



Journal

October 2013

A million chinook flood the Columbia

On Sept. 24, the number of adult chinook salmon safely passing Bonneville Dam exceeded 1 million, by far the largest number on record at the storied hydro-power project.

Chinook numbers reached a staggering 1,006,619, with more than two months remaining in the run. This return was largely buoyed by a fall chinook run that numbered 830,177 by the same date.

For comparison, the corresponding 10-year average of chinook is 563,957; for fall chinook it's 345,468. The next-highest return occurred in 2003, with 921,314 chinook returning by Dec. 31 of that year.

This year also registered the top three daily returns, with a single-day return record of 63,870 set on Sept. 9.

The returns are the result of many factors, including efforts by federal, tribal, state and local groups to improve the conditions for salmon and steelhead during the periods of their lifecycle spent in the Columbia River Basin. Many of these improvements have been funded by BPA ratepayers and include estuary and tributary habitat restoration, federal hydropower dam fish passage improvements, modernizing hatcheries and addressing harvest and predation in the river system. Favorable ocean conditions over the past few years also played a significant role.

While many of the chinook were headed for the northern reaches of the Columbia and Hanford Reach in eastern Washington, a significant number headed down the Snake River as a result of a hatchery supplementation program established by the Nez Perce Tribe. These Snake River fall chinook are listed under the Endangered Species Act.

More than 40,000 fall chinook have made their way past Lower Granite, the last of the federal dams on the lower Snake River.

For current return numbers, go to the Fish Passage Center website at www.fpc.org, click on "Adult Data" in the left hand column and select "Daily Passage Report."



Photo courtesy of USFWS Pacific.

Treaty recommendation out for comment

The U.S. Entity, in consultation with Northwest states, tribes, federal agencies, public utilities and other stakeholders, released a draft recommendation for modernizing the 50-year-old Columbia River Treaty with Canada. The Entity, made up of the BPA administrator and the Northwestern Division engineer of the U.S. Army Corps of Engineers, will submit a final recommendation to the U.S. Department of State in December.

The Columbia River Treaty Review Draft Regional Recommendation is available for public review and comment through Oct. 25.

"While the region has realized substantial benefits from the Treaty since its inception in 1964, its modernization is a potential win-win opportunity for the region to achieve additional environmental and economic benefits from the Columbia River," said Elliot Mainzer, acting BPA administrator.

"We have made major progress in getting to this draft recommendation," said Col. John Kem, Northwestern Division commander, U.S. Army Corps of Engineers. "While we have additional work ahead of us, I am hopeful and confident that the region will come together in support of a final consensus recommendation later this year."

The modernized Treaty envisioned in this draft recommendation would include an ecosystem-based function as a



third primary purpose of the Treaty to ensure a more comprehensive approach throughout the Columbia Basin watershed. It would also better address the region's interest in a reliable and economically sustainable hydro-power system; continue to provide a similar level of flood risk management to protect public safety and the region's economy; and create flexibility within the Treaty to respond to climate change, changing water supply needs and other potential changes in system operations, while continuing to meet authorized purposes, such as navigation.

The draft recommendation identifies the method included in the Treaty for calculating Canada's share of power benefits generated on the U.S. portion of the system, called the Canadian Entitlement, as outdated and no longer equitable, resulting in an unnecessarily excessive cost to regional utility ratepayers. It emphasizes that it is important that any modernized Treaty more accurately calculate and equitably balance the actual benefits of coordinated power operations. The recommendation also advocates that any Treaty modifications result in a net power benefit.

Current assured flood control storage arrangements provided by the Treaty for its first 60 years will change in 2024, whether the current Treaty continues or not. After 2024, the U.S. still has access to Canadian storage for flood control, but must request the storage when needed, unless other arrangements are made with Canada. The U.S. must pay Canada for the operating costs and economic losses from this "called-upon" flood control storage.

Ecosystem-based function refers to environmental conditions including river flows, water quality and the cultural and societal benefits of healthy fish and wildlife populations, including the management of river flows to aid fish migration. The incorporation of ecosystem-based objectives has been a major area of interest in the Treaty review process and is prominent in the draft recommendation for this reason.

