2024 ANNUAL REPORT TO CONGRESS

Northwest **Power** and **Conservation** Council

NOTES FROM THE CHAIR

As Chair of the Northwest Power and Conservation Council, I'm pleased to share the Council's 2024 Annual Report to Congress.

2024 was a crucial planning year as the Council prepared to accept recommendations to amend the Columbia River Basin Fish and Wildlife Program and laid the groundwork to begin the Ninth Northwest Power Plan. This is a critical time for our region, as we anticipate significant growth in electricity demand from the technology sector, electric vehicles, building electrification, and more, while the resource mix continues to shift.

At the same time, 2024 provided clear examples of both progress and challenges for fish and wildlife. In December, staff's extensive work to assess decades of data from the Council's Fish and Wildlife Program culminated in a presentation on progress made towards goals, objectives, and implementation across the basin.

One of the pillars of the Northwest Power Act is that the Council does its work in public, and with extensive regional engagement. We host monthly meetings across our four states that are accessible both in person and online. In 2024, in addition to our central office in Portland, meetings were held in Astoria, OR; Helena, MT; Olympia, WA; and Coeur d'Alene, ID. The Council also works extensively with diverse partners in the region, including the Bonneville Power Administration and other federal agencies, states, tribes, utilities, ratepayers, and more. As we move through the transparent and collaborative public processes that guide the next Fish and Wildlife Program and Ninth Northwest Power Plan, we invite and encourage everyone with an interest in these important topics to help shape the future of the Columbia Basin.

Mike Milburn, Chair

Please note: Past annual reports have followed a fiscal year format (Oct.-Sept.). For this and subsequent reports, the Council is adopting a calendar year format. To facilitate this transition, this report spans Oct. 1, 2023 to Dec. 31, 2024.

Council members:

Mike Milburn, Chair
Montana

Thomas (Les) Purce
Vice-Chair, Washington

Jeffery Allen
Idaho

KC Golden
Washington

Douglas Grob
Montana

Margaret Hoffmann
Oregon

Charles F. Sams III
Oregon

Ed Schriever
Idaho

COUNCIL OVERVIEW

In 1980, Congress passed the Northwest Power Act, which created the Council. Our mission is to assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply; develop a program to protect, mitigate, and enhance fish and wildlife in the Columbia River Basin that are impacted by the hydrosystem; and to do so with broad public engagement across our four-state region of Oregon, Washington, Idaho, and Montana.

The Council's origin stems from a crisis in Pacific Northwest electricity system planning in the 1960-70s that led to over-investing in power plants. As a result of this over-investing, electric ratepayers in our region are still paying off billions of dollars in debt and are scheduled to continue to do so until the 2040s. These events coincided with major struggles of salmon and steelhead populations in the Columbia River Basin in that era, due to hydropower development, habitat loss, commercial overfishing and other factors.

A look back at our history of power planning

Ultimately, Congress concluded that an independent entity should be responsible for forecasting the region's electricity load growth and recommending which resources should be built. That's why the Northwest's approach to power planning is different from just about everywhere else in the U.S. It is a regionally coordinated, public process where everyone – utilities, interest groups, and individual citizens – can help decide how we meet our energy needs.

The Council blazed an innovative course from the start. Early leaders saw the need for flexibility in forecasting electricity demand as well as planning for new supply- and demand-side resources in the Northwest's power system. Their emphasis on cost-effectiveness and flexibility mitigated risk in electric power investments, while still ensuring the system's reliability and adequacy. Energy efficiency emerged as a go-to way to meet demand at costs much lower than building new plants. This was an ideal fit with the low-cost, reliable hydropower generated by the Columbia River. Over the past 20 years, power supply shortages have been extremely rare in the Northwest – even as extreme weather events have increased – while regional power costs remain among the lowest in the U.S.

A look back at our history of protecting fish and wildlife in the Columbia Basin

The Columbia Basin is roughly the size of France. From its headwaters in the Canadian Rockies, the Columbia flows over 1,200 miles to the sea. The vastness and complexity of its basin is reflected in the scale of the challenge that the Council's Fish and Wildlife Program has addressed over the past 45 years. When we embarked on this journey in 1980, a mitigation program of this size and complexity had never been attempted in the U.S. Today, it is one of the largest in the world. The Program protects anadromous fish like salmon, steelhead, and Pacific lamprey, but also resident fish like bull trout, cutthroat trout, Kootenai River white sturgeon, and burbot. Wildlife species also benefit from the Council's Program. It has required a willingness to embrace uncertainty, design large-scale management experiments, evaluate results, and adjust based on research, monitoring, and evaluation. We've tracked important progress on our goals and objectives, while significant ongoing challenges remain.

POWER PLANNING

2024 in review – Power planning

Our Ninth Power Plan will be addressing and solving the dual challenges of significant load growth and a shifting resource mix in the Pacific Northwest. The Power Act requires us to develop 20-year power plans and review them every five years. In 2024 as in 1980, we saw a clear need for flexibility in how we plan for future electricity demand, and to mitigate risk in electric power investments. Congress created the Council to navigate uncertain moments just like the one we face today. The Ninth Plan's cost-effective resource strategy will ensure the Northwest's power system continues to be adequate, efficient, economical, and reliable over the next 20 years.

