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

May 11, 2022

DECISION MEMORANDUM

TO: Council Members

FROM: Executive Director Bill Edmonds

SUBJECT: Approve the Final Annual Report to Congress for Fiscal Year 2021

Staff requests that you approve the Annual Report to Congress for Fiscal Year 2021 at this meeting, with any additional edits. The Northwest Power Act requires the Council to report annually to Congress and to make the draft report available for 90 days of public comment prior to submission (Section 4(h)(12)(A)). The Council released the draft report for comment on December 18, 2021 and the comment period closed March 18, 2022.

We received comments from the Bonneville Power Administration, which were addressed by staff and reflected in the final report. Bonneville's comments are also attached for your review.

Staff will be reviewing and updating how we communicate on the Council's work and key issues in the region in future reports.

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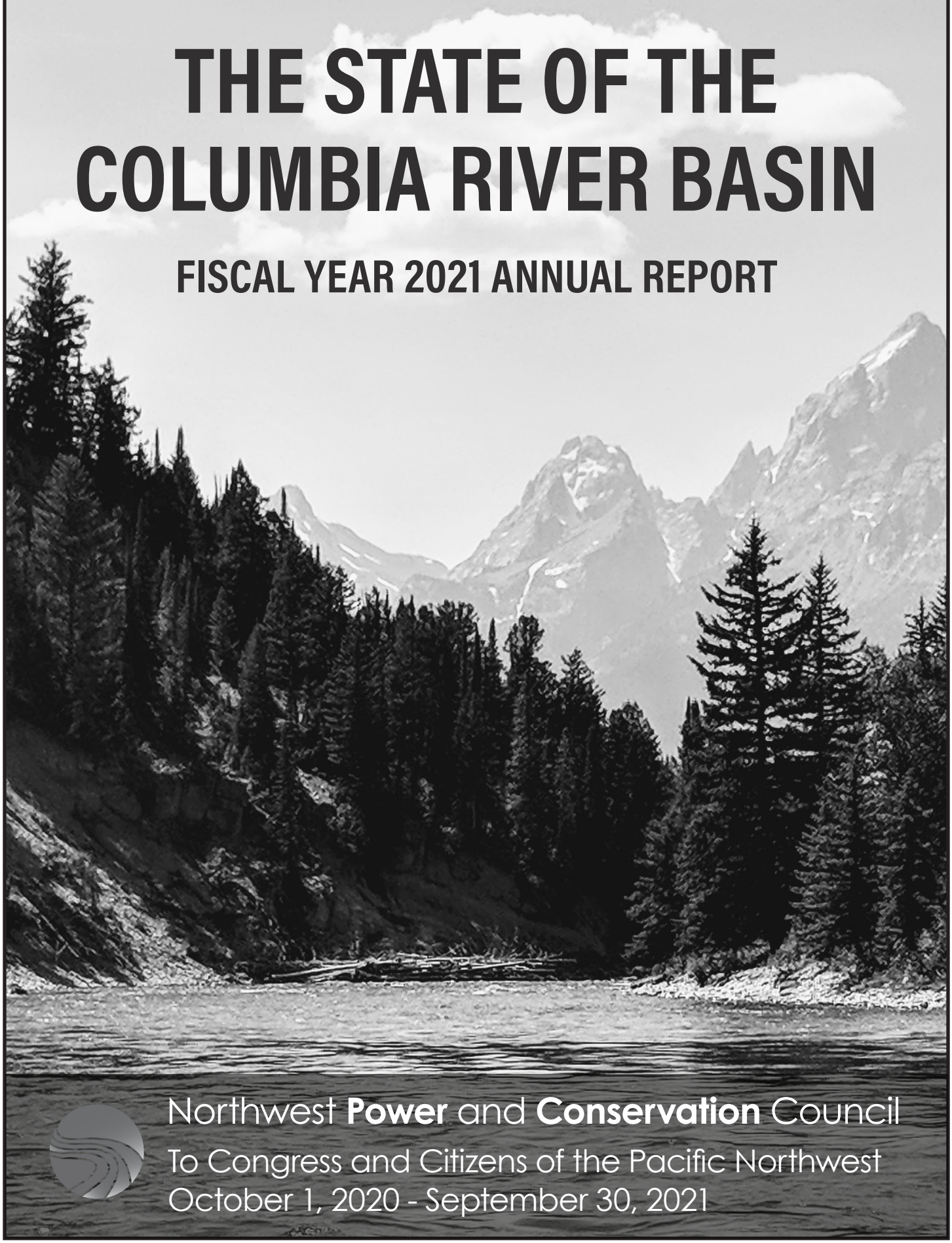
Portland, Oregon 97204-1348
www.nwcouncil.org

Bill Edmonds
Executive Director

503-222-5161
800-452-5161

THE STATE OF THE COLUMBIA RIVER BASIN

FISCAL YEAR 2021 ANNUAL REPORT



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

To Congress and Citizens of the Pacific Northwest

October 1, 2020 - September 30, 2021

Submitted to the

Committee on Energy and Natural Resources
United States Senate

Committee on Energy and Commerce
United States House of Representatives

and

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 to the public at www.nwcouncil.org/about/policies/bylaws.

Northwest **Power** and
Conservation Council

April 20, 2022

As executive director of the Northwest Power and Conservation Council, I'm pleased to transmit the Council's Fiscal Year 2021 Annual Report to the United States Congress.

The Council approved its 2021 Northwest Power Plan in February, forecasting a future very different from past plans as regional and Western utilities comply with state and municipal clean energy policies.

Inefficient thermal plants, mainly older generators fueled with coal, are expected to retire during the next decade, removing several thousand megawatts of capacity from the power supply. In their place, thousands of megawatts of renewable resources, mainly solar and wind power, are expected to be built. In short, a fundamental shift away from fossil fuel generation to renewables is underway, and the plan outlines actions to ensure the reliability and affordability of the Northwest's power system even as it evolves.

In response to a 2020 revision to the Council's Columbia River Basin Fish and Wildlife Program goals and objectives, the Council worked with fish and wildlife managers to develop and populate strategy performance indicators to better describe our desired mitigation outcomes and track and report on the program's progress on them over time.

