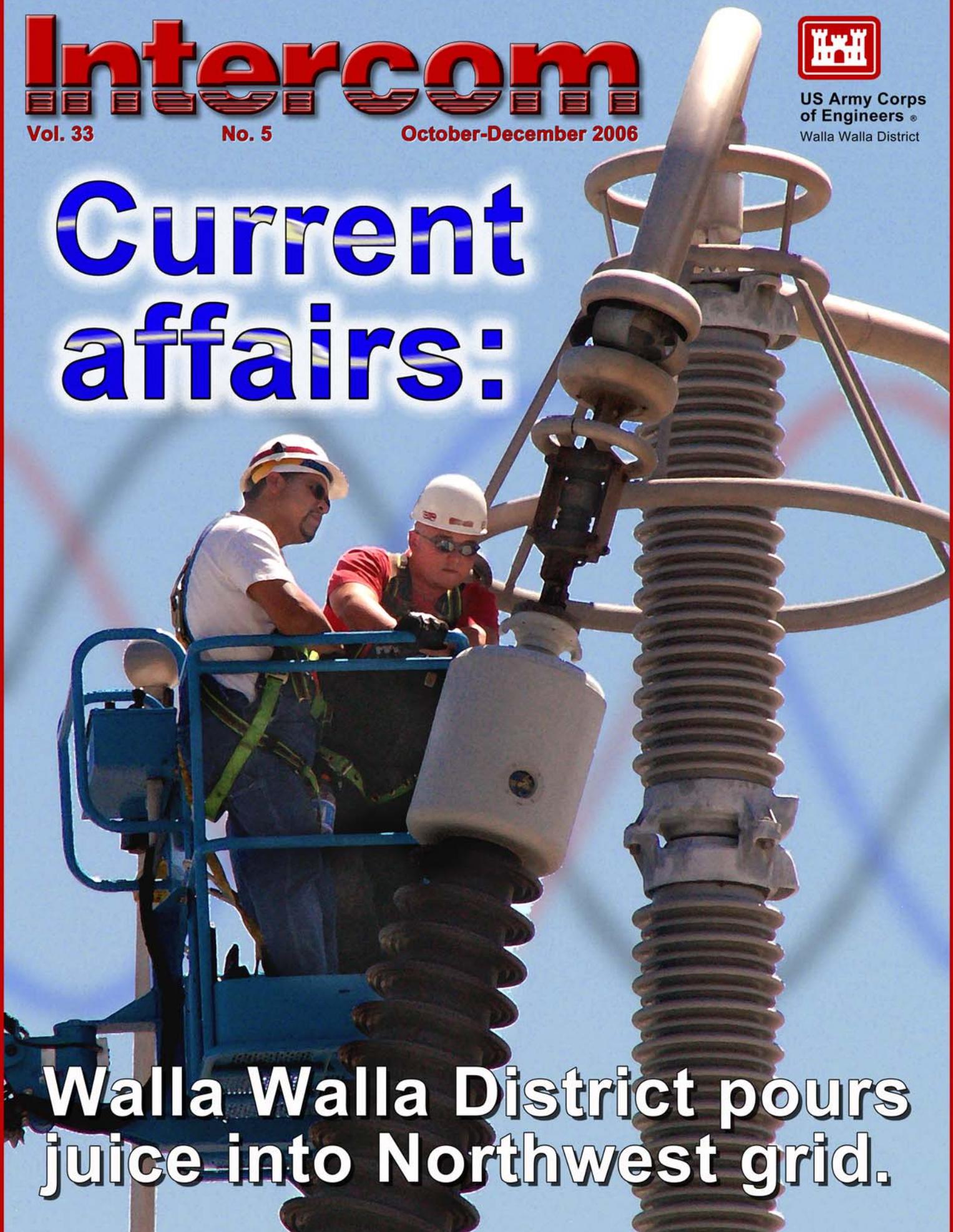
No. 5

October-December 2006



US Army Corps
of Engineers
Walla Walla District

Current affairs:



Walla Walla District pours
juice into Northwest grid.

FROM WHERE I SIT

Whole greater than sum of the parts



photo by Margaret Millard, supply technician, Dworshak Dam

It took a large team to help remove the Unit #1 generator rotor Oct. 31 at Dworshak Dam powerhouse. The extra people needed were coordinated by Bill Shaw, mechanical crew foreman, and Jim Simonsen, electrical foreman.

by Charlie Krahenbuhl

“Multipurpose hydroelectric projects” is a phrase I have used innumerable times the last few years to make the point that we all must look at things from a system approach. “What system,” folks ask? “Are you thinking a very specific hydropower generator or powerhouse as a system with your background as an electrical power engineer? Or even broader system of the Federal Columbia River Power System (FCRPS) with our partners Bonneville Power Administration, Bureau of Reclamation and Energy Northwest with both generation and transmission of electrical power? Or in an environmental system such as a Columbia River basin view where cause and effect issues are so important, also with innumerable stakeholders, agencies, tribes and nongovernmental organizations (NGOs)?”



Krahenbuhl

As someone important said, probably about 1776 and paraphrased here, “We must surely stick together or hang separately.” That is the focus of this musing, how a system approach complements what we must do anyway as stewards of the assets trusted to us. Another way of putting that stewardship responsibility: “Are we in the business or aren’t we? And what business is it?”

We strive to operate and maintain multipurpose hydroelectric projects that, yes, produce electrical power. That power is produced, actually converted, by either the volume of water passing through a Kaplan turbine or the impact of pressurized water on an impulse turbine. Either produces torque that in turn moves an electromagnet past coils of wire, however large they may be. The movement of a magnetic field through a coil of wire creates voltage, electrical pressure, which forces electrons through a load and back to the source. And without a load, like the electrical light at the end of the tunnel, alternating current doesn’t flow, and without current flow there is no power. The more we know about electricity the more we wonder how it really works, but that’s another story.

A few years ago, before direct funding of hydropower, I modified the printing on a shirt that said the budget was so bad that the light at the end of the tunnel was shut off. I added the “powerhouse which fed” the light was shut off, thus my use of the tunnel image.

Let’s just repeat and refocus; our plants produce electrical power.

Along with producing power by the use of turbines and generators with their subsystems and components, a system in

See WHERE I SIT, page 15.

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On the Cover...

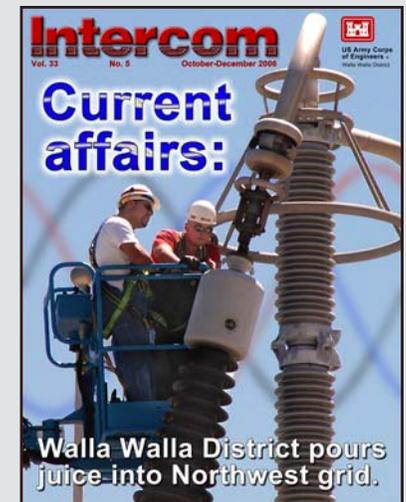


photo by Sue Walton, Lower Monumental Lock and Dam

Alex Almeida, left, and Josh Dougan prepare equipment at the Lower Monumental Dam powerhouse for electrical energy loss testing July 17. Elevated levels up to 500,000 volts used to feed the power grid can mean monetary loss if defective equipment wastes even a fraction of the energy produced. Testing, maintenance and upgrades keep systems in top condition.