Much of the work in developing the Ninth Power Plan will take place in 2025-26. To prepare for this, in 2024 our Power Division staff:

- Developed and updated a mid-term assessment of the 2021 Power Plan, tracking regional resource additions, energy efficiency, demand response, and new load growth, to provide continued guidance to the region between power plans
- Using our new multi-metric approach to adequacy, conducted an assessment of resource adequacy looking out to 2029, which included an updated short-term load forecast and new wholesale market study
- Released an issue paper to solicit public feedback on topics to be considered during the development of the Ninth Power Plan
- Started to evaluate the costs, timelines, and attributes of generating resources, energy efficiency, and demand response over the next 20 years
- Consulted with regional partners through our advisory committees

Our advisory committees consist of utilities and Bonneville Power Administration, regulators, technical experts, and public interest groups from across the Northwest. These committee meetings provide open, public forums to collaborate, check assumptions, and review computer modeling results, among many other vital tasks in developing a power plan.

Load forecast

As part of our assessment on resource adequacy, we produced a new short-term load forecast in spring 2024 that saw potential for significant demand growth by 2029, driven primarily by data centers, chip fabrication, and electric vehicles, among other sectors. However, the amount of future tech-sector demand that will materialize, and by when, is uncertain – so our forecasters created four trajectories to account for this uncertainty. Using our base forecast, we projected growth between 14%-18% by 2029. Medium and high trajectories were between 25%-34% growth over that five-year period. The medium and high growth trajectories will likely be constrained due to infrastructure needs, construction timelines, permitting, supporting power infrastructure and supply, and other factors.

Resource adequacy

Our Power Division analysts tested this new forecast through our multi-metric approach to protecting the Northwest's power system. For many years, the Council – like most power system planners in the U.S. – used a single criterion to ensure the Northwest's electricity grid had adequate resources to meet daily energy needs as well as periods of peak demand. This worked well for a power system

whose predominant resources were hydropower, thermal plants, and energy efficiency, where generation uncertainty was minimal. As the resource mix shifts in the Northwest and more renewable sources come online, a new approach was needed.

The Council implemented a multi-metric adequacy framework in 2023, which provides insights into the frequency, duration, and magnitude of potential shortfall events. An adequate system means all metrics stay within their respective thresholds. This is a major advancement that will help the Council and the region plan for needed solutions in the Pacific Northwest. We were among the first power system planners in the U.S. to adopt this approach.

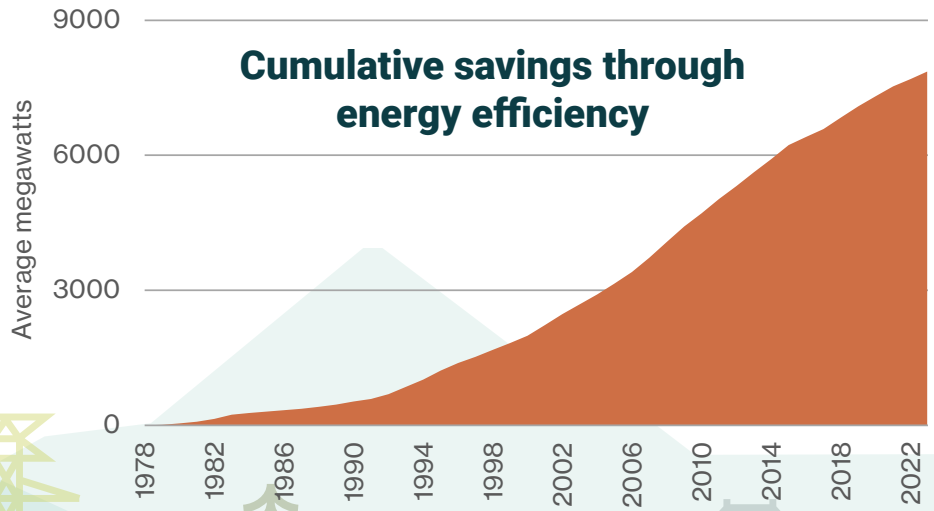
In summer 2024, we published a new adequacy assessment, which analyzed the 2021 Plan's resource strategy in the year 2029, given the recent changes in loads and resource additions. The adequacy assessment found that continuing to implement the power plan strategy assuming a base forecast of load growth would ensure an adequate system. However, two scenarios were inadequate. The first was when tech-sector demand reached the medium trajectory by 2029, and the second was when the Northwest only achieved the low-end of the 2021 Plan's target for acquiring cost-effective energy efficiency.

2021 Power Plan implementation

These findings underscored the importance of fully implementing the 2021 Power Plan, while the Council develops the upcoming Ninth Plan. The 2021 Plan gave the region a target of acquiring 750-1,000 aMW of cost-effective energy efficiency by 2027. For reference, the city of Seattle uses about 1,000 aMW of power every year.

We published new data in 2024 showing significant progress toward those goals. In 2023, the region acquired 160 aMW, following 148 aMW that was acquired in 2022. More work and continued investment will be needed to ensure that the 2021 Plan's targets are met by 2027. The 2021 Plan also identified the need to continue to weatherize homes in the Northwest, and we see more opportunities to do so in the region.

The 2021 Plan also called for the Northwest to acquire at least 3,500 megawatts of renewable energy; low-cost and frequently deployable demand response; and to use the existing system conservatively to provide additional reserves to help integrate new resources. In 2024, the Council reported that the Northwest was on track and making progress to meet key parts of the strategy. However, demand response needed improvement. While some utilities' efforts aligned with the type of demand response recommended in the plan with more region-wide benefits, many focused on products to meet specific, localized needs. Future load growth was also an area of significant uncertainty and risk, which demonstrated why 2025 and 2026 are a critical juncture for planning for the future of the region's electricity grid.