Assessing the performance of the program is a complicated task given the hundreds of projects, and multiple other actions that have been implemented at different times for different durations throughout the basin over the last 40 years. But, it will go a long way in determining whether the program is making progress in achieving its objectives

and goals and in identifying opportunities for refining program investment. This work on assessment is critical to ensuring that implementation of the program is achieving mitigation for the effects of the hydropower system on fish and wildlife.

I invite you to review this overview of our past year's work to protect the fish and wildlife resources of the Columbia River Basin, while ensuring an adequate, efficient, economical, and reliable power supply.

Sincerely,

Bill Edmonds
Executive Director

Contents

The Council's View:

The State of the Columbia River Basin in 2021

Fiscal Year 2021 was one of success and adaptation for the Northwest Power and Conservation Council. The Council successfully completed a draft of its 2021 Northwest Power Plan, released it for public comment, and conducted four public hearings in 2021 by webinar – each hosted by a state represented on the Council, and did this while staff and Council members continued to work remotely in response to the Covid 19 pandemic. The Council closed its offices to staff and the public in March 2020, directing its employees to work remotely. Like many other employers, public and private, the Council offices remained closed through all of 2021.

Despite the disruption of a pre-pandemic routine that became nearly forgotten, the Council's work continued without interruption. The Council continued its regular practice of monthly meetings, and all were conducted by webinar. Work on the Draft 2021 Northwest Power Plan continued, as noted above, and work on the Columbia River Basin Fish and Wildlife Program continued as well, as the Council launched an effort to improve monitoring and evaluation of the program consistent with the 2020 Addendum to the 2014 Program.

Meanwhile, the Northwest continued to improve the efficiency of the regional power supply, although the pace slowed a bit from previous years as building activity slowed during the pandemic. Regardless, the region acquired 1,039 average megawatts of energy efficiency from 2016 through 2020, bringing the regional total since 1982 to about 7,200 average megawatts. Expressed as electricity, that much would power six cities the size of Seattle for a year.

In 2021 the Council also hosted a forum on diversity, equity, and inclusion to explore 1) how energy data and metrics can be used to reveal and describe inequities; 2) the importance of public engagement in the design of energy policy and programs; and 3) the use of equity-assessment tools to prompt energy policy makers and energy program designers to incorporate equity considerations. Information from the forum was incorporated in the Draft 2021 Power Plan.

Fiscal Year 2021 also was significant as it was the 40th anniversary of the first meeting of the Council, which took place in Portland on April 28,1981. The four Northwest states formed the Council in January 1981 after President Carter signed the Northwest Power Act into law in December 1980. In the Act, Pacific Northwest legislators and policymakers took a revolutionary leap of faith, working to end the construction of expensive and environmentally intrusive power plants and instead prioritize meeting much of the region's future power demand through more efficient energy use. And for the first time, fish and wildlife affected by Columbia River Basin hydropower dams were to be protected in a manner that provides equitable treatment with the other purposes of the dams.

At that first meeting, Governors Atiyeh of Oregon, John Spellman of Washington, Ted Schwinden of Montana, and John Evans of Idaho addressed the Council members they had appointed, highlighting the cooperation among the states in writing what Governor Schwinden called a 'blueprint for this region's energy future' while also protecting fish and wildlife in the Columbia River Basin. Over the years, the Council's power plan, which includes the fish and wildlife program, has met that challenge, guiding the region to a more efficient, reliable, and affordable energy supply while mitigating the impacts of Columbia River Basin hydropower dams on fish and wildlife.

Council Energy Overview

The 2021 Northwest Power Plan

In September 2021, the Council completed work on the draft 2021 Northwest Power Plan, the latest version of the plan that the Council revises every five years. Public comments were accepted through November, and the final version of the plan was approved in February 2022.

The 2021 Plan envisions a future much different than what we anticipated in past plans, as the Northwest and West Coast electricity supply adjusts to comply with clean-energy policies enacted by states and some municipalities and utilities. Inefficient thermal plants, mainly older generators fueled with coal, are expected to retire during the next decade, removing several thousand megawatts of capacity from the power supply. In their place, thousands of megawatts of renewable resources, mainly solar and wind power, are expected to be built and come online.

This development complicates power planning because of the variable output of those renewables – wind plants don't generate when there is no wind, and solar plants don't generate overnight. Adding to the complexity is the fact that the existing high-voltage transmission system may not be capable of moving all the new renewable energy from where it is generated to where it is consumed in time to comply with clean-energy milestones that begin as early as 2030, only nine years in the future. Major transmission lines typically take at least a decade to build.

The 2021 Power Plan responds to the many challenges ahead -- new economic signals, new resource development and dispatch, changing system operations, uncertainty about the future – with a resource strategy designed to propel the region through the changes while maintaining an adequate, efficient, economical, and reliable power supply. Key elements of the strategy include:

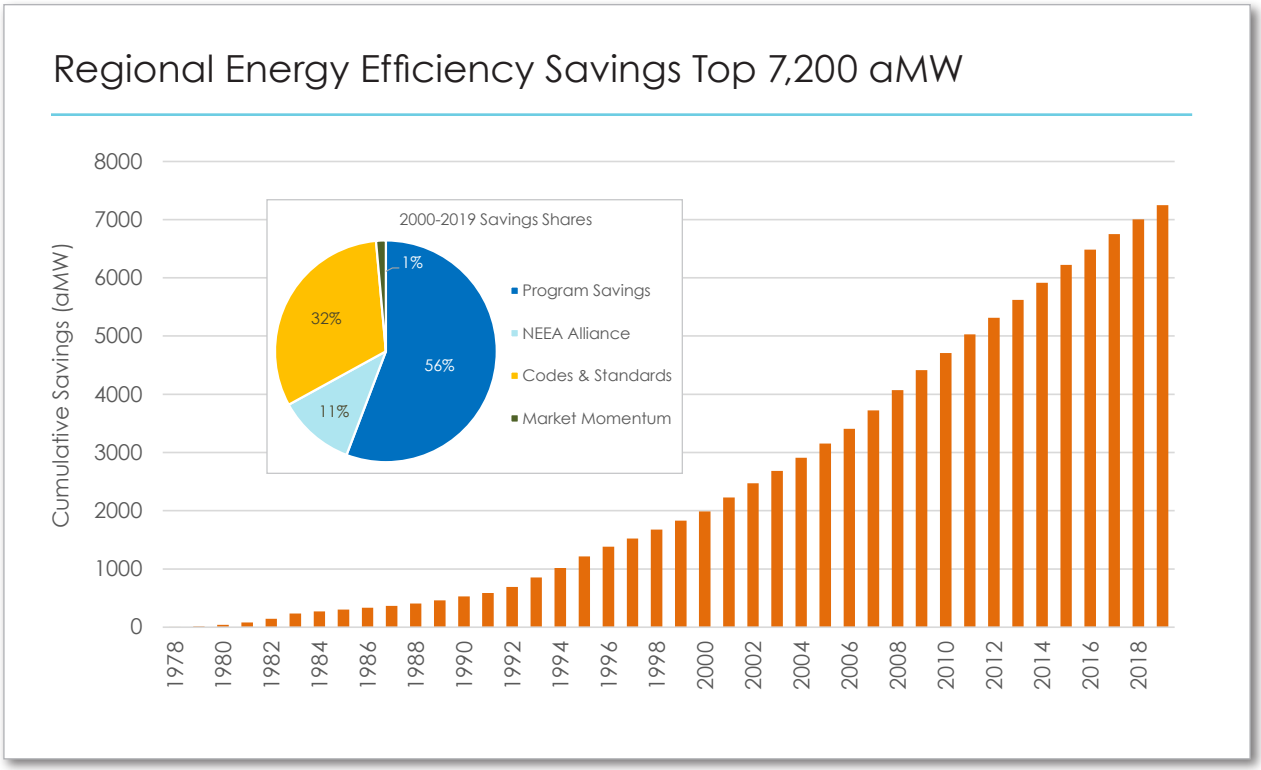
- Energy efficiency: The Council recommends that the Bonneville Power Administration and regional utilities plan to acquire between 750 and 1,000 average megawatts of cost-effective energy efficiency by the end of 2027 and a minimum of 2,400 average megawatts by 2041. This is less than in past plans, underscoring the high achievements of the last 40 years. Much of the inexpensive efficiency has been achieved, and what remains is close to the price of power from the least-expensive generating plants – wind and solar, for example.
- Demand response: The Council recommends utilities examine two types of demand response (demand response is the voluntary reduction of power use during periods of high demand and limited resource availability, such as in the

early morning and early evening, in return for compensation): 1) residential time-of-use (TOU) rates, and 2) demand voltage regulation (DVR). Our assessment shows that about 200 megawatts of TOU and 520 megawatts of DVR are available by 2027.

- Renewable resources: The Council recommends the region acquire at least 3,500 megawatts of renewable resources by 2027 as a cost-effective option for meeting energy needs and reducing emissions.
- Existing resources: Electricity imports from outside the region, particularly solar power from California, will be important to the future Northwest power supply. Solar and wind power have become so inexpensive that they are beating practically every other type of power in the wholesale market, making many inefficient thermal plants uneconomical to operate. The Council recognizes that the transition to an increasingly clean and low-cost power supply can't happen so fast that reliability and adequacy are compromised, so the draft plan recognizes existing thermal plants – coal, natural gas, nuclear – as an important component of the power supply.
- Regional collaboration: In addition to these resources, the Council recommends that Bonneville and regional utilities, along with their associations and planning organizations, work together and with others in the Western electric grid to explore the potential costs and benefits of new market tools, such as capacity and reserves products, that contribute to system accessibility and efficiency. The Council expects that greater regional collaboration would produce significant cost savings and introduce more efficiency into system operations.

Northwest Energy Efficiency Total Reaches 7,200 Average Megawatts

The region acquired 1,039 average megawatts of energy efficiency from 2016 through 2020. That's slightly below the five-year goal (1,115 average megawatts) in the Council's Seventh Power Plan, issued in 2016. The total over the last 40 years now stands at about 7,200



average megawatts. Expressed as consumed energy, that's enough for six cities the size of Seattle for a year. The 2020 slowdown was partly due to the impacts of the pandemic and partly due to the increasing cost of efficiency measures. Much of the inexpensive efficiency improvements were achieved in past years.

Annually, the Council collects information about energy efficiency achievements from Northwest utilities, the Bonneville Power Administration, and the Northwest Energy Efficiency Alliance. The Alliance, an association of more than 140 utilities and energy efficiency organizations, works to increase the adoption of energy-efficient products, services and practices. Here are some highlights from the 2020 efficiency report:

- The region achieved 187 average megawatts of efficiency improvements in 2020, which is about a 14-percent decline from 2019
- The Northwest Energy Efficiency Alliance reported 61 average megawatts of savings in 2020
- Bonneville achieved 326 average megawatts of savings between 2016 and 2020, 31 percent of the total regional savings for that time period. Bonneville achieved 35 average megawatts in 2020.

Council Supports Revised Efficiency Standards for Consumer Products

The Council supported administrative changes intended to improve the process of reviewing and adopting energy efficiency standards for electrical devices including consumer products and commercial equipment.

In a May 2021 letter to the federal Department of Energy (DOE), the Council said revisions proposed by DOE would restore long-standing and well-accepted practices by the agency and its constituents, remove obstacles, and help enable a more effective review of standards and test procedures.

The Council has participated in federal efforts to improve energy efficiency for decades as part of its work to improve the efficiency of electricity use in the Northwest.

Council Forum Addresses Energy Equity

Early in 2021, the Council hosted a forum on diversity, equity, and inclusion in its power planning and for its 2021 Power Plan. The forum – with 130 attendees – built on past work in the Council's advisory committees to address underserved communities and marked a step forward in ensuring equity in our energy planning.

The forum explored how data and metrics can be used to reveal and describe inequities; the importance of public engagement in the design of energy policy and programs; and the use of equity assessment tools to prompt policy makers and program designers to incorporate equity considerations.