Walla Walla District loses a champion advocate of fish migration protection

Joined Walla Walla District in 1987

Walla Walla District Fishery Biologist Rex DeWayne Baxter, 55, died Nov. 16 at St. Mary Medical Center in Walla Walla following a heart attack.

A memorial service was held Nov. 25 at Grace Episcopal Church in Dayton, where Baxter lived.

Rex Baxter was born Oct. 15, 1951 in Ottawa, Kan., to Carl and Marjorie Baxter. He graduated in 1969 from high school in Enterprise, Ore., and earned a bachelor's degree from Oregon State Univ. and a master's degree in biology from Washington State Univ.

On Nov. 12, 1977, he married Deborah Stevenson in Auburn, Wash. Before coming to Dayton they lived in Battle Mountain and Elko, Nev., where he worked for the Bureau of Land Management.

He started working at Walla Walla District in 1987.

A member of Grace Episcopal Church, he enjoyed hiking, camping, hunting and reading.

Survivors include his wife, at home; son, Steven Baxter of Seattle; daughter, Emily Baxter of Pullman; his mother, of Enterprise; three brothers, Gary Baxter of Portland, Terence Baxter of Walla Walla and Jon Baxter of Bend, Ore. He was preceded in death by his father; and brother, Ken Baxter.

Left his mark on NWW

"Rex Baxter worked on a lot of the juvenile fish transport, and juvenile fish facility issues," said Wildlife Biologist Al Sutlick. "One of his big accomplishments was to convert our fish counting operation, which for years has been done under cooperative agreement with the states, into a contract."

Sutlick said Baxter worked on an extensive redesign of the fish ladder at Mill Creek Project.

"We had a fish ladder put in (at Mill Creek) but it never functioned the way it was supposed to," Sutlick said. "Rex spent a lot of time working with Mill Creek Project and the state in redesigning the fish ladder so it would actually function. They had some very good success with more fish using it."

Sutlick said Baxter will most likely be remembered in Walla Walla District for his work on improving the design and operation of the various juvenile fish facilities (JFF.)

"Rex helped work out the bugs in the JFF at Little Goose Project," Sutlick said. "Some of his ideas were used in the design of the other fish facilities at Granite, at McNary, at Ice Harbor, at Lower Monumental, at all of them. In part those



Al Sutlick



U.S. Army Corps of Engineers file photo

Rex Baxter was an integral part of the juvenile fish facility biological team at Little Goose Dam in the 1980s.

designs came from things that Rex did, especially the fixes afterward."

A personal remembrance by John Bailey

Friends, family and fellow Corps employees said our good-byes to Rex Baxter Nov. 25 at Grace Episcopal Church in Dayton. A thumbnail sketch of Rex's work history was read: "He began his federal career with the Bureau of Land Management, transferred to Little Goose Dam in 1987, and came to the Walla Walla District office in 2001," followed by the words, "He was a model employee." This summary did not come anywhere close to capturing the Rex I knew. To me, Rex was much much more than a boss, mentor and colleague.

Rex was a committed biologist and made me a believer in the Corps of Engineers. In the beginning of my relationship with Rex, I'd thought I would work for the Corps for a

See BAXTER, page 5.

Biography courtesy of Walla Walla Union-Bulletin

Water, water everywhere



photo by Jay Breidenbach, NOAA-National Weather Service

Flooding at Dry Creek in Eagle, Idaho, crept up on residential areas during April. Several Treasure Valley communities

experienced flooding or high water in 2006. The Boise River often flooded before Arrowrock and Lucky Peak dams were built.

by Joe Saxon

When high waters threatened homes and businesses within Idaho's Treasure Valley last spring, the U.S. Army Corps of Engineers, Walla Walla District, responded by partnering with federal, state, and local agencies to form a new Treasure Valley Flood Exercise Group.

The group hosts a series of flood exercises, starting with the Nov. 15 meeting in Boise which drew nearly 100 participants, to help Treasure Valley officials prepare responses to potential flood events anytime they might happen.

"Flooding causes more damage than any other event in America," said Jay Breidenbach, senior hydrologist with the National Weather Service in Boise. "This orientation session was exactly what we needed to bring together all the flooding experts that have a role to play in the Treasure Valley. When flooding occurs, coordination is critical."

Several Treasure Valley communities adjacent to the Boise River experienced flooding or high water in 2006, spurring calls for greater agency coordination and

cooperation throughout the region.

Historians note that the Boise River routinely flooded before the construction of Arrowrock and Lucky Peak dams. An April 6, 2006 Boise Guardian article said, "In 1862 floodwaters were seen ...with a flow estimated at 100,000 cubic feet per second (cfs)." Flows of 7,000 cfs are considered flood stage now in Boise. Last spring flows reached slightly above that.

"No one knows better than local residents and agencies how important it is for everyone to work together during a flood," said Gay Ernst, Chief, Emergency and Security Management, Walla Walla District.

"The Treasure Valley flood orientation session brought many agencies and organizations to the table, providing ample opportunity to share information about what actions each can take and what resources each can provide. This level of coordination before any event is critical to a successful disaster response," she stated.

Among the agencies attending the Nov.

15 initial groundbreaking meeting were the National Weather Service, Bureau of Reclamation, Federal Emergency Management Agency (FEMA), Idaho Department of Water Resources, Ada and Canyon counties and cities throughout the Treasure Valley. Mayor Nancy Merrill of the City of Eagle, a community that experienced flooding last spring, was the keynote speaker.

"It's important for us to learn from the events we experienced last year, and then to come together and do what's smart to ensure these issues are addressed," Merrill said.

"By focusing on sharing information, coordinating flood preparation and recovery efforts, identifying regulatory impacts and available communication channels, we hope to identify and consolidate available resources and assistance as well as increase awareness throughout the Treasure Valley for more effective response during flood events," said Doug Hardman, Ada County Emergency Management Director.



Gay Ernst



Nancy Merrill



Doug Hardman



photo by Rick Haverinen

Work can now begin

Architect and artist Maya Lin explains her plans for Sacajawea State Park near the Tri-Cities in a Native American Land Blessing ceremony Oct. 27. Lin created the Vietnam War Memorial in Washington, D.C. while a student. She is working with the Confluence Project on several designs at locations along the Lewis and Clark trail to honor the explorers and the Native Americans they encountered.

New type of spillway weir slated for McNary through contract award

by Gina Baltrusch

Walla Walla District, U.S. Army Corps of Engineers, has awarded a \$1.8 million contract to a Spokane, Wash., company to build a new prototype surface-bypass structure to develop valuable information for improving passage conditions for out-migrating juvenile salmon and steelhead in the Columbia River, it was announced Dec. 11.