FISH & WILDLIFE

To prepare for the next Columbia River Basin Fish & Wildlife Program amendment process, the Council reviewed the last 40 years of the Program in terms of what measures have been proposed, what actions have been taken, and what data is available to evaluate the outcomes. To do this, staff looked at broad categories under the Program, including hydro operations, habitat restoration, artificial production, and goals and objectives.

Artificial production

Overview: The Columbia River Basin's system of hatcheries serves the primary purpose of mitigating impacts to fish from dams and development. Hatcheries balance and manage risk while working towards meeting mitigation and conservation objectives. The Program has also emphasized that hatchery programs should complement habitat restoration, have regional coverage, meet conservation and harvest objectives, and use the best available science to manage programs adaptively.

Success: The Council's artificial production program includes 39 facilities that operate as part of the basin's hatchery system, with 47 production programs spanning 12 species and implemented by 16 entities. The artificial production program has contributed significantly to preserving threatened and endangered stocks, as well as providing harvest opportunities for tribal and non-tribal fisheries.

Challenges: Ensuring funding for ongoing operations and maintenance as well as improvements and expansion remains a challenge.

Hydro operations

Overview: Management of the federal hydrosystem is complex, and designed to achieve multiple purposes including power, flood control, irrigation, and transportation. The goal of the hydrosystem measures in the F&W Program is to improve conditions for fish, including juvenile and adult migration of anadromous species like salmon and steelhead, mainstem spawning and rearing for salmon, and supporting resident fish. This is accomplished through protecting and restoring ecosystem functions, providing water of adequate quantity and quality, managing dams and reservoir operations to protect and restore ecosystem function and habitat, and improving fish passage and survival through the hydrosystem.

Success: Migration of juvenile and adult salmon and steelhead has benefited from flow measures supported by the Program. Operations and structural improvements at dams have been tailored to specific conditions and structures to improve survival for all life stages of many migratory species. Operations have been implemented that balance the needs of resident fish and salmon and steelhead, such as those at Libby and Hungry Horse dams. Mainstem flow operations have benefited the spawning and rearing of adult salmon including chum and Hanford Reach fall Chinook.

Challenges: Not all flow objectives have been met, but the existence of targets has allowed managers and dam operators to adjust water during critical windows to support salmon and steelhead. And while progress has been made on measures that benefit lamprey, sturgeon, and some resident fish, more work remains to be done.

Habitat

Overview: The habitat category is broad and encompasses topics like predator management, protected areas, wildlife mitigation, and invasive species management in addition to habitat protection, restoration, and enhancement. While the F&W Program initially focused on onsite improvements like fish passage, recent decades have seen the role and importance of offsite mitigation and habitat improvement increase substantially. The Council's Program is part of the tapestry of restoration efforts being implemented by many partners across the basin.

Success: To date, the Program has protected more than 300,000 acres of habitat through protection or easement and improved over 760,000 acres of habitat through restoration. 44,000 miles of Northwest rivers and streams have been protected from additional hydropower development and have remained undammed. The majority of wildlife losses from construction and inundation of federal dams have been mitigated, although mitigation for operational losses remains.

Challenges: Predation and invasive species management have become more of a priority in recent years. While predation on salmon and steelhead by marine mammals and birds is part of the natural food web, alterations to the ecosystem as a result of the hydropower system can mean that predation at certain times and places can have a big impact on survival rates. Invasive species like zebra and quagga mussels pose a huge risk to the region economically and ecologically; the impacts of other species, like shad, are currently less well understood.

Goals and objectives

Overview: As part of the 2020 Addendum process, fish and wildlife managers representing states, tribes, and federal agencies collaborated with the Council to identify goals, objectives, and indicators for the F&W Program.

Columbia River Basin Fish and Wildlife Program

Success: In 2024, staff provided the most detailed reporting to date on progress for performance indicators while also highlighting significant and ongoing challenges. Data on indicators can be found on the Council's Program Tracker. The rolling average of adult salmon and steelhead returns in 2024 remained steady relative to the last decade (more details on next page). Progress was also reported on indicators related to Oregon chub, sturgeon, and Pacific lamprey. Other achievements are captured in their respective categories (artificial production, hydro operations, habitat).