"In our work, we engage with a vast four-state region on energy and fish and wildlife issues," noted Council Executive Director Bill Edmonds. "We must understand the impact of this work on everyone in the region – this includes our close consultation with tribal sovereigns on fish issues and in deepening our understanding of the unique effects on hard to reach communities on the power side."

Information from the forum was incorporated into the draft power plan.

Northwest Power System's 2019 Greenhouse Gas Emissions

In the Pacific Northwest, the power system's carbon emissions are directly related to how much hydropower is produced. In a good water year, emissions are lower because less natural gas and coal are dispatched and conversely, emissions tend to be higher in poor water years as fossil fuel generators are dispatched more often.

In 2019, the latest year for which figures were available, the region experienced its worst water year since 2005, leading to an increase in emissions of about 16 percent – from about 48.5 million metric tons in 2018 to about 56.6 million metric tons in 2019.

As coal-fired generators begin to retire in the region, and in the country, and existing natural gas generation continues to displace coal generation, emissions will begin to trend downward in the coming years. Natural gas is less carbon-intensive, releasing roughly half the emissions of coal.

The extent of the trend will depend on what kind of resources come online. But with state renewable portfolio standards and other clean-energy policies in place, it's likely the region will see an increase in zero-carbon resources such as energy efficiency, renewables, and energy storage.

Wholesale Electricity Prices Come Into Focus

Throughout the West, retiring coal plants and a plethora of clean energy policies in states, municipalities, and utilities have changed how electricity markets function, adding even more uncertainty to an already challenging enterprise: forecasting the future.

The Council predicts that future wholesale prices will be low in the winter and spring, reflecting the impact of the Northwest's reliance on hydropower and increased renewables throughout the West. In years with a larger runoff, negative pricing is a possibility as inexpensive renewables, particularly solar power, flood the market. The summer month prices are expected to be comparatively higher, especially during the evening hours when the sun goes down and solar generation drops to zero. But even summer prices become lower over time on an average basis because the low prices midday decrease as more solar generation is added throughout the West. Carbon emissions are expected to decrease over time, with higher avoided emissions during the summer.

Council Fish & Wildlife Overview

Council Moves Ahead on Measuring Program Performance

For 40 years, the Council's Columbia River Basin Fish and Wildlife Program – the nation's largest regional effort to protect and enhance natural resources – has worked to mitigate the effects of the hydropower system on fish and wildlife. Over the life of the program, an emphasis on performance has always been important. In response to a 2020 revision to the Program goals and objectives (reflected in the 2020 Program Addendum), the Council worked with fish and wildlife managers to develop and populate strategy performance indicators to better describe our desired mitigation outcomes and track and report on the program's progress on them over time.

The first step in improving measurement of program performance is to better understand the work that has been done and describe the accomplishments from that work, both at the basin and ecological province scale. At the basin scale, the Council staff will look at how the program has developed over time; how different strategies have been implemented; and program investments. At the ecological province scale, staff will look at the geographic distribution of investments to support mitigation work, the relationship between implementation and priorities, and other geographic information.

An initial set of strategy performance indicators, developed in collaboration with fish and wildlife managers through a series of workshops during development of the 2020 Program Addendum, are a critical component of the effort. A workgroup was formed in early 2021 and has been working to help identify sources of data, compile the information and report on the status of the strategy performance indicators.

It's an ambitious undertaking given the complexities of understanding natural processes and our impact on them. Assessing the performance of the program is a complicated task given the hundreds of projects, and multiple other actions that have been implemented at different times for different durations throughout the basin over the last 40 years. But, it will go a long way in determining whether the program is making progress in achieving its objectives and goals and in identifying opportunities for refining program investment. This work on assessment is critical to ensuring that implementation of the program is achieving mitigation for the effects of the hydropower system on fish and wildlife.

Maintaining Program Hatcheries and Fish Screens

In Fiscal Year 2021, hatcheries and fish screen projects received $450,000 from the cost savings placeholder in the budget for the Council's fish and wildlife program. The 2014 Program and 2020 Addendum recommended using savings from existing projects to fund new projects that implement program priorities recommended by the Council as well as for maintaining high-priority past investments.

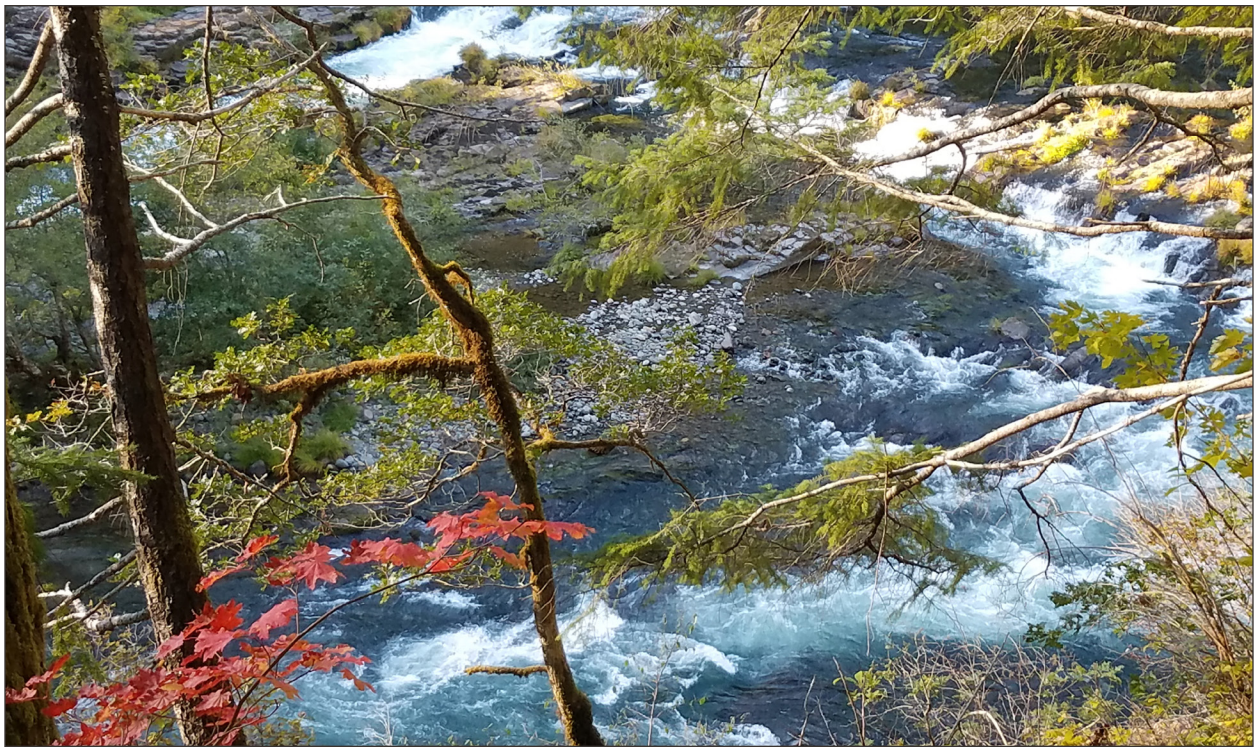
Council and Bonneville Power Administration staff worked together to reallocate funds available from cost savings to other one-time project needs. In addition, the Asset Management Strategic Plan addresses non-recurring maintenance needs for hatcheries, fish diversion screens, and mitigation lands to ensure the benefits of past investments. Based on this plan, a prioritized list of maintenance equipment and tasks is developed each year.

