

MONTANA CURRENTS



Summer 2011

Rare bull trout make historic climb at PPL Montana's advanced fish ladder at Thompson Falls Dam

Hundreds of miles in Clark Fork River system now reopened to native Montana trout and other fish species

It weighed in at only three-quarters of a pound, but it was a native Montana bull trout and that made all the difference.

The first bull trout, a 14-incher, recently made the climb over the new fish ladder at PPL Montana's Thompson Falls hydroelectric plant, a significant landmark for Montana's rich fisheries habitat. Close to 100 other trout of various

species have also made it up the ladder and released upstream.

"Montana Trout Unlimited is excited to hear that PPL Montana's fish passage system at Thompson Falls is up

and running and passing fish, including bull trout," said Michael Gibson, outreach director for Montana Trout Unlimited.

"Time will tell, but our hope is that the new system will have a positive impact on trout populations in the Clark Fork below St. Regis while also providing connected habitat for migrating bull trout," Gibson said. "Initial reports of fish passage at Thompson Falls are encouraging considering the current cold water temperatures. Coupled with the removal of Milltown Dam and work being done on the upper river and its tributaries, the future looks bright



for the Clark Fork River."

PPL Montana's fish passage system at Thompson Falls is the first full-length fish ladder in the United States specifically designed to accommodate bull trout, a federally listed threatened species. It's also the tallest fish passage facility of its kind in Montana. The advanced fish passage system that PPL Montana funded, built and dedicated last year is helping

the bull trout reach its spawning area on the Clark Fork River

"The recent, successful passage of the first bull trout was a significant milestone, marking the first time the species used a full height fish ladder in the United States," said Mark Wilson, field supervisor with the U.S. Fish and Wildlife Service's Division of Ecological Services in Helena.

"Every time I see the Clark Fork River, I'm reminded of one of the great symbols of Montana's

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PPL Montana honored for role in park restoration

PPL Montana's support in restoring masonry structures, bridges and other resources at Giant Springs Heritage State Park has earned the company a 2011 Historic Preservation award from the Great Falls/Cascade County Historic Preservation Advisory Commission.

"PPL Montana and its employees deserve recognition for their work along the Missouri River here in Great Falls," said Ellen Sievert, Great Falls/Cascade County historic preservation officer. "Giant Springs Heritage State Park is our most visited state park, and the improvements made in the restoration of masonry structures on Roe Island at the park could not have been done without the support of PPL Montana."

The area that comprises Giant Springs Heritage State Park, across the Missouri River from PPL's Rainbow dam, was discovered by the Lewis and Clark Expedition in 1805 and contains one of the largest freshwater springs in the world. More than a quarter of a million people visit the park each year.

The work to restore the structures, built in the 1930s by the federal Works Progress Administration, was funded by PPL Montana and the Missouri-Madison River Fund, a \$6.1 million trust fund for public recreation.

"PPL Montana has been a steadfast partner and friend of the Great Falls area, working not only to preserve the structures in the park but also to create recreation opportunities and conservation easements at significant Lewis and Clark sites," Sievert said. "The commission appreciates the substantial role that PPL Montana has played in the preservation of resources in the river corridor."

PPL Montana's funding to support the River Fund is part of an overall \$40 million commitment since 2000 for recreational and other wildlife, fisheries, habitats and water quality river stewardship projects along a 524-mile portion of the Madison-Missouri River corridor. PPL Montana has nine reservoirs under its Missouri-Madison federal operating license.

Improvements to this bridge at Roe Island were supported by PPL Montana.



Rare bull trout

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legendary fisheries habitat — the native bull trout," he said. "The promising start to PPL Montana's ladder operation is encouraging for everyone who cares about Montana fisheries and the health of our rivers."

Once spring arrived, Clark Fork River fish began to climb the new fish ladder at PPL Montana's Thompson Falls hydroelectric plant.

So far, PPL Montana has examined and passed upstream nearly 100 trout, including bull, cutthroat, rainbow and brown species, said Jon Jourdonnais, manager of hydro licensing and compliance for PPL Montana.

The first fish, an adult rainbow trout, successfully climbed the ladder on March 21. The largest fish to climb the ladder so far is a five-pound rainbow.

Thompson Falls' steel and concrete ladder system has 48 step pools that permit fish to gradually ascend about 75 feet to the top of, and over, the dam.

A strong surge in upstream movement of fish is expected after peak spring runoff as flows reduce and water temperature increases, supporting the general upstream migration.

Advanced biological monitoring, trapping and tagging technology, and adaptive ladder operations, will allow fisheries biologists to better support and enhance fish movement patterns and timing of runs in the Clark Fork River.

The Thompson Falls fish ladder project is part of PPL Montana's federal operating license in compliance with the Endangered Species Act.



Plant has positive effects on Montana's economy, families



The Colstrip power plant has far-reaching, positive effects on the economy, jobs and the quality of life in Montana, according to the results of a recent study by economists at the University of Montana.