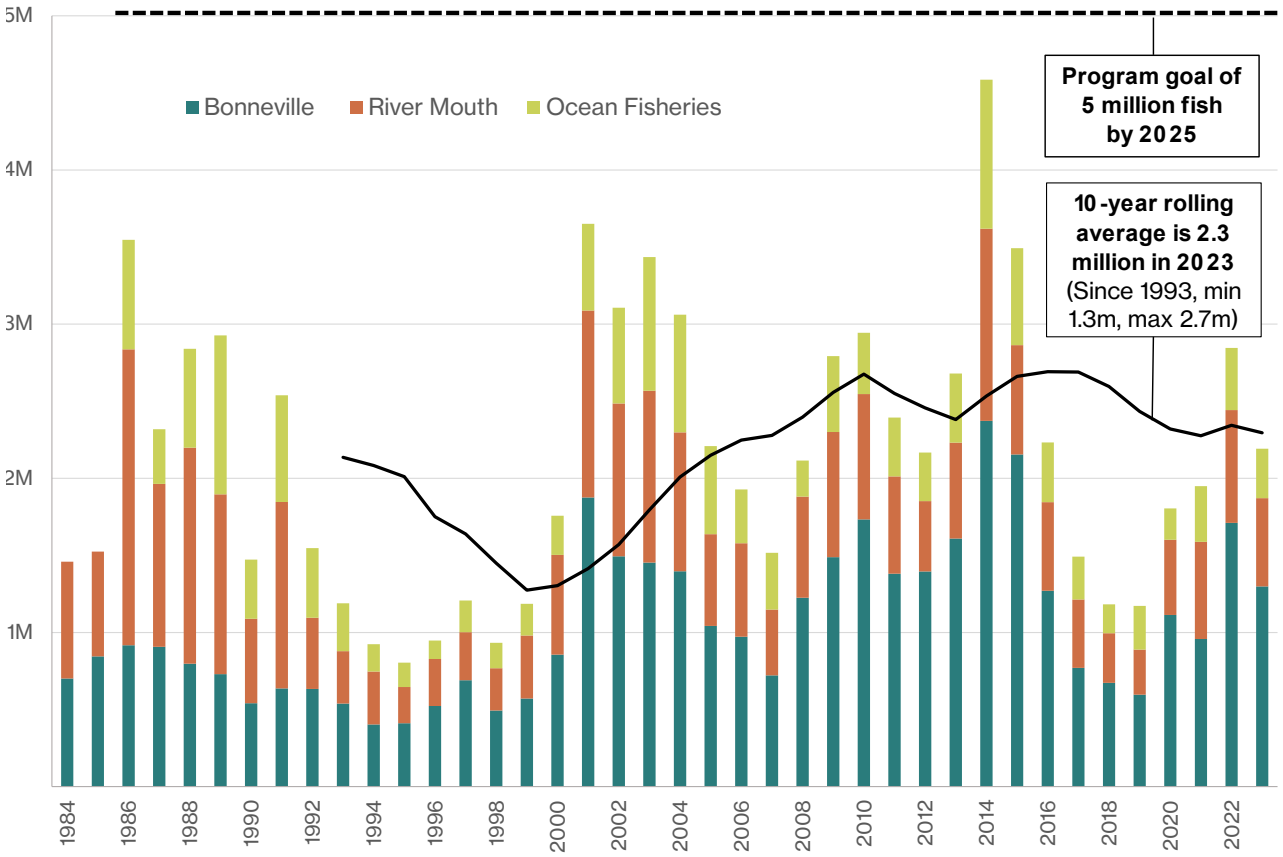
Challenges: Significant challenges to salmon and steelhead, resident fish, and wildlife still remain throughout the Columbia River Basin in terms of declining stocks, climate change, threats from invasive species, changes in the ocean, and more. As the Council heads into the Fish and Wildlife Program amendment process beginning in 2025, we will be looking to our state, federal, and tribal fish and wildlife managers, as well as other regional partners to submit their recommendations for how the Program can continue to address those challenges.

Salmon and steelhead returns

Every year, the Council provides updates on adult salmon and steelhead returns. Staff and partners across the region collaborated to include data from ocean fisheries and the mouth of the river in addition to the counts at Bonneville Dam.

The 10-year rolling average of adult salmon and steelhead returns to the basin was 2.3 million, similar to the 2.4 million average of the previous decade, and a significant improvement from the 1990s when the average dipped to a low of 1.3 million. However, it does not meet the Program's long-standing goal of having 5 million adult salmon and steelhead return to the Columbia Basin annually.

This analysis also showed a positive trend of an increasing proportion of salmon and steelhead migrating to areas located above Bonneville Dam. Getting more adult fish above Bonneville Dam is crucial to supporting tribal harvest, sport fisheries, and natural reproduction in the middle and upper portions of the basin.



DID YOU KNOW?

- Through the Council's energy efficiency measures, the Northwest has saved **8,000 average megawatts** since 1980, enough power for **7 Seattles**!
- And **$5 billion** has been saved in lower bills for energy consumers and avoided costs
- The F&W Program has helped protect **44,000 miles** of undammed Northwest rivers and streams
- Plus over **300,000* acres of habitat** protected through purchase or easement, and **760,000 acres**** improved through restoration

* 1992-2022 ** 2005-2021

ADMINISTRATION & BUDGET

Budget overview

The Bonneville Power Administration funds the Council as prescribed in the Northwest Power Act. Bonneville is a self-financing power marketing authority under the U.S. Department of Energy. The Act establishes a funding mechanism for the Council based on an estimate of Bonneville's forecast annual firm-power sales. Funding for the Council does not come from annual federal appropriations or from state governments.

Budget for Fiscal Year 2025 (revised)

The Council has managed its budget and finances in a responsible and conservative manner since Congress authorized the Council's formation in 1980. The Council's budget ($12.4M for FY 2025 revised) has grown at an average rate less than inflation over the past 40 years and has remained relatively flat. The Council has even historically underspent its budget and returned unspent funds to Bonneville at the end of some fiscal years.

However, despite the Council's prudent management of funds, its budget is beginning to bump up against the cap. The Act envisioned that Bonneville's firm power sales would increase as the region's electric utilities were allowed to place additional loads on Bonneville. Bonneville's funding threshold for the Council would then similarly increase. However, over the last 20 years, Bonneville's forecast for firm power sales has not increased significantly, and has even declined in some years, due in part to the Council's energy efficiency work authorized and required by the Act. The fact that Bonneville's firm power sales have not increased as envisioned when the Act was passed in 1980 means the Council's funding base has remained relatively flat and has not kept pace with inflation.

The Council will continue to work with Bonneville and the Northwest Congressional delegation to identify and develop a path forward that will allow the Council to carry out its responsibilities as mandated by Congress.