In Fiscal Year 2021, these funds purchased needed equipment, repaired buildings, upgraded electrical systems, and purchased materials for fish screens. Projects included the Nez Perce Tribal Hatchery; Sherman Creek Hatchery; Spokane Tribal Hatchery; Umatilla Hatchery; and fish screen projects for the Idaho Department of Fish and Game; Washington Department of Fish and Wildlife; and Oregon Department of Fish and Wildlife.

Anadromous Fish Habitat and Hatchery Project Review Continues

Though a multi-year review cycle, the Council and its Independent Scientific Review Panel review all of the projects that implement the Council's fish and wildlife program. The anadromous fish habitat and hatchery project review, the fourth and largest category of projects to be reviewed during the current review cycle initiated in 2017, progressed in Fiscal Year 2021. Other reviews already completed include wildlife projects, mainstem and program support projects, and resident fish projects.

Anadromous and hatchery project sponsors discussed their work with the Council's Independent Scientific Review Panel, which then drafted its preliminary review



of the 124 projects and released it in September. In its preliminary review, the ISRP found that 32 project proposals met scientific review criteria defined in the Northwest Power Act, 41 proposals met scientific review criteria with conditions, and 12 proposals were not amenable to scientific review and thus received "not applicable" determinations. The ISRP requested responses on 37 proposals to determine whether they fully meet scientific review criteria. Project proponents were invited to respond by November 2021. Those responses informed the ISRP's final report to the Council, and the Council's final recommendations to Bonneville in 2022.

Projects in this category include hatchery operations and maintenance, fish screen operation and maintenance, habitat restoration, and the monitoring and evaluation activities associated with these projects. The projects are implemented by a variety of organizations. The Fiscal Year 2021 start of year budget for the projects is about $140 million.

Council Adds Website With Information on Hatcheries

The Council, in partnership with the region's fish and wildlife managers, unveiled a new website (hatchery.nwcouncil.org) about the region's hatcheries, their historical beginnings, how science has informed their evolution, and the status of hatcheries throughout the Columbia River Basin.

The site is intended for a general audience but has links to detailed, technical information. The goal is to make key information easily available and understandable to all users through bold data points in visual graphics, combined with simple stories that provide background information and context.

We intend the website to be a useful resource for anyone interested in hatcheries and how they have changed over time. The site will continue to be updated. This is part of an ongoing effort to explain the regional collaborative work to improve fish and wildlife in the basin.

Letter of Support for Continued Funding to Control Marine Mammals

In October 2020, the Council sent a letter to NOAA Fisheries urging permanent federal funding for ongoing, critical research into the impact of marine mammals – sea lions and seals – on adult spring Chinook salmon and other species in the Columbia River.

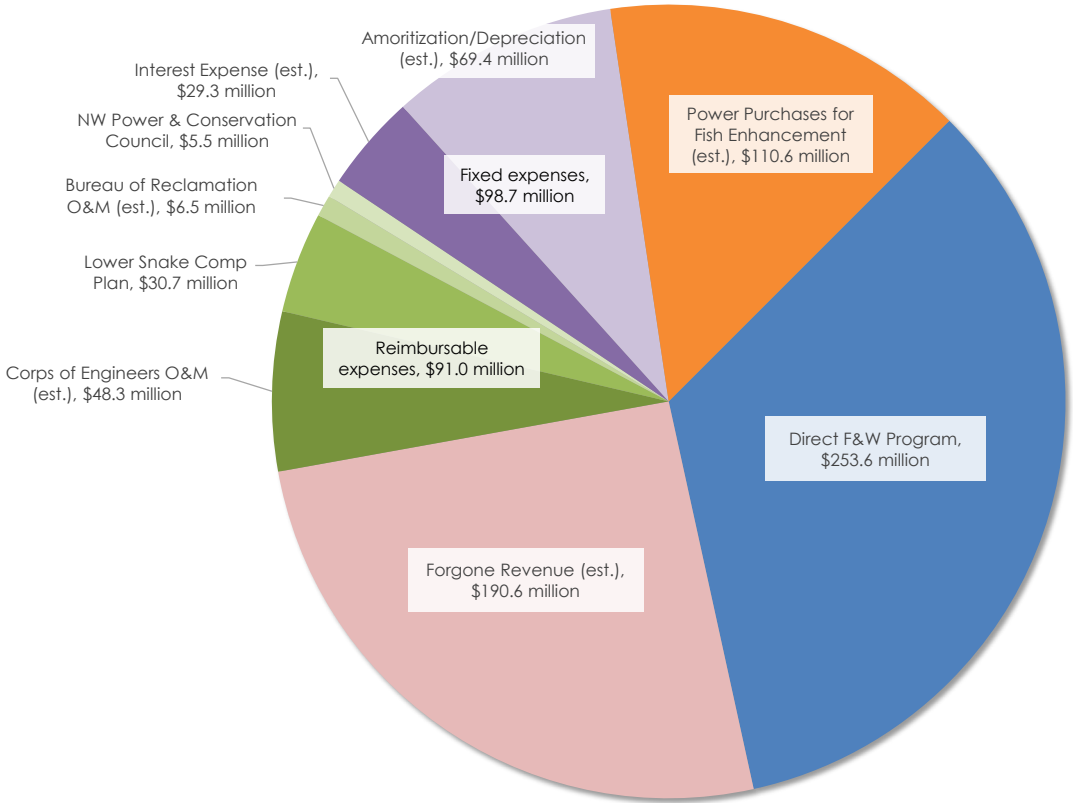
To date, the research has been funded through annual grants. NOAA has reported that as much as 40 percent of the annual spring Chinook return disappears between the ocean and Bonneville Dam and attributes this disappearance to predation by marine mammals, after accounting for other possible sources of mortality.