Tri-State Metal Fab Inc. was awarded a contract to build the spillway weir to be installed at McNary Lock and Dam. The weir is slated for completion in March 2007, with biological testing planned for spring and summer 2007.

“The prototype weir will allow flexibility in testing to help determine the best location and flow to attract juvenile fish to

the bypass entrance,” said Ken Hansen, hydraulic engineer for the project. “The information we gather in testing the weir will help us make informed decisions as we design permanent surface bypass systems for McNary.”

The new weir is different from past weirs the Corps has built – this one is called a Temporary Spillway Weir. The TSW is a part of a two-year prototype testing program for acquiring information prior to installation of a more permanent system. It is about 35-feet high and 50-feet wide. The massive, steel structure weighs about 250-thousand pounds. It can be fitted into any one of McNary’s 22 spillbays. The temporary structure has a low relative cost, is easier to implement and allows for flexible biological testing.

BAXTER, from page 3

couple of years, then go to work for a “real” fish agency. But Rex had other things in mind. Rex awakened me to the reality about fish matters – to have a healthy skepticism about what some people in the public say.

There are those who work eight hours a day for a nice paycheck; and then there are those who make a career commitment, doing more than just what it takes get the job done. Rest assured, Rex was in the latter category. He would never ask anyone to do anything he wouldn’t do himself. He voluntarily worked nights, weekends and holidays. Many a time he would work a swing shift, go home and be back less than eight hours later to work a day and load fish into a barge or truck tank trailer. His unassuming sense of duty reminds me of Abe Lincoln polishing his shoes in the White House oval office - shocked onlookers were told, “Whose shoes would you have me black?” Unless you worked closely with Rex, you



John Bailey

wouldn’t have the foggiest idea of how tirelessly devoted he was to protecting and preserving our natural resources.

He was always there whenever I needed him. He was there when I started in January 1994. I learned the ropes of being a project biologist from him. He was there when I had difficulty finishing my master’s thesis with all its trials, as he had similar problems while finishing his thesis at Washington State University. He was there to support me when my mother died in 2000, as he had already lost a parent.

Rex always had high expectations and confidence in me and knew when I was ready to go on my own. When it came time for me to go to the district office, he was already there, welcoming me. I suppose when it’s time for me to go to that great beyond...he’ll be there.

Through times good and bad we kept company, my yin to his yang. I the Husky turned Vandal, Rex the Beaver turned Cougar. Rex the ever quiet private one who stayed in his office cave, I the more

exuberant one who mixed it up with the facility staff. Rex was ever the detail person, nothing little missed his eye. Yet I needed to fill him in on the bigger picture sometimes. I handled the people stuff, tours, barge loading and so on. Rex loved reports and spreadsheets.

Rex found it hard to express himself openly. He did not wear his emotions on his sleeve - being the somewhat shy private person he was. However, Rex wasn’t meek, he was capable of being very forceful if need be. A growl or shout from Rex was extremely rare, so if you heard one from him you paid attention. An angry Rex was like a skyrocket – fast, fiery and furious, culminating in an explosion that quickly faded away. Once the smoke cleared, Rex never held a grudge.

My eight seasons with Rex at Little Goose were truly among the happiest years of my life. Rex was much much more than a boss, mentor and colleague. Once you had his trust, you were a friend for life. Goodbye Rex. I miss you.

John Bailey is a fishery biologist in the District’s Technical Support Branch.

Girding the grid;

Corps of Engineers part of a system that really produces



The Unit #1 generator stator at Lower Granite Lock and Dam powerhouse got a brand new coil in 2004.

photo by U.S. Army Corps of Engineers

by Charles Krahenbuhl and Joe Saxon

The U.S. Army Corps of Engineers, Walla Walla District's hydropower facilities are part of a unique collaboration with two other U.S. government agencies, the Bonneville Power Administration and the Bureau of Reclamation.

Together they form the Federal Columbia River Power System (FCRPS) which maximizes the use of the Columbia River by generating power, protecting fish and wildlife, reducing flood damage, providing irrigation and navigation, and sustaining cultural resources.

The 31 federally owned multipurpose dams on the Columbia and its tributaries that comprise the FCRPS provide about 60 percent of the region's hydroelectric generating capacity of 20,444 megawatts (MW) of power. From a national perspective, this is approximately 25% of

the nation's total hydropower output.

The Corps is the nation's largest hydro producer. The Walla Walla District's six hydro facilities at Dworshak, Lower Granite, Ice Harbor, Little Goose, McNary and Lower Monumental dams generate about 4,400 MW of energy making it the Corps' second largest hydro-producer behind Portland District.

The 31 federal dams of the FCRPS are the Northwest's power supply foundation, and in large measure, they fuel the region's economy. With a transmission grid that reaches thousands of miles, the FCRPS provides power to customers up and down the West Coast from Canada to California, and eastward to the Desert Southwest.

These hydro plants provide a sustainable source of electricity, an important attribute as global tensions and environmental concerns threaten our national energy security. Also, the system

provides a stable platform for which other renewable sources, wind and solar, can be integrated. The FCRPS agencies are setting a course for a clean and renewable energy future by investing in powerhouse modernization and other improvements to maximize the multipurpose use of the Columbia River.

The FCRPS agencies balance hydropower operations with activities that protect migrating fish, and they supply irrigation water to more than a million acres of land in Washington, Oregon, Idaho and Montana. As a major river navigation route, the Columbia-Snake Inland Waterway provides shipping access from the Pacific Ocean to Lewiston, Idaho, 465 miles inland. Water storage at all projects on the major tributaries and main stem of the Columbia totals 55.3 million acre-feet, much of which enhance flood damage reduction.

Walla Walla District supplies power to Northwest & beyond

You can fix it; sometimes it's better to replace it

by Rick Haverinen

While Carole Bayer Sager and Peter Allen may have written a song in the 1970s that says, "Everything Old Is New Again," it's a fact of life in the mechanical world that everything new will eventually get old. Age happens.

U.S. Army Corps of Engineers dams within the Walla Walla District were built in the 1940s through the 1970s. The District's oldest, McNary Dam on the Columbia River, began construction in 1947 and it was completed in 1953 when its 14 generators went on line.

Over 50 years later, that electrical generation equipment is starting to wear, despite continual maintenance, and engineering companies are developing new equipment all the time that makes the process more efficient, safer, less expensive to operate, or friendlier to the environment. Other components of river dams such as navigation locks and spillway gates have parts that also take a beating over time.

"It's hard to find parts for the old equipment," said David Alexander, a mechanical engineer at McNary Dam. "New technology can help."

"One of the goals is to make the system more reliable so we're able to generate more power," said Brian Miller, mechanical engineer in the District's Programs and Project Management Branch.

Some of the new-fashioned components going into McNary and the five other hydroelectric dams the District operates include digital speed governors, state of the art exciters that produce the magnetic field for generators, plus higher-capacity circuit breakers and new line transformers. McNary is getting new cooling systems for its bearing oil.