After several decades of successful incorporation of ecosystem objectives into Columbia River Basin management through extensive domestic initiatives, as well as under the current Treaty by annual or seasonal agreements with Canada, the U.S. Entity believes that the Treaty could be modernized to reflect and further build upon the evolution of ecosystem as another important aspect of system operations. In addition, the recommendation advocates flexibility in the post-2024 Treaty design to allow for future changes that may be brought about by climate change.

By December, the U.S. Entity must deliver the final version of the regional recommendation to the U.S. Department of State. The Department of State will use the document

to begin the federal government policy review process to decide whether to proceed with a Treaty modernization effort with Canada. If a decision is made to enter into negotiations, they will be led by the Department of State, not the U.S. Entity. The Department of State has stated that it will need regional involvement and expertise should it open negotiations.

For more information on the Columbia River Treaty Review, including the draft recommendation, go to www.crt2014-2024review.gov.

Snake River sockeye hatchery opens

Two decades after a single male sockeye salmon dubbed Lonesome Larry returned to Idaho's Redfish Lake, the plight of the sockeye is becoming a distant memory, thanks in part to the new Springfield Fish Hatchery.

More than 140 people gathered to watch the dedication of the \$13.5 million hatchery in September. Funded by BPA ratepayers, the facility will produce up to 1 million Snake River sockeye smolts each year and help BPA meet part of its obligation to mitigate the impact of federal hydropower dams on salmon and steelhead in the lower Columbia and Snake rivers.

The 73-acre facility will be operated by the Idaho Department of Fish and Game. It is the next step in re-establishing a natural population of the iconic species.

"The story of the Snake River sockeye is one of perseverance. Their numbers were once so depressed by harvest, predation, habitat loss and dams that many in the scientific community declared them functionally extinct," said Lorri Bodi, vice president of BPA's Environment, Fish and Wildlife organization. "But these fish are survivors, and the state of Idaho, BPA, Shoshone-Bannock Tribes and others weren't willing to give up on improving conditions for these fish. The Springfield Hatchery is just one piece of a larger effort that has proven successful in bringing back the Snake River sockeye."

The fish were listed as an endangered species in November 1991. In May of that year, the Snake River Sockeye Captive Broodstock Program was established by Idaho Department of Fish and Game, BPA, NOAA Fisheries, Shoshone-Bannock Tribes and the Oregon Department of Fish and Wildlife. The broodstock program sought to preserve the genetic diversity of the species and prevent its extinction.

In 1992, Lonesome Larry was the only male sockeye to return from the ocean to Idaho's Stanley Basin. In 1995 and again in 1997, no adult sockeye returned to the basin. But by 2010, the return reached 1,336, a number not seen since the 1950s.

The creation of the Springfield Fish Hatchery in Bingham County will allow the broodstock program to focus on increasing smolt production to assist in large returns of ocean-run adult sockeye to the Stanley Basin. The adults will be used in hatchery spawning as well as released to natural habitat to spawn. The increase in adult fish may eventually lead to recreational and tribal fishing seasons.

The current run of sockeye into the Snake River is one of three remaining populations in the Columbia River Basin. The other two populations are in Okanagan and Wenatchee lakes, on tributaries of the upper Columbia River.

LiDAR program maps corridor to success

BPA's Vegetation Management program, which uses advanced Light Detection and Ranging (LiDAR), was nationally recognized for excellence this year. The laser-based survey tool is mounted on helicopters to identify potentially devastating risks to grid reliability from trees growing or falling into transmission lines. A touch from a tree can trigger a flashover, fire or power outage.

Since launching LiDAR five years ago, BPA staff can view color-coded 3-D snapshots of every foot of the 15,000-circuit-mile transmission system. It allows the agency to recognize dangerous trees more rapidly and accurately, making outages less likely.

The agency's innovative use of LiDAR was recognized in March by the North American Transmission Forum as a national example of excellence.

"With the LiDAR program, BPA is able to have a much greater understanding of the state of the grid," says geographer Ryan Beck, the BPA Remote Sensing team lead. "And we're mapping a corridor in a matter of minutes or hours that historically would have taken a traditional field survey crew months to do."