Survival Trends for Juvenile Salmon and Steelhead

The Council's Fish and Wildlife Program contains a set of goals and objectives related to mitigating for effects of the hydrosystem on fish and wildlife in the Columbia Basin. One key objective is to improve juvenile and adult survival of salmon and steelhead through the hydrosystem as a component of achieving a "double the run" abundance goal. Charts on the next two pages show examples of trends in survival though the hydrosystem and abundance of adult salmon and steelhead counted at Bonneville Dam. Over the last year, the Council has been working to develop a new tool to track these and other indicators of program performance, as noted above. This tool- Program Tracker- will contain a detailed assessment of a multitude of indicators, along with providing improved context around the datasets and their interpretation, and a clear linkage between each indicator and the objectives and goals of the program. We anticipate that this information will be available prior to developing our next annual report to Congress. During this current transition year, the Council elected to retain figures in the report that were consistent with those reported in prior years.

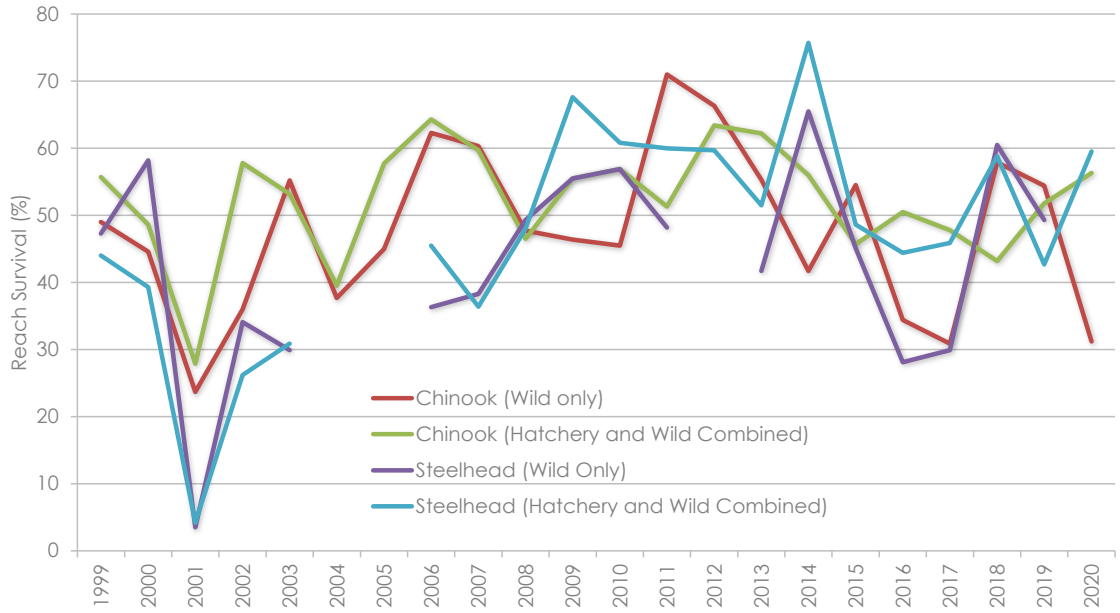
BPA Costs by Major Area, FY 2021

Total of $744.5 million does not reflect $108.6 million in obligations to capital projects for fish and wildlife projects, software development, and structures at dams, or $90.6 million federal credits Bonneville receives from the U.S. Treasury

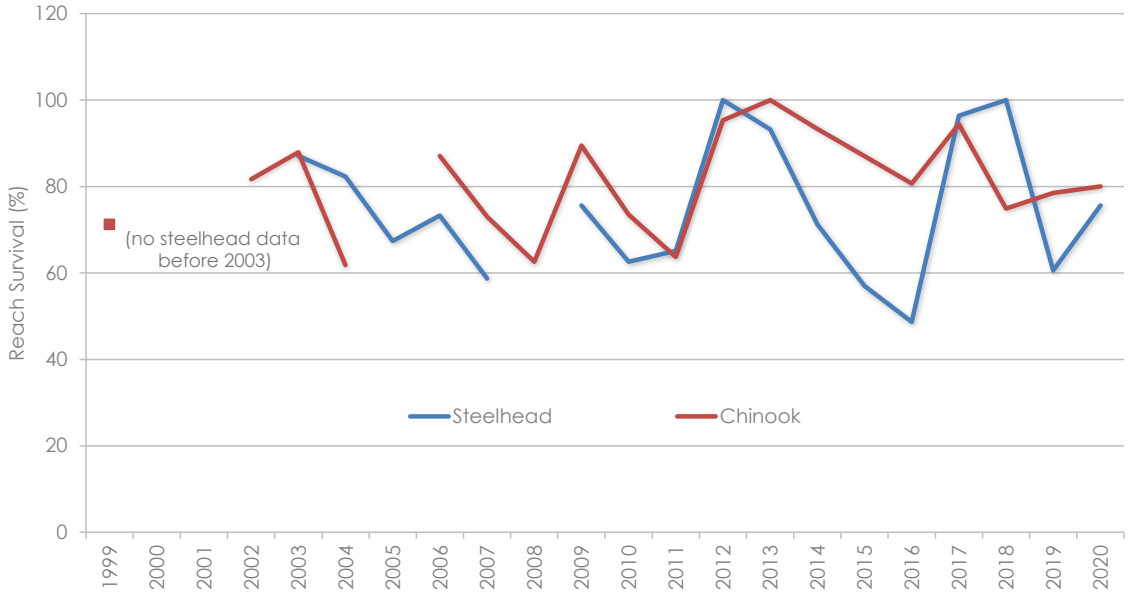


This information has been made publicly available by BPA in January 2022. The figures shown are consistent with audited actuals that contain Agency approved financial information, except for forgone revenues and power purchases which are estimates and do not contain Agency approved financial information.