PUBLIC AFFAIRS

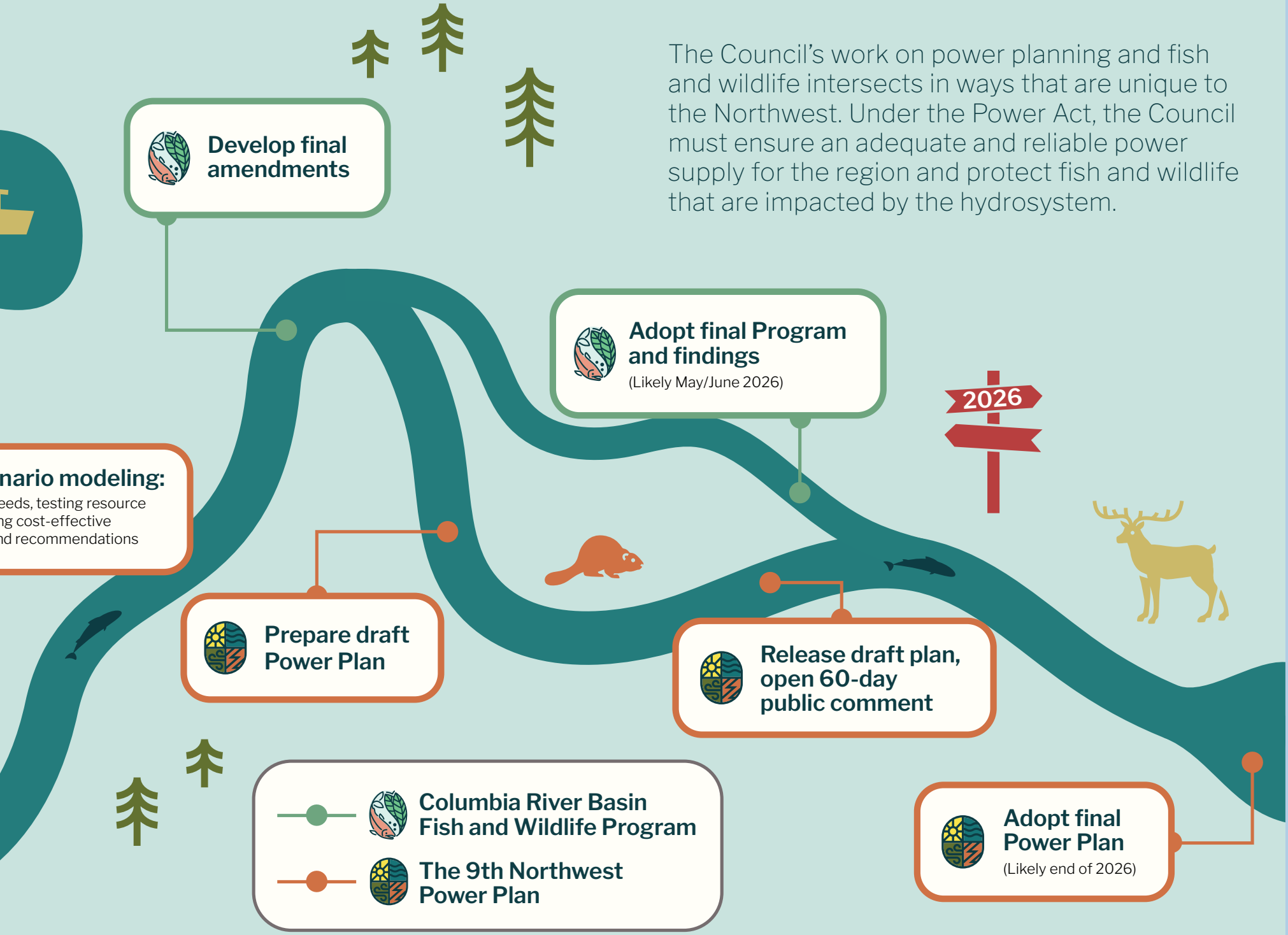
Public engagement is foundational to the Council's decision-making process, ensuring collaboration and transparency. The Northwest Power Act directs the Council to consult with diverse groups across the region, including states, tribes, federal agencies, local governments, electricity customers, utilities, environmental organizations, users of the Columbia River system, and more. Multiple technical advisory committees provide input on power planning, and independent science boards review fish and wildlife projects.

Council meetings are open to the public and hosted both online and in person throughout the region. As work on the Columbia River Basin Fish & Wildlife Program and Ninth Northwest Power Plan continues to ramp up, there are multiple ways for interested parties to stay informed and get engaged. See our website at nwcouncil.org, a regional hub of information on power planning and fish and wildlife. You can also sign up for our monthly newsletter, the Spotlight, and follow us on Facebook, LinkedIn, and Instagram (all are @nwcouncil).

The Path Ahead

Every five years, the Council updates the Columbia River Basin Fish and Wildlife Program and the Northwest Power Plan. Here are important milestones in that process.

The Council's work on power planning and fish and wildlife intersects in ways that are unique to the Northwest. Under the Power Act, the Council must ensure an adequate and reliable power supply for the region and protect fish and wildlife that are impacted by the hydrosystem.



IDAHO

Council helps Idaho prepare for population, economic growth

In 2024, Idaho topped 2 million residents for the first time; the state's population has increased by 54% since 2000. Idaho led the nation in overall annual job growth at 2.8% and in the private sector at 3.4% in 2024, according to regional economists. The state has seen an influx of new residents in the northern, eastern, and southwestern regions. In the Treasure Valley, high-tech companies and manufacturers like Meta, Micron, and others are building data centers and chip fabrication facilities, and construction jobs are growing rapidly.