BPA used to experience unwelcome tangles with trees several times a year, but this summer the agency marked five years since suffering an outage caused by a tree growing into a line. Also this summer, the LiDAR program completed a half-decade effort to map the entire BPA grid, which reaches seven states.

Before LiDAR, BPA's primary means of assessing dangerous trees was putting crews on the ground. That method is only 53 percent accurate, according to a comparative study led by Steve Narolski, BPA Vegetation Management and Access Maintenance program manager.

Imagine eyeballing every tree along transmission corridors lacing some of the most rugged country in the West — and manually documenting every arboreal troublemaker. BPA performed that enormous task under great pressure after an outage in 2008, caused by a 230-kilovolt line sagging into a cherry tree near Wilsonville, Ore.

When BPA reported the outage, the Western Electricity Coordinating Council responded in a big way, issuing an order for BPA to immediately inspect every foot of right-of-way for vegetation that could jeopardize the reliability of the grid. BPA sprinted to complete the comprehensive inspection more than a month ahead of the prescribed 90 days. It was a transformative experience that jolted BPA to take a more proactive approach to managing vegetation.

From its vantage point aboard a helicopter, LiDAR peppers a slice of the landscape with rapid pulses of light, producing a pattern of data points. BPA collects 40 points of measurement per square meter.

When the data is imported to the computer-aided-design software that BPA uses to draw transmission lines, the points reassemble into vivid shapes on a 3-D map revealing every tower, line and tree.

The software applies BPA's transmission clearance standards of 10 to 25 feet, depending on voltage and tree location, and potential threats pop out on the screen like color-coded villains in a video game. Yellow trees are getting too close to the conductor. Red trees are already violating the safe clearance, which triggers a crew visit to the site within 72 hours.

Perhaps the most remarkable fact, as pointed out in the North American Transmission Forum's article, is that LiDAR is 99 percent accurate. That means accurate within 6 inches from 500 feet up.

Watch us work

CREWS TEAM UP FOR EMERGENCY REPAIRS

Imagine a cloud of dust billowing toward you, turning daylight into darkness. That's what residents and BPA personnel in central Washington experienced when a powerful dust storm barreled through the area on Sept. 15. The storm toppled 48 wood poles and shredded the conductor. See how crews repaired the damage, and find out what made this outage an emergency.

TO WATCH this and other videos, go to our **YouTube** channel at www.youtube.com/BonnevillePower.

AGENCY PROJECTS

Columbia River Treaty 2014/2024 Review [Regionwide]

The U.S. Entity released its Draft Regional Recommendation concerning the future of the Columbia River Treaty with Canada. This document is a result of a multi-year, collaborative process between the U.S. Entity, Sovereign Review Team and stakeholders. It reflects significant changes from the Working Draft Recommendation released in late June 2013. The Entity is seeking broad regional support — from sovereigns, regional stakeholders and the public — before the recommendation is finalized and presented to the U.S. Department of State in December. The Entity is accepting comments through Oct. 25. To advance the public conversation, the Entity will host public meetings across the region. For meeting details and to see the Draft Regional Recommendation, go to www.crt2014-2024review.gov. Submit comments to www.bpa.gov/comment. For more information, email U.S. Entity staff at treatyreview@bpa.gov, or call BPA at 800-622-4519 or the Corps at 503-808-4510.

OS-14 Rate Case [Regionwide]

In the OS-14 rate case, BPA will propose rates to recover the costs incurred under the Oversupply Management Protocol. Under the new rate case schedule, the draft ROD will be issued Nov. 21. For information, go to www.bpa.gov/goto/RateCase.

Quarterly Business Review [Regionwide]

BPA will hold its Quarterly Business Review on November 5. This meeting will focus on BPA's finances with a review of current fiscal year 4th quarter financial results compared to financial forecasts, such as the start-of-year budget and rate case. Other current agency topics and Operational Excellence initiatives will also be covered during the meeting. For information, go to www.bpa.gov/goto/QBR.