Corps environmental concerns include keeping oil, grease, and other

contaminants out of the river water and easing the path for the fish that use the river as an Interstate highway from spawning areas to the ocean and back again. Ice Harbor Dam has a possibly-convenient problem that combines both ecological issues. A wearing turbine had to be shut down when a grease seal failed. Because that turbine will need a fix, there is an opportunity to now replace the bladed "runner" with one designed to better allow fish to pass through it without injury.



David Alexander

"We're working with industry in trying to come up with a turbine (design) that both meets our need from a power standpoint, a better, more efficient turbine, that also has less impact on the fish," said Miller. "We have the alternatives of passing fish over the spillways or through the bypass system where they avoid the turbines. But you also have some fish that (unavoidably) pass through the turbines and the data is showing the injury rate through some of

the turbines (even now) isn't that bad."

"There may be a tradeoff between power output and being fish friendly, the ability to allow fish to pass through (the turbine) without injury," said Rick Emmert, project engineer in the District's Design Branch. "Industry is normally focused on (designing turbines that provide) high power and high efficiency, and they do that really well. So when they start factoring in the environmental requirements, they're not sure how to deal with it. We may get everything we want but it may require a compromise (in power production) to get fish friendliness into the design."



Brian Miller

Scale models of new turbine designs are currently being tested in Vicksburg, Miss., and a prototype turbine of a newer design has been installed at Bonneville Dam where it is also being tested.

Perpetual motion maintains Corps projects



photo by Rick Haverinen

Barry Jackson, an electrician at Little Goose Lock and Dam, repairs a backup power generator Oct. 25 at the District Headquarters building in Walla Walla.

"The people on our maintenance teams are all highly professional," said Carl Knaak, supervisory mechanical engineer, Little Goose Lock and Dam. "They're also extremely experienced. I have people that have been working on dams for 30 years. They know what they're doing, and in addition, they know how to do it safely. It's not just getting the job done, it's getting it done right, safely and cost-effectively."



Carl Knaak

If it's broken, fix it; if not



photo by Kenneth Hengen, Dvorshak Dam



photo by Haverinen

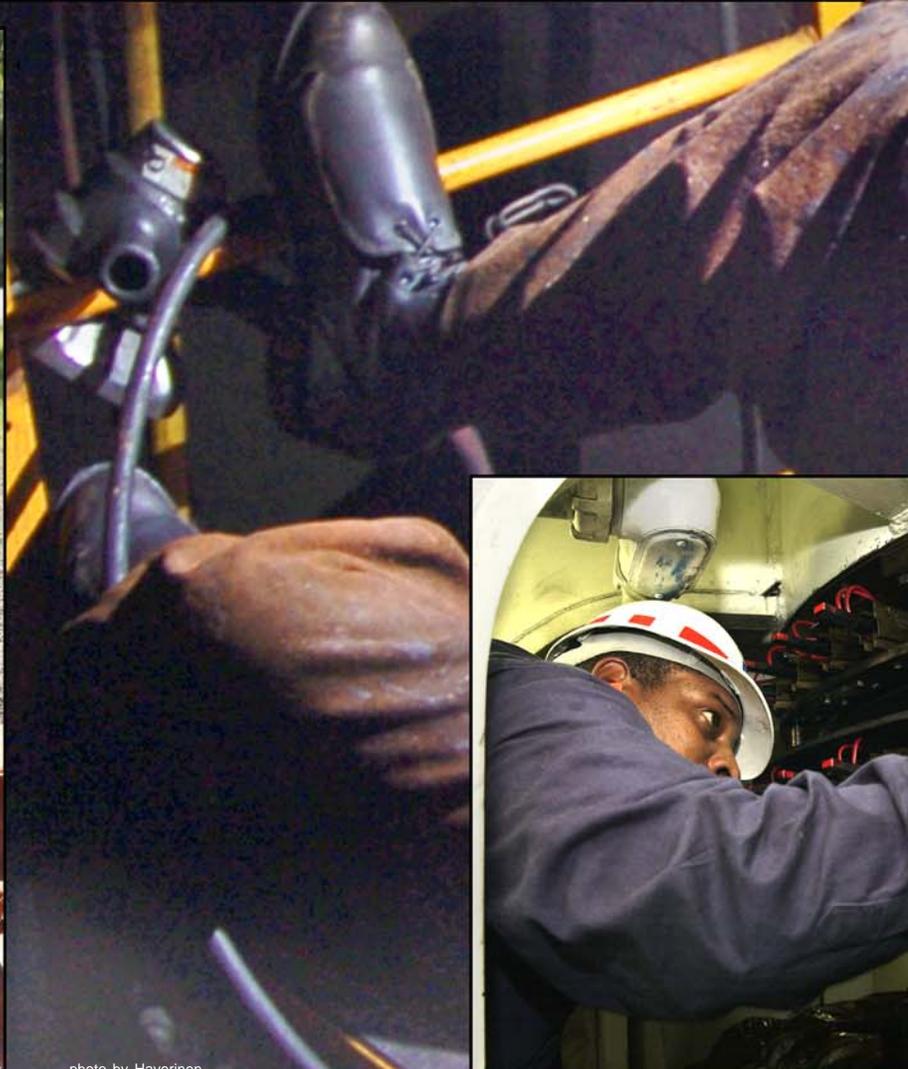


photo by Haverinen

not broken, maintain it.

It keeps going, and going...

All the mechanical gear owned by Walla Walla District wouldn't work unless someone was around to keep it running, and the scale of maintenance jobs can range from small to huge.

Clockwise from far upper left: Jeff Ohlson must lie down on the job to disconnect direct current field coil busses from generator unit #2 prior to unstacking it at Dworshak Dam in October; while on his back, Bob Scott repairs a turbine runner by filling voids with stainless steel welds at Lower Granite Dam in November; a crew from Dix Corp. removes a new turbine blade bushing from a liquid nitrogen bath prior to mounting it in November; Phillip Martin checks generator brush wear at McNary Dam in November; and Eric Christean repairs a mower at Lyon's Ferry Park in June.