System Survival of Juvenile Snake River Chinook and Steelhead, Lower Granite to Bonneville Dams

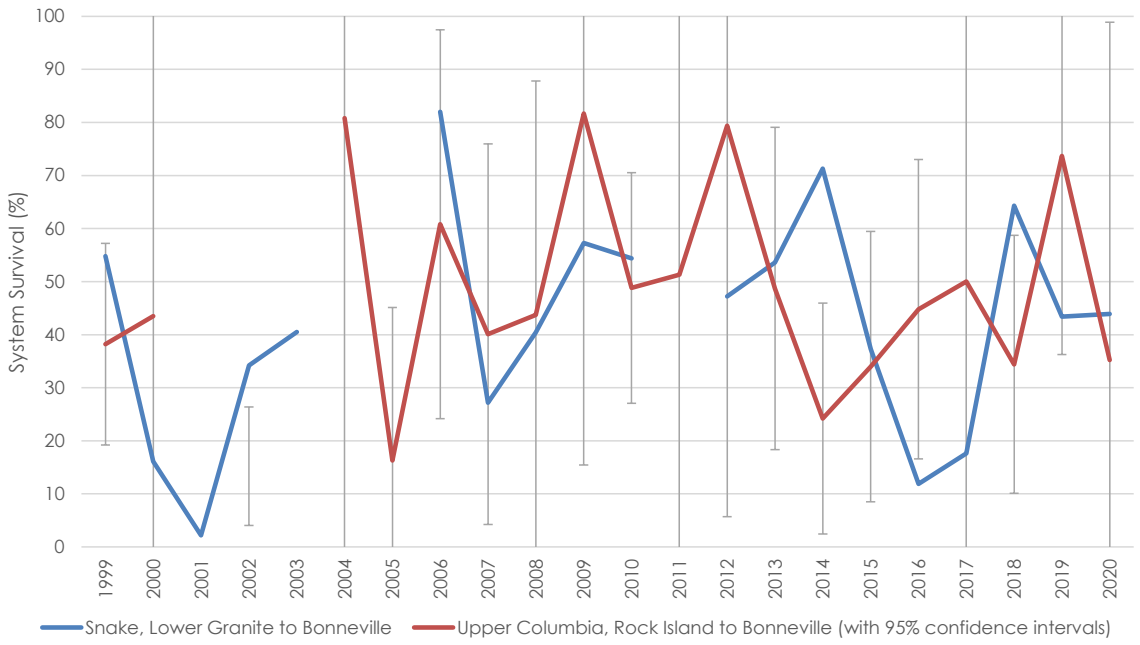


Survival of Juvenile Upper Columbia Hatchery Chinook and Steelhead, McNary to Bonneville Dams



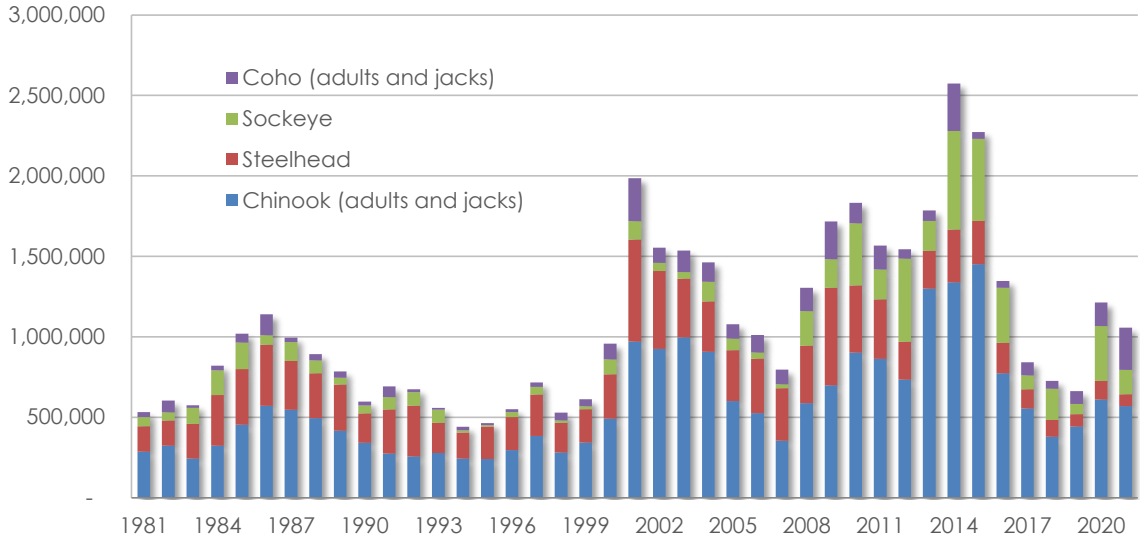
Top chart: Tables 23, 24, 26, 27, bottom chart: Table 29 from *NOAA Fisheries Survival Estimates for the Passage of Spring-Migrating Juvenile Salmonids through Snake and Columbia River Dams and Reservoirs: 2020*

Survival of Juvenile Snake and Upper Columbia Sockeye, Lower Granite and Rock Island Dams to Bonneville Dam