The study, commissioned by the owners of the Colstrip power plant — PPL Montana, Puget Sound Energy Inc., Portland General Electric Company, Avista Corporation, PacifiCorp and NorthWestern Energy — shows that Montana has a stronger and more prosperous economy because of the Colstrip power plant.

Specifically, the report finds that because of the Colstrip power plant, Montana has:

- 3,740 more jobs, including 2,688 private sector jobs.
- \$360 million more in personal income.
- \$638 million more net output produced.
- 7,700 more residents, based on the jobs attributable to the plant.

“The report confirms that responsible operations of the Colstrip power plant by its owners have benefited the community and the state far beyond the electricity we generate,” said Pete Simonich, vice president and chief operating officer of PPL Montana, the company that operates the power plant. “The plant provides good-paying, family-sustaining jobs for hundreds of people,

many of whom make their home and raise their families in Colstrip, and creates a large economic ‘ripple effect’ that reaches across the state from the business activity and tax revenue the plant generates.”

The four-unit Colstrip power plant in Rosebud County is the second largest coal-fired power plant west of the Mississippi River, capable of generating 2,094 megawatts of electricity. The plant employs about 360 people and uses locally mined, low-sulfur Montana coal.

Patrick Barkey, director of the University of Montana’s Bureau of Business and Economic Research and co-author of the report, said that without the Colstrip plant the economy of eastern Montana would be profoundly different.

“The fundamental conclusion of this study is that the contribution that has been made, and continues to be made, by the generating facility in Colstrip is larger than many Montanans may realize,” Barkey said. “When you look statewide, the impact is significant. Colstrip directly and indirectly accounts for nearly \$104 million in taxes paid to state and local governments in Montana, with roughly two-thirds of this total paid to the state and benefiting all Montanans.”

To read the complete report, visit www.colstripeconomicreport.com.

PPL Montana employees plan Earth Day, Arbor Day activities at Pine Butte Elementary School

PPL Montana employees at the Colstrip power plant participated in several recent community activities in celebration of Earth Day and Arbor Day.

Employees sponsored an Earth Day program at Pine Butte Elementary School, where students kicked off the program with poems about recycling and taking care of our earth.

Bill Neumiller, a senior environmental engineer at the Colstrip power plant, gave a presentation about the importance of recycling and how the plant recycles some of its materials, how the city of Colstrip is keeping the city clean by recycling and how the schools are doing their part by recycling.

As part of the program, PPL Montana gave away five composting bins and students participated in a community cleanup.

Neumiller returned to Pine Butte Elementary School on May 5 to give a presentation on the importance of trees as part of the Colstrip Tree Board's Arbor Day activities at the school. The Colstrip Tree Board is receiving its sixth Tree City USA award in 2011.

Pine Butte students participated in a performance featuring singing and dancing. The power plant sponsored this event, which featured a poster contest for students in Grades K-5 and a tree planting at the school and local parks.

Colstrip overhaul improves reliability, boosts local economy

PPL Montana has invested \$67 million in improvements for Units 2 and 3 at the Colstrip power plant, a project that's not only important to the reliability of the plant but also to the local economy.

"The work involved 375 PPL Montana employees and about 500 outside union craftspeople and specialized engineers and technicians," said Neil Dennehy, manager of the Colstrip power plant.

"About 30 percent of the outside workers found accommodations in Colstrip while others stayed in Forsyth, Hardin and Ashland," he said. "The influx of extra people also means more business for local restaurants, Laundromats, grocery stores and small businesses. It's been a real boon for the local economy, and all of our local communities embrace the part-time residents who come here to work."

This year marked the 35th year of overhauls of generating units at Colstrip. During the overhaul, the units are completely dismantled for inspection and repair.

"We inspect the boilers and rewind generators. All of the internal parts — pumps, gearboxes, motors and material handling systems — are also taken apart and inspected," Dennehy said. "All worn out equipment is replaced."

Unit 2 generates 307 megawatts of power, Unit 3 generates 740 megawatts.

"Our maintenance overhaul is one example of the commitment PPL Montana makes to operate the Colstrip plant safely and reliably," Dennehy said.

Colstrip, one of the largest coal-fired generating plants in the West, is operated in an environmentally

responsible manner. All four units have scrubbers, and the plant's use of low-sulfur Montana coal minimizes emissions of sulfur dioxide. Colstrip last year commissioned a system designed to reduce mercury emissions by up to 90 percent on all four units.

Operated by PPL Montana, Colstrip is owned by PPL Montana, Puget Sound Energy Inc., Portland General Electric Company, Avista Corporation, PacifiCorp and NorthWestern Energy.

The generator stator contains a rebuilt blower shroud that provides a uniform flow of hydrogen gas used for cooling the generator rotor.