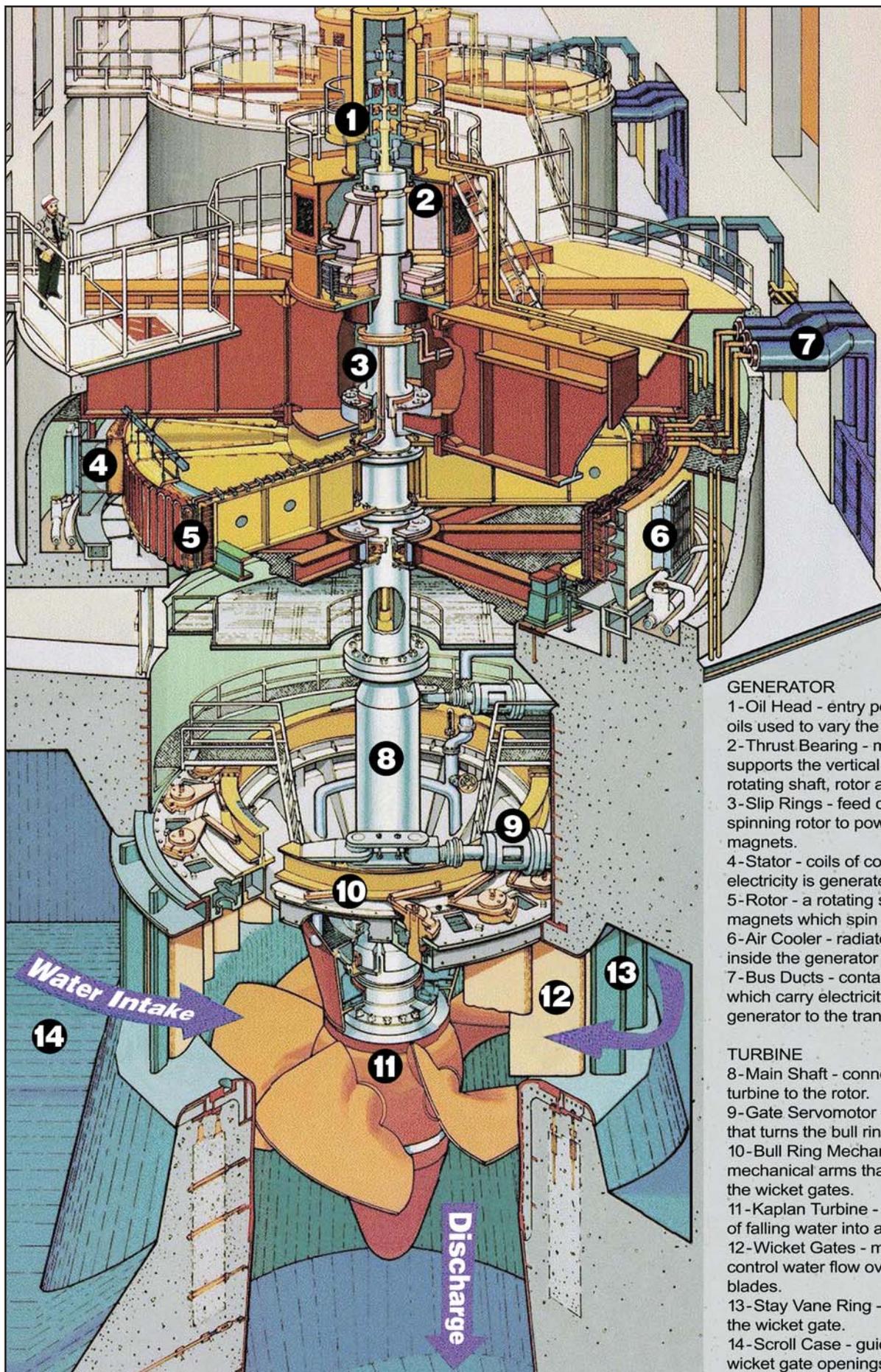


photo by Haverinen



photo by Haverinen

Generator



GENERATOR

- 1-Oil Head - entry point for hydraulic oils used to vary the turbine blade angle.
- 2-Thrust Bearing - main bearing that supports the vertical weight of the rotating shaft, rotor and turbine.
- 3-Slip Rings - feed current into the spinning rotor to power its electro-magnets.
- 4-Stator - coils of copper strands where electricity is generated.
- 5-Rotor - a rotating set of electro-magnets which spin past the stator.
- 6-Air Cooler - radiators used to cool air inside the generator and barrel.
- 7-Bus Ducts - contain copper bars which carry electricity out of the generator to the transformer.

TURBINE

- 8-Main Shaft - connects the spinning turbine to the rotor.
- 9-Gate Servomotor - hydraulic motor that turns the bull ring mechanism.
- 10-Bull Ring Mechanism - a ring with mechanical arms that open and close the wicket gates.
- 11-Kaplan Turbine - converts the energy of falling water into a spinning motion.
- 12-Wicket Gates - movable gates that control water flow over the turbine blades.
- 13-Stay Vane Ring - guides water into the wicket gate.
- 14-Scroll Case - guides water into the wicket gate openings.

NWW's Hydro Projects

Project	River	State	Service	Rating
Dworshak	N/Fork Clearwater	ID	1973	400 MW
Ice Harbor	Snake	WA	1962	603 MW
Little Goose	Snake	WA	1970	810 MW
Lower Granite	Snake	WA	1975	810 MW
Lower Monumental	Snake	WA	1969	810 MW
McNary	Columbia	OR/WA	1952	980 MW

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. This water is moving with tremendous force and is guided down to the turbine. As it strikes the blades of the turbine, 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.

Hydropower Facts

Clean - NWW power plants emit none of the waste gases that cause acid rain, air pollution or global warming. They are very quiet and require no outside fossil fuel.

Reliable - These mechanically simple hydropower units are reliable and durable.

Efficient - NWW plants convert about 90% of the available water energy into electricity. Fossil fuel plants are only about 50% to 60% efficient.

Renewable - The sun, rain and snow provide the power for our generators using the hydrologic cycle.

Flexible - We can readily start and stop our units to meet demand.

The Walla Walla District's hydropower projects can generate enough electricity, 4,400 megawatts, to power 1.5 million homes and business for a city the size of Seattle.

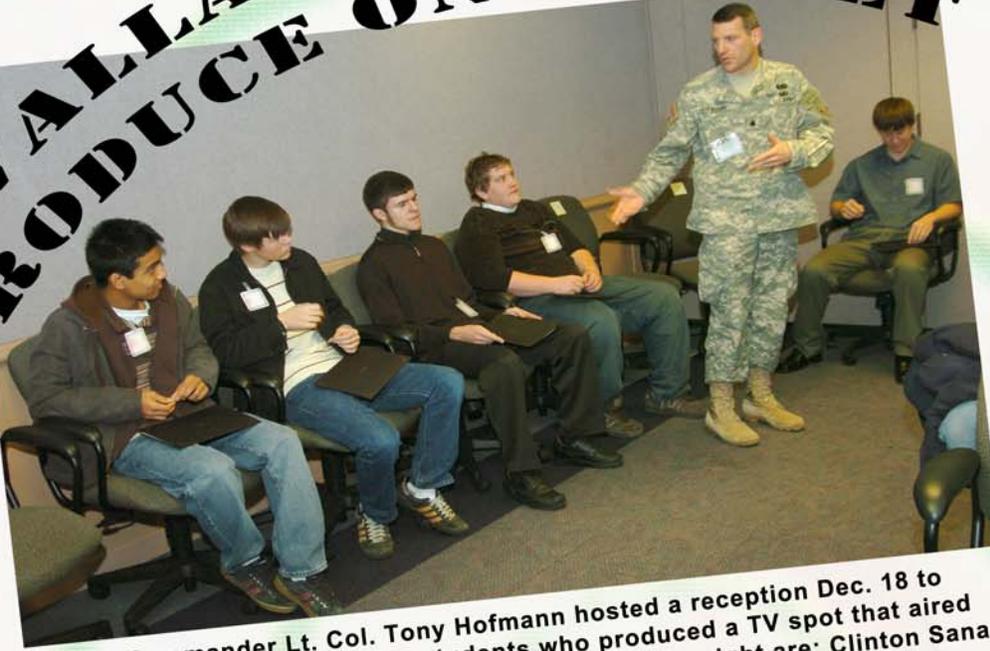
Ice Harbor Dam can generate enough power for all of Eastern Washington, except for Spokane.