These sectors require dependable and affordable power, underscoring the importance of the Council's long-term resource planning. The Council has helped the power system meet these growing needs by:

- Encouraging investments in energy efficiency measures that reduce overall demand and lower costs for consumers and sectors such as agriculture. To acquire cost-effective energy efficiency identified in the Council's power plans, Idaho utilities have worked with farmers to promote energy-efficient practices, such as variable frequency drives for pumps and advanced irrigation scheduling systems.
- Idaho Power and PacifiCorp have been leading utilities in the region in acquiring demand response products, which help make loads more flexible and easier to manage at peak periods. The Council has called for low-cost and frequently deployable demand response in the Northwest since it adopted the Fifth Power Plan in 2004.

Downtown Boise in the fall

- Supporting the integration of new power resources, such as natural gas peaker plants, small-scale hydropower projects, and renewables, and helping to plan for transmission system upgrades and expansion.
- Upgrading the Power Division's computer modeling that forecasts electricity demand to hourly levels and prepares for extreme weather events and periods of peak demand.

Looking ahead, the Ninth Power Plan will play a key role in creating a blueprint for the cost-effective expansion of the power grid in Idaho. This will help provide certainty to businesses and industries looking to locate or expand in the state while growing the economy and well-paying jobs. Robust long-term system planning will also help protect reliability and adequacy.

Idaho steelhead saw strong returns in 2024

More than 100,000 steelhead returned to Idaho in 2024, making it the highest return since 2016. The fish start arriving in late summer, and by fall, they can be found in Idaho rivers stretching from Lewiston and Riggins to Salmon and Challis, providing anglers with a chance to catch them while they're still fresh from the ocean.

Lower Granite Dam on the Snake River is the last of eight dams that steelhead must cross before entering Idaho waters. Fisheries managers not only saw higher-than-average counts at Lower Granite Dam this year but also observed larger fish. "Over 80% of the steelhead that crossed Lower Granite Dam this year were fish that spent two years in the ocean. This resulted in anglers catching bigger fish this fall," said Idaho Fish and Game Anadromous Fisheries Coordinator Chris Sullivan.

2024's encouraging returns are likely due to several factors, including improved hatchery performance, habitat restoration efforts, ocean conditions, and adjustments to fish passage and river operations. These combined efforts have helped boost fish survival rates and overall returns. The increase is a welcome change following the extremely low steelhead returns between 2017 and 2023, but overall trends remain concerning.

Steelhead on the Clearwater River, Idaho. Photos courtesy of Idaho Department of Fish & Game

OREGON

Energy efficiency, demand response make crucial strides in Oregon

Oregon's energy landscape is changing. State policies and other factors are driving shifts in the power grid's resource mix; large loads like data centers are locating and expanding in the state; and decarbonization increases the electrification of transportation, buildings, and other sectors. The Council's power planning has helped Oregon prepare for and navigate these changes, while protecting the grid's resource adequacy.

Energy efficiency lowers demand on the grid, while demand response make loads easier to manage, especially at peak periods. The 2021 Power Plan gave the region targets to acquire 750-1,000 aMW of cost-effective energy efficiency, and to acquire low-cost and frequently deployable demand response.

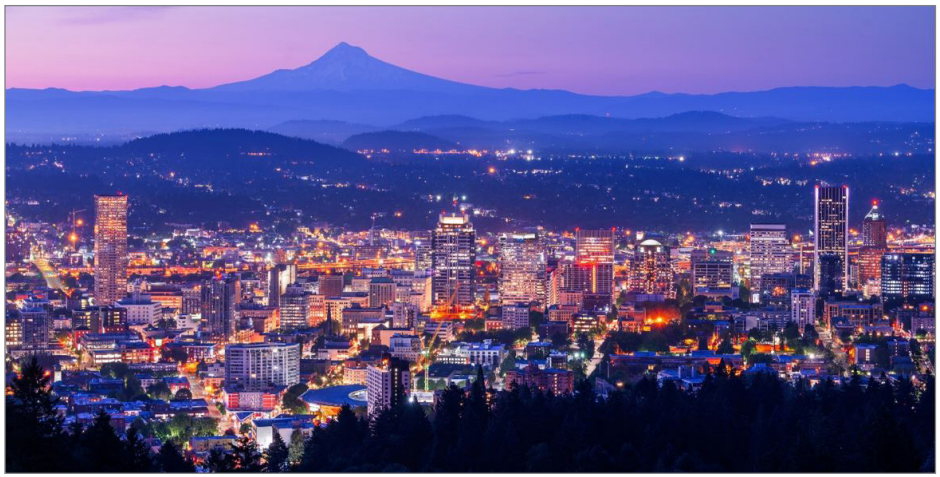
Partners in Oregon took action. During a heatwave in July 2024 that set a summertime record-high for energy demand on the Northwest grid, Portland General Electric deployed the largest electricity demand shift in company history, tapping its entire suite of energy-shifting programs that over 200,000 customers participate in. PGE shifted almost 109 MW – enough to power 90,000 homes for four hours. Additionally, PacifiCorp has been a regional leader in acquiring demand response products for the industrial sector.

Across the state, more utilities, the Energy Trust of Oregon, and the Bonneville Power Administration are taking advantage of improving efficiency. To take one example of many, the Columbia Basin Electric Cooperative serves Morrow, Umatilla, Gilliam, Wheeler, and Sherman counties in central and eastern Oregon. Recently, the co-op has partnered with small businesses like Heppner Family Food to acquire cost-effective efficiency in commercial buildings, helping these businesses save money on monthly bills and lower energy use. The co-op also offers efficiency rebate programs for residential appliances, weatherization, water heating, HVAC, multi-family buildings, new manufactured homes, as well as for farms and other agricultural businesses.