Generator core repainted. The generator stator consists of an iron core that provides a magnetic path and support for the newly installed 72 copper bars that create the end product, electricity.

Employees at Hauser Dam receive top federal safety designation

PPL Montana now has seven ‘Stars’ in its safety constellation.

PPL Montana employees at Hauser Dam recently learned that their hydroelectric plant near Helena has been certified as a “Star” facility under the U.S. Occupational Safety and Health Administration’s Voluntary Protection Program, or VPP.

Hauser has joined the Colstrip, Corette, Kerr, Holter, Madison and Thompson Falls power plants as certified Star sites in VPP, which recognizes facilities that go beyond compliance to protect employee health and safety. The Star certification is the highest safety recognition given in the program.

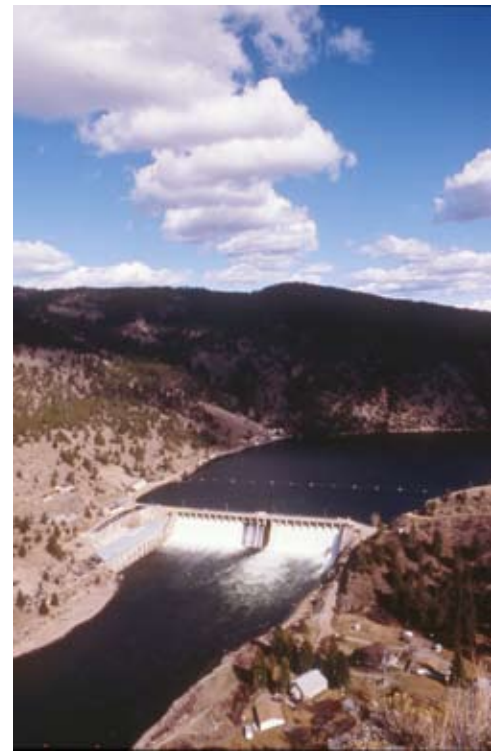
“It is my sincere pleasure to inform you that the Hauser hydroelectric project has been officially approved as a VPP Star site,” said Brad Baptiste, VPP manager for OSHA Region VIII in Denver.

“Congratulations on this noteworthy achievement, and thank you for your commitment to employee safety and health excellence.”

Crew members at Hauser are Gary Bergum, Ted Zimmerman, Dan Kokoruda, and Dave Schatzka. Jeremy Butcher, a PPL Montana safety/industrial hygiene professional, helped the crew prepare the application.

When PPL Montana’s Corette power plant received its VPP Star in 2005, it became the first industrial worksite in Montana to earn that designation. Of the eight VPP Star sites in Montana, seven belong to PPL Montana.

Hauser Dam, a six-unit hydroelectric plant on the Missouri River about 14 miles northeast of Helena, has been producing clean, renewable energy for 100 years. It is one eight hydroelectric plants and one reservoir along the Missouri and



Madison rivers covered under PPL Montana’s federal operating license.

Hauser Reservoir and nearby Lake Helena are popular sites for recreational activities such as fishing and hiking. Numerous campgrounds dot the river above and below the dam.

PPL Montana’s Rainbow Dam expansion project passes halfway point

The expansion of PPL Montana’s Rainbow hydroelectric plant is more than 60 percent complete and on schedule despite the record rainfall this spring and continuing high flows on the Missouri River.

“Crews working at the construction site recently embedded all of the major turbine components in concrete, a key milestone in the \$230 million expansion project at Rainbow,” said Pete Simonich, vice president and chief operating officer of PPL Montana. “Our next milestone is the completion of the powerhouse, which is expected in late summer. The entire



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Rainbow Dam *(continued from page 3)*

project is expected to be completed in 2012.
“The new Rainbow hydroelectric plant taking shape on the Missouri River is poised to bring more clean, reliable energy to the region and power the future, just as it helped provide power and fueled economic growth at the dawn of the industrial age in Montana back in 1910,” he said.

With a single 62-megawatt unit in the new powerhouse, PPL Montana will increase by 70 percent the amount of clean, renewable power it generates at its Rainbow facility. Smaller units, installed between 1909 and 1930 with a combined capacity of 35 megawatts, are being replaced with the single unit that can generate enough electricity to power about 45,000 homes.

Since the start of the project in the fall of 2009, the Rainbow redevelopment has created hundreds of local construction jobs and boosted the local economy.

Brett Doney, president and chief executive officer of the Great Falls Development Authority, said the work at Rainbow, which has involved more than 45 Montana subcontractors and suppliers, is the largest private sector project, in terms of dollars, in the history of Cascade County.

“There are many local workers and other people from across the state who are living here, buying products and using an array of services available in the Great Falls area,” Doney said. “The nature of construction jobs such as this is that a lot of work gets done on site, and that requires supplies from local vendors and businesses. It’s a ripple effect.”

“Just as it did back in 1910, Rainbow once again is providing a large boost to the local economy,” Simonich said.



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