Walla Walla District has 41 turbines ranging in size from 70 MW to 220 MW. One megawatt (MW) is one million watts or enough to light 10,000 one-hundred-watt bulbs.

One hydropower turbine at McNary produces as much electricity as 211 Walla Walla FPL 660 KW wind turbines.

Kaplan Turbines are the main workhorse of the District. They are about 90% to 95% efficient and have adjustable blades that allow operators to tilt them in response to changing water conditions. While they are a little more complex than other turbines, they turn at only 87.5 rpm and are designed to have a long service life.

WALLA WALLA STUDENTS PRODUCE ON-TARGET VIDEO



Local high school students get TV broadcast exposure as their spot, on behalf of Walla Walla District, airs nationally Dec. 2 during Army-Navy game.

District Commander Lt. Col. Tony Hofmann hosted a reception Dec. 18 to thank Walla Walla High School students who produced a TV spot that aired nationally Dec. 2 during the Army-Navy game. Left to right are: Clinton Sana, Jake Reller, David Stadnik, Jesse Rodrick, Hofmann, and Luke Nelson.

by Rick Haverinen

“We couldn’t spend any project funds,” said Lt. Col. Tony Hofmann, commander, Walla Walla District, when he learned video spots could be submitted to yank the historical military service rivalry chain during the airing of the Army-Navy football game played Dec. 2.



Hayden

In the best Army tradition of “Let a captain do it,” Hofmann tasked Capt. Samantha Hayden, the District’s security specialist.

The idea was to make a “Go Army, beat Navy!” message while identifying the unit sending the encouragement. If the game’s TV producers liked the spot, it would air sometime

during the broadcast.

“At the U.S. Military Academy it’s engrained from day one to beat Navy,” Hofmann said.

Alex Kwan, a civil engineer in the District’s Construction Division, came up with the script, and Hayden took it to Dennis DeBroeck, a vocational instructor at Walla Walla High School. He gave the project to students in his computer animation class, and about a month later they had a finished product.

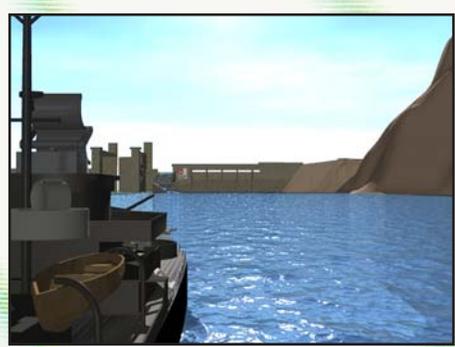


DeBroeck

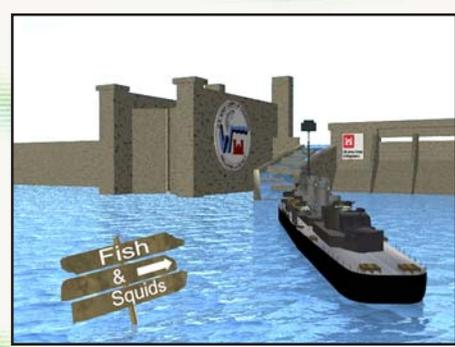
“Normally it takes longer to put something like this together,” DeBroeck said. “They were putting in refinements right up to the last minute.”

DeBroeck said the students built over 55,000 virtual

TV SPOT continues to page 13



A Navy cruiser approaches a Walla Walla District dam. The ship’s commander uses the radio to request permission to pass.



The dam operator doesn’t allow the ship to use the navigation lock, saying fish and “squids” must climb the fish ladder.



The ship commander orders the pilot to cruise up the fish ladder and complains, “I hate it when they call us ‘squids.’”



photo by Jeanne Newton, Stringer, Ice Harbor Lock and Dam

Business is picking up

Ice Harbor Lock and Dam had the benefit of a helpful crew of community volunteers which spruced up Hood Park Boat Basin, also known as Cargill Pond, Oct. 28. Volunteers from numerous communities generously pitch in to help the District in countless ways.

rating. Statistical assurances are provided to demonstrate that salaries will not be adversely affected by the new, more conservative approach to performance evaluation. This change, combined with a daunting (no, it's not user-friendly at the moment) automated appraisal system have tested the good humor of NSPSers throughout the Army human resources community. Improvements have been promised before District supervisors, who convert to NSPS on January 21, enter the system.

The current emphasis throughout Army is on the development of guidance for the proper use of the pay banding aspect of NSPS. Permissible movement within the very broad salary ranges of pay bands is a major concern so that merit principles are meshed with managerial flexibility to assure fairness. USACE is developing draft guidance, and we expect

to have direction in place before the District GS workforce converts to NSPS in October 2007.

The latest news on NSPS can be found at <http://www.cpol.army.mil>, and all District employees should visit the site regularly to be "in the know."

Ray Quinn is Chief, Civilian Personnel Advisory Center, Walla Walla District.



Ray Quinn

CPAC explains NSPS mysteries

by Ray Quinn

The National Security Personnel System (NSPS) today, aside from pay banding, is largely a revised performance management system, with slightly increased performance incentives.

The normal January cost-of-living salary increases are guaranteed in 2007 and 2008, and the pool of money from which the performance-related salary increases were to come has, thus, been reduced. Whether cost-of-living increases beyond 2008 will be guaranteed remains to be seen, and the final decision will certainly dictate the

fate of NSPS as a new "pay for performance" evaluation system, as originally intended.

Meanwhile, employees in our CPAC are completing their first cycle under NSPS, as a part of their CHRA command, and finding the system to be quite challenging. The espoused DoD bias toward a bell curve rating profile (i.e., 70% of employees at level 3 on a 5 level scale) is a cultural change from the current profile in which 81% of Army employees are at level 1, the highest

Combined Federal Campaign has strong finish at Walla Walla District

Employees and military personnel in the Walla Walla area of the U.S. Army Corps of Engineers pledged \$31,411 in contributions to this year's Combined Federal Campaign (CFC,) which was 112 percent of the goal, according to Lisa Rodighiero, campaign coordinator.

The total pledged for the entire USACE Walla Walla

District including projects was \$53,359.10. The projects donated through numerous local area campaigns.

The breakdown is: District Walla Walla County/Mill Creek, \$31,411.10; McNary, \$15,400; Dworshak, \$1,652; Ice Harbor, \$4,373; Little Goose, \$1,040; Lucky Peak, \$41; Lower Monumental, \$2,132; and Lower Granite, \$670.