FISH AND WILDLIFE

Draft 2014-2018 FCRPS Biological Opinion [Regionwide]

NOAA Fisheries has released a draft of the 2013 Supplemental Biological Opinion for review. NOAA developed the Supplemental Biological Opinion to address a 2011 court remand order requiring the agency to reexamine the 2008 and 2010 Biological Opinions and requiring more specific identification of habitat actions planned for 2014–2018. The agency will accept public comments through Oct. 7 and develop a final Biological Opinion by December. Public comments may be submitted to 2013DraftFCRPS@noaa.gov. For information, go to www.salmonrecovery.gov.

TRANSMISSION

Montana-to-Washington Transmission System Upgrade Project [Spokane County, Wash.; Nez Perce, Clearwater and Shoshone counties, Idaho; Mineral, Sanders, Missoula and Powell counties, Mont.]

BPA is accepting comments through Oct. 31 on the addition of new substation site alternatives for the proposed Montana-to-Washington Transmission System Upgrade Project. BPA's consideration of the new substation site options is a result of an earlier public comment period on the proposed project, through which the additional sites were

identified. BPA is proposing the system upgrades in response to customer requests for increased transmission service capacity from BPA's Garrison Substation in Western Montana to points west of the Cascades. The upgrades would help BPA accommodate the requests without having to build any new high-voltage transmission lines. For information, go to www.bpa.gov/go/M2W.

Midway-Moxee Rebuild and Midway-Grandview Upgrade Transmission Project [Benton and Yakima counties, Wash.]

BPA proposes to rebuild and upgrade the existing 115-kV wood-pole transmission line that runs from Midway Substation along the Columbia River, southwest to Grandview Substation. BPA will host a public scoping meeting in Grandview, Wash., on Oct. 16. For information, go to www.bpa.gov/goto/MidMoxGrand. **SEE CALENDAR**

I-5 Corridor Reinforcement Project [Cowlitz and Clark counties, Wash., and Multnomah County, Ore.]

BPA and its contractors are beginning work in the existing transmission line corridor along segments 49, 51 and 52 to collect information for the project. The information will help BPA refine the proposed design for the project and determine its potential impacts. For information, go to www.bpa.gov/goto/i-5 or call 800-230-6593.

Boyer-Tillamook Access Road Improvement Project [Tillamook and Yamhill counties, Ore.]

BPA released the preliminary EA in September and is accepting comments through Oct. 21. BPA is proposing this project to improve a 13-mile portion of the access road system for the 115-kV Boyer-Tillamook No. 1 transmission line. For information, go to www.bpa.gov/goto/BoyerTillamookAccessRoads.

CLOSE OF COMMENT

Submit comments to www.bpa.gov/comment.

- **Oct. 21**, Boyer-Tillamook Access Road Improvement Project
- **Oct. 25**, Columbia River Treaty Review Draft Regional Recommendation
- **Oct. 31**, Montana-to-Washington Transmission System Upgrade Project (new substation site alternatives)

CALENDAR OF EVENTS

Midway-Grandview Transmission Line Rebuild and Upgrade Project public meeting

- **Oct. 16**, 4 to 7:30 p.m.
Grandview School District Learning Center, 313 Division St., Grandview, Wash.

4th Quarter Quarterly Business Review

- **Nov. 5**, 9:30 a.m. to 3:20 p.m.
Rates Hearing Room.

To view BPA's public involvement calendar, go to www.bpa.gov/goto/calendar. For Americans with Disabilities Act accommodations, call toll free 800-622-4519.

The Journal is a monthly publication of the Bonneville Power Administration. If you have questions or comments, or you want to be added to the mailing list for any project, call toll free 800-622-4519.

To order copies of documents, call: 800-622-4520 or 503-230-7334. Written comments may be sent to: BPA, P.O. Box 14428, Portland, OR 97293-4428. Email address: comment@BPA.gov. BPA home page: www.bpa.gov. For details on BPA environmental reviews listed above, including site maps and documents issued to date, see www.efw.bpa.gov/environmental_services/nepadocs.aspx. Process Abbreviations: EA-Environmental Assessment, EIS-Environmental Impact Statement, ESA-Endangered Species Act, FONSI-Finding of No Significant Impact, NOI-Notice of Intent, ROD-Record of Decision.