Collaborative efforts benefit migrating fish in estuary

All migrating salmon, steelhead, and other anadromous fish in the Columbia River Basin must swim through the estuary and mouth of the river near Astoria, Ore. However, half of the estuary's historic habitat was lost to agriculture, urban development, and industry.

The F&W Program covers the lower mainstem Columbia River and estuary in Oregon and Washington, as well as some surrounding areas. The estuary is crucial habitat for juvenile anadromous fish as they transition from freshwater to saltwater in a process called smoltifying.



Nighttime skyline in Portland, Oregon

Example of dike breaching and tide gate management in the WallooskeeYoungs estuary restoration project, Astoria. Upper photo shows construction in 2017 facing southwest. Photo: Cowlitz Indian Tribe

Same area in 2022 (facing southeast) which shows improvements in the channel and native plant growth. Photo: Lower Columbia Estuary Partnership

The Council has collaborated with partner organizations like Lower Columbia Estuary Partnership, Columbia Land Trust, Columbia River Estuary Taskforce, Cowlitz Indian Tribe, Washington Department of Fish and Wildlife, NOAA, Pacific Northwest National Laboratory, the Army Corps of Engineers, and BPA, among several others. These joint efforts are focusing on improving habitat, breaching dikes and floodgates, reconnecting floodplain, and otherwise restoring and monitoring ecosystem function in the estuary.

Since 2000, these efforts have resulted in the completion of 80 projects to reconnect 11,000 acres of floodplain habitat. Additional research is looking at climate change and resiliency, monitoring fish use of transitional habitats, and investigating the restoration potential of different types of shoreline habitat, particularly shoreline that has been armored or riprapped.

A pivotal shift in these efforts came with the recognition that the estuary extended to the base of Bonneville Dam and that restoration efforts should extend out that far. Listed fish populations were found in all parts of the estuary, not just the most saline and tidal portion. That's why the Council's Program focuses on all 146 miles of this stretch of the Columbia.

Adaptive management has been a core principle guiding work in the estuary. The Council and its partners test hypotheses, document findings in peer-reviewed research, and have strong coordinated communication so that others can learn from that research and its findings. Additional restoration efforts in the estuary can progress and advance from that firm basis of scientific understanding.

The photos at the left show an example of dike breaching and tide gate management in the Wallooskee-Youngs estuary restoration project near Astoria. This project lowered or removed over a mile of levee and in the process removed five tidegates. The project also recreated nearly 10 miles of interior channels, based on historical data and enhanced LiDAR imagery. Native plants have germinated, although the vegetation community is still evolving.

MONTANA

Libby, Hungry Horse operations deliver local, regional benefits

In northwestern Montana, Libby and Hungry Horse Dams provide 40 percent of water storage on the U.S. side of the Columbia River Basin. Over the past 30 years, the Council has worked collaboratively with partners in Montana and in the federal government to shift operations at these dams. These operations have been a cornerstone of the Council's Fish and Wildlife Program implementation in Montana.

The changes have helped to reduce negative effects on ecosystem function and fish populations in the reservoirs and rivers immediately downstream of these projects. Prior to these changes, dam operations significantly altered the natural river hydrography by storing water during spring runoff to manage flooding, and then releasing water, primarily during the fall and winter, to produce electricity. These operations also included an unnatural pulse of water out of the dams in the summer that impacted both the reservoirs and rivers.

Dam managers made these operational changes while still maintaining effective local and system-wide flood risk management and providing multiple benefits from two of the Columbia Basin's highest elevation storage projects. Benefits include:

- Hydropower production at both dams, and more importantly, all downstream dams
- Assisting migration and recovery of endangered salmon and steelhead in the lower Columbia Basin

Hungry Horse Dam on the South Fork of the Flathead River in northwestern Montana

- Reducing winter drafts of both reservoirs, providing more stable reservoir ecosystems and increasing the likelihood of reservoir refill during summer, which is important for fish and wildlife, recreation, and other uses

"The Council created the Fish and Wildlife Program that allowed us to put these mitigation measures in," said Brian Marotz, who helped lead the adoption of these operations while with Montana Fish Wildlife & Parks. "The Council set the stage for this."

Montana co-ops help Council develop wildfire-informed power system planning

Major wildfires in recent years have impacted the power system in Montana – and across the Northwest – in adverse ways and posed adequacy challenges. This spurred the Council to work with regional partners, including Montana electric utilities and cooperatives serving rural communities, to reevaluate and enhance how it models the impact of wildfires on the power system. This new information will be used to protect the electricity grid's adequacy and reliability in the Ninth Power Plan, and to help guide its cost-effective resource strategy.

Power lines in Darby in Montana's Bitterroot Valley, which is served by Ravalli Electric Co-Op

As a result of this collaborative work, Council staff have captured the operational risk of transmission derating on the bulk power system due to wildfires, as well as the possibility of smoke-induced reduction of solar generation. By embedding the operational risk of wildfires in modeling and data, the Council's goal is to have wildfire-informed planning in the Ninth Power Plan.

Mitigating wildfire risk is a top priority for Montana's electric cooperatives including Flathead Electric Cooperative in northwestern Montana, which is the largest in the state with almost 2,000 miles of overhead power lines. Hundreds of miles run through heavily forested areas. With a robust wildfire mitigation plan, the co-op uses utility best practices to protect infrastructure and improve the safety of its community for wildfires. Clearing trees from utility rights-of-way and upgrading infrastructure to enhance automation are two key measures. Cooperatives are balancing these investments with increased electricity need in their service territories from population growth and other factors. Montana has ranked eighth in the nation for in-migration of new residents since 2020, and most of that has been concentrated in the western part of the state, according to the Montana Department of Labor & Industry.