TV SPOT from page 12

polygons in order to construct a Navy cruiser, the video's star player, plus a Corps dam, water, a sign and other elements. The 30 second spot required the rendering of 900 individual video frames.

Alicia Elder, a senior, edited the various 3D animation shots together, learning something about her classmates in the process, "How talented they are."

"To see that they picked something



Elder

from Walla Walla (to air during the broadcast,) and from high school students at that, was pretty amazing,"

Elder said.

Some other creative team members included: animation by Alberto Chavez (team leader), and Clinton Sana and Jake Reller; ship model concept by David Stadnik; voice overs by Jessee Rodrick, Micah Thoms, Zach Wheeler, and Luke Nelson; and music composition by Jeremy Ueckert.

Hayden said the process of the Corps of Engineers finding support at the high

school was "Absolutely amazing."

"First of all the product that they came out with was incredible, completely professional grade," Hayden said, "and when you think that high school kids did this on a very short notice, it just blows your mind away. And on the larger picture, of the communication and cooperation between the Corps and the high school, working together and volunteering together, it's exactly right. It's the model of what a community should be and we're part of the community."

Small mouth, big bass

Angler beats his own record



Photo courtesy Idaho Dept. Fish and Game

Dan Steigers holds his 9.72 pound smallmouth bass caught Oct. 28 at Dworshak Reservoir. Steigers broke his own record for the State of Idaho.

Dan Steigers of Juliaetta, Idaho, caught the 9.72-pound fish, replacing his previous 8.31-pound smallmouth bass state record also caught in Dworshak Reservoir on Oct. 14, 1995, according to an Idaho Fish and Game news release. The new record bass measured 23.75 inches in length and 20.5 inches in girth.

“At first, I didn’t really believe I’d caught another record fish. I’m pretty lucky, I guess,” said Steigers, a 49-year-old Juliaetta native who spends much of his free time enjoying the outdoors. Steigers grew up in Orofino and fished at Dworshak Dam “before it ever reached full pool after the dam was put in. I love the lake – if I’m not fishing, then I’m just bobbing around in my boat enjoying it.”

Dworshak natural resource officials shared Steigers’ excitement about the record catch.

“We’re thrilled about the state record smallmouth being caught in Dworshak

Reservoir for the second time in a row,” said Paul Pence, Walla Walla District natural resource manager at Dworshak Dam and Reservoir. “Food source productivity in Dworshak Reservoir is low, so this is probably a very old fish – a giant for this species in this reservoir.”

Dworshak Reservoir is about 54 miles long and has a surface area of about 20,000 acres. Visitation to Dworshak during fiscal year 2005 was 134,497. For more information, call the Dworshak Visitor Center at (208) 476-1255.

Idaho sportfish records are listed in IFG’s annual fishing rule book and posted online at <http://fishandgame.idaho.gov/cms/fish/> — click on “Idaho Record Fish.” State record sportfish application forms are available at IFG offices located in Lewiston, Coeur d’ Alene, Nampa, McCall, Jerome, Pocatello, Idaho Falls, Salmon and Boise. Fishers who believe they have caught a record-setting fish should first get the fish weighed on a certified scale; an IFG official must verify the catch. The national record is held by angler D. L. Hayes who caught an 11.9-pound smallmouth bass on July 9, 1955, in Dale Hollow Lake along the border between Tennessee and Kentucky.

By Gina Baltrusch

A new Idaho state record smallmouth bass was caught Oct. 28, at the U.S. Army Corps of Engineers’ Dworshak Reservoir near Orofino, Idaho.

NWW launches nutrient supplementation program at Dworshak

by Joe Saxon

Fertilizing is nothing new to most people. Just sprinkle some on the lawn, water for a couple of weeks, add a dose of sunshine and before you know it, you’re spending half your weekends cutting grass.

Environmental caretakers at the U.S. Army Corps of Engineers (Corps) Walla Walla District will take that fertility rite to new depths, literally, by fertilizing the Dworshak Reservoir.

According to Cindy Boen, the District’s project manager for the Dworshak Nutrient Supplementation Pilot Program, “We’re proposing to improve the aquatic environment of the reservoir and tributaries through the addition of nutrients.”

Nutrient levels in the Dworshak reservoir have declined since the Dworshak Project was constructed Boen said. This five year partnership between the U.S. Army Corps of Engineers and the Idaho Department of Fish and Game “will determine the efficiency and feasibility of instituting a nutrient supplementation program in Dworshak Reservoir,” she said.

The Corps and Idaho Department of Fish and Game will

apply a specially blended liquid phosphorous and nitrogen fertilizers in very specific amounts and ratios via barge. Applications will occur once weekly from late March through September over a five year period.

Technicians will monitor water quality within the reservoir and below the dam three to four days after an application of fertilizer, and will reevaluate monitoring frequency after the project’s initial year.

Boen said “This effort should boost the health of phytoplankton, which impacts the Dworshak Reservoir food chain.” Kokanee salmon, which represents 60-70% of the total annual fishing effort on Dworshak, feed on zooplankton, which in turn, feed upon phytoplankton.

“Applying specific formulas and amounts of fertilizers to the length of the reservoir weekly through spring and summer should improve water quality and fish populations due to the increased quantity and quality of organisms in the food chain,” she said and “increase transfer of nutrients from the reservoir to tributaries via spawning kokanee.”

Time in Iraq chance to help people

by Rick Haverinen

Tony Sijohn looked at his four months in Iraq as an opportunity to help people.

"I really believe in what the Corps is doing over there and the positive things that are going on," Sijohn said. "I really wish the media would show more positive things such as rebuilding the schools, improving the water treatment plants and providing electrical power."

Sijohn is a power plant mechanic at Little Goose Lock and Dam but for four months in 2004 he was a construction quality control representative for the U.S. Army Corps of Engineers in the Kirkuk area of Iraq.

"Basically we watched how the contractors worked to make sure that they were building with quality and not just throwing something together," Sijohn said.

Sijohn used his construction know-how to monitor work on three large-scale projects: an Iraqi army base, a domestic water treatment plant, and a gas-fired electrical generation plant.

"We took the blueprints out and verified plans for the buildings," Sijohn said. "We'd make sure everything was correct per the drawing. We made sure the roads were going to be cut where they were supposed to be. They dug out the foundations for the buildings and then they laid the gravel and we watched how they did pours, which had to cool at a certain rate or else the concrete would crack."



Tony Sijohn visits the eternal flame in Kirkuk, Iraq in July 2004.

Sijohn also found himself teaching building trade skills. "They were just spot tying rebar all over the place," Sijohn said. "We'd tell them we wanted it 100 percent tied, and then we showed them how to tie the rebar. The contractors really should have been showing them that but it just seemed easier as we were walking around to show how to do it. And there were safety concerns. We saw they were using old vegetable oil cans for drinking water at the army base. It looked like they took a can opener and peeled the lid open and threw a block of ice in. So we advised the contractors that they needed to get a proper water coolers and sanitary places to store their ice. They were just putting their ice on the ground and throwing a piece of burlap over it."

Sijohn said insurgents fired mortars or rockets uncomfortably close to where he was on several occasions.

"At the Iraqi army base one day we took rockets and we didn't have a bunker," Sijohn said. "We didn't know what to do at first but we thought, 'We can't leave here. We can't have 1200 (Iraqi workers) watch us get in a rig and leave just because it gets hot.' So we put our gear back on and we went back to work like nothing happened. But a lot of people do that and I did that every few days. So I've seen a lot of personal courage over there and I was glad to be a part of it."

USACE photo by Miles Johnson, Little Rock District, Southwest Division

WHERE I SIT, from page 2

itself, we must consider other systems. How do hydropower generating units in one powerhouse, or the 35 powerhouses in FCRPS, support the largest electrical power system in both the Northwest and because of its hydropower, the energy needs of the nation? We could speak of our District's or other agencies' powerhouses and what part of the FCRPS each is, but that would defeat the purpose of a system approach, wouldn't it? A system approach would say a unit is important, a powerhouse even more so and a power system again more so. An office, or district, or other organization in itself must defer to and provide stewardship to the system. How do those units support the FCRPS generation and transmission system and also renewable electrical resources such as wind and solar-powered generation? How about Energy Northwest, the only nuclear generating station in the Northwest and the 36th plant in the FCRPS? A focus on the system brings folks together for a

common cause; a pretty important thing when it comes to stewardship.

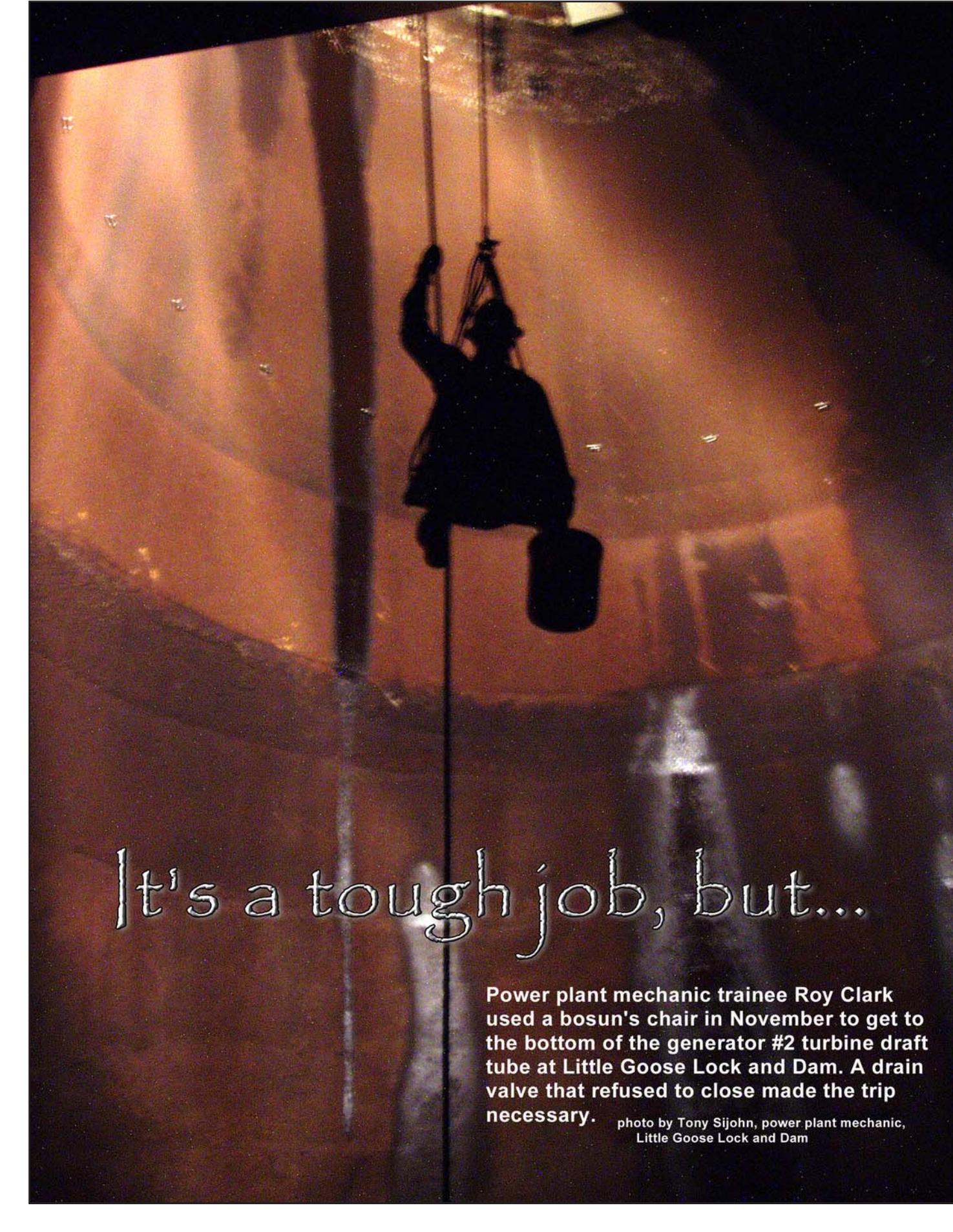
Up to now I have been electrically oriented, but what about the environmental system and that continuing "stick together or hang separately" stuff? We all could look at each activity such as power generation, fish passage and habitat, wildlife habitat, water quality, land stewardship or erosion, public use areas, cultural resources, recreation, navigation, flood damage reduction, et al, separately as business lines or missions. Tunnel vision might make us believe our specialty is the most crucial of all else that is important. Striving for perfection in one thing while ignoring everything else is not success, at least not for long term goals.

Where overall risk and reliability of systems are concerned, no individual item is independent. All parts interact and have value that is hopefully measurable against definable criteria. Performance measures are vital because what gets looked at gets attention. Measuring the right things is extremely important. Those who develop the measures have quite an obligation to

use a whole-system approach to discriminate the important from the urgent. Asset plans, which we have been developing for the FCRPS plants, strive to address all aspects of multipurpose hydroelectric systems, plus navigation, flood damage reduction, recreation, environmental stewardship, and everything else. The asset plan must contain conclusions that determine the value of each purpose so decisions can be made on appropriate life cycle decisions. Life cycle includes conception of an idea, through its birth, the expected life of the entity, to its rebirth and next life.

By evaluating the value of a system and its parts, the common cause becomes clear when the tough decisions must be made and no one thing counters the value of another. We strive to maximize the overall value without discounting any subsystem or component, kinda like that "synergy" that was a recent buzzword.

Charlie Krahenbuhl has recently retired as supervisory electrical engineer in the Business and Environmental Branch of Walla Walla District.



It's a tough job, but...

Power plant mechanic trainee Roy Clark used a bosun's chair in November to get to the bottom of the generator #2 turbine draft tube at Little Goose Lock and Dam. A drain valve that refused to close made the trip necessary.

*photo by Tony Sijohn, power plant mechanic,
Little Goose Lock and Dam*