"Reliable power starts with resilience," said Katie Pfennigs, Community Relations Manager with Flathead Electric Cooperative. "Understanding how the growing threat of wildfire impacts grid reliability is a critical step to ensure that utilities like Flathead Electric Cooperative can continue to serve our communities. While our cooperative is on the front lines, tackling wildfire mitigation efforts to protect our community and our critical infrastructure, the Northwest Power and Conservation Council's work will help translate these local efforts into broader regional strategies for power security and reliability."

WASHINGTON

Council's technical expertise supports Washington's clean energy transition

Washington is a leading state in adopting clean energy policies that will decarbonize the electricity grid, transportation systems, industries, and other sectors of the state's economy. State leaders cited the Council's data-driven, technical expertise in power system planning in assisting the development of these policies as well as the regulations implementing them.

"There hasn't been a legislative session or big regulatory docket that's gone by where they haven't asked the Council members or the staff to come and testify," said Nancy Hirsh, former Executive Director of the NW Energy Coalition who spent decades working in Northwest energy policy issues before leaving NWEC in 2025. "(The Council's) work has really formed the foundation in Washington for the renewable energy and the energy efficiency portfolios."

Hirsh and Glenn Blackmon, director of the Energy Policy Office at the Washington State Department of Commerce, credited the Council's longstanding work on energy efficiency and its developing efforts on demand response. This includes the Regional Technical Forum, an advisory committee to the Council that develops and maintains a list of eligible energy efficiency resources in the Northwest, and objectively generates peer-reviewed energy savings estimates through robust and unbiased analysis. These methodologies and standards are embedded into state law in Washington.

Blackmon cited the Council's eight other advisory committees, which focus on demand forecasting, resource adequacy, and additional aspects of power planning, as being critical forums for discussing technical analysis.

"These are all really important places for the experts in the region to get together, compare notes, and talk to each other," Blackmon said. "We're all taking lessons back and improving upon our own work."

Columbia Basin Water Transactions Program

The Columbia Basin Water Transactions Program (CBWTP) was established in 2002 through a partnership with the Council, Bonneville, and the National Fish and Wildlife Foundation and in coordination with the Confederated Tribes of the Umatilla Indian Reservation and the Confederated Tribes of the Colville Reservation. The goal is to partner with willing landowners to restore stream flow in ecologically significant Columbia Basin tributaries. In 2024,

Trout Unlimited Project Manager Dan Jaspers, right, discusses components of an irrigation efficiency project on the Methow River that was constructed between 2018-2021. It resulted in improving in-stream flow by over 26 cfs for roughly four miles of the mainstem river and side channels.

Icicle Creek near Leavenworth, Washington

eighteen new water conservation and management grants totaling more than $2.7 million were awarded. The 18 awards leverage more than $1.6 million in match from the grantees.

Projects are being funded across Washington state, including in the Methow, Okanogan, Wenatchee, Entiat, Yakima, Klickitat, White Salmon, and Spokane subbasins, to benefit salmon and steelhead as well as resident trout species. Icicle Creek, near Leavenworth, is an example of the kind of collaboration that goes into making these projects successful. CBWTP grantee Washington Water Trust has spent a decade working with states, tribes, federal agencies, and the Cascade Orchard Irrigation Company (COIC), the holder of the oldest and largest water rights on Icicle Creek and a water provider for hundreds of acres of farmland, to restore flow to Icicle Creek by building a new, more efficient pumping station and remove the older infrastructure that slowed the creek. Now, an additional 1.3 billion gallons of water will remain in the creek annually for steelhead, spring Chinook, bull trout, and other wildlife, while still providing needed irrigation for farmland.

Honoring the first Council Chair, Dan Evans

In April 2024, the Council honored its first chair, former Washington Governor Dan Evans, during an event held at the Evergreen State College in Olympia.

Evans chaired the Council from 1981-83. He was an instrumental figure in the creation of the First Power Plan adopted in 1983, and the early development of the Fish and Wildlife Program. Evans left when he was appointed to a seat in the U.S. Senate, where he served until 1989. April's event with Gov. Evans was one of his last public appearances; he passed away at the age of 98 in September.

We were grateful to be able to celebrate Gov. Evans' legacy with his friends and family that night, and to honor his lifetime of public service benefiting the state of Washington and the entire Pacific Northwest.

Council Chair Jeff Allen of Idaho, left, addresses an audience at a reception honoring Gov. Dan Evans (seated, left) at the Evergreen State College in Olympia in April 2024, while Council Member Les Purce of Washington hands Evans a blanket helping commemorate his years of service to the Council.

This annual report was submitted to the:

Committee on Energy and Natural Resources
United States Senate

Committee on Energy and Commerce
United States House of Representatives

Committee on Natural Resources
United States House of Representatives

The Northwest Power and Conservation Council was established pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law 96-501) by the states of Idaho, Montana, Oregon, and Washington. The Act authorized the Council to serve as a comprehensive planning agency for energy policy and fish and wildlife policy in the Columbia River Basin and to inform the public about energy and fish and wildlife issues and involve the public in decision-making.

This annual report has been developed pursuant to Section 4(h)(12)(A) of the Northwest Power Act. The Council's bylaws, which include its organizational structure, practices, and procedures, are available at nwcouncil.org/about/policies/bylaws.

See this report at nwcouncil.org/reports/2025-3, posted online for 90-day comment.