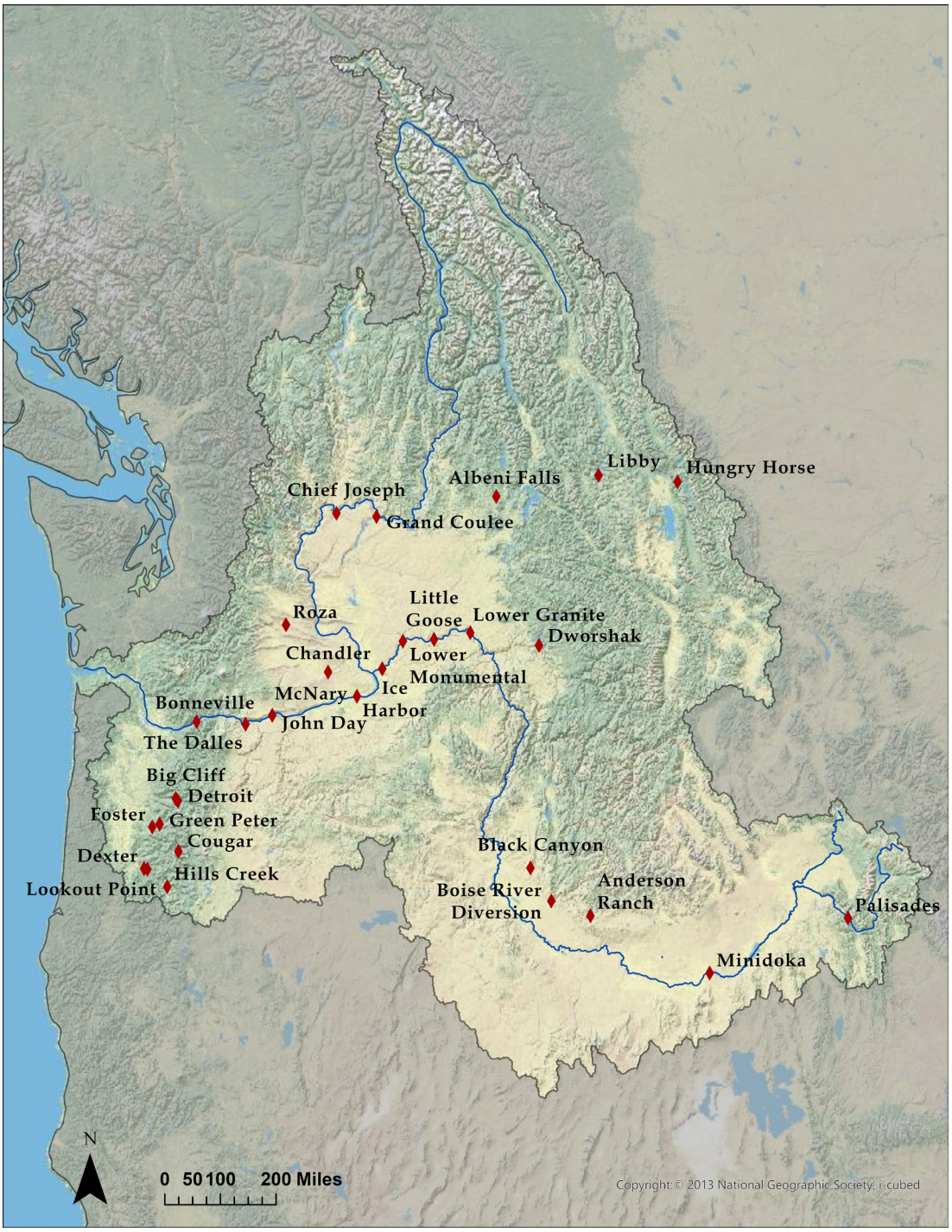
Source: Table 28 from *NOAA Fisheries Survival Estimates for the Passage of Spring-Migrating Juvenile Salmonids through Snake and Columbia River Dams and Reservoirs: 2020* (original source: repository.library.noaa.gov/view/noaa/33207). NOAA does not estimate survival of fall-migrating fish.

Salmon and Steelhead Counted at Bonneville Dam



Source: Fish Passage Center, www.fpc.org

Dams on the Columbia River



Public Affairs Overview

Outreach, Information, and Communication

The Northwest Power Act directs the Council to provide for the participation and consultation of the Pacific Northwest states, tribes, local governments, consumers, electricity customers, users of the Columbia River System, and the public at large in developing regional plans and programs related to energy efficiency, renewable energy resources, other energy resources, and protecting, mitigating, and enhancing fish and wildlife that have been affected by hydropower dams in the Columbia River Basin. The Council's Public Affairs Division has the primary responsibility to implement this portion of the Act.

The Division uses a variety of communication tools to perform its mission, including printed and electronic publications, the Council's website, social media platforms, video, public meetings, and press releases that are posted as news items on the website and then communicated to the news media and other interested parties via email and social media.

The Council's website, www.nwcouncil.org, functions as the hub of its outreach efforts and public information strategy. The Council continuously updates its website, making it faster to load and easier to use. This is important during the pandemic, when many people are working from home and accessing website and electronic media more often. The website contains myriad documents, publications, databases, and other forms of information. Included, for example, are the Northwest Power Plan, the Columbia River Basin Fish and Wildlife Program and Program Addendum, as well as links to the monthly Council meetings and materials, a calendar of events, Council news, Council white papers, official public comment on Council documents, PowerPoint presentations, videos, Council newsletters, photos, and links to the Council's social media platforms.

The Council maintains various social media accounts. These include Facebook, Twitter, LinkedIn, Instagram, Vimeo, and Flickr accounts, all of which are available on the Council's News page. The monthly Council Spotlight newsletter, distributed by email and posted on the website, includes news about Council meetings and links to posts on the website.

The Public Affairs Division also has the responsibility of advancing the Council's mission and accomplishments with members of Congress and their staffs. To assist this work, the Council conducts an annual field trip for staff

members of the Northwest congressional delegation during the August Congressional recess. Because of the pandemic, the usual trips were canceled in 2020 and 2021. The Council has been conducting these informational trips for Congressional staff since 2008.

The Council also has a relationship with its closest counterpart agency in the Canadian Columbia River Basin, the Columbia Basin Trust. The Council and Trust agreed, through a 2000 memorandum of understanding, revised in 2013, to work together on projects to inform and involve the public on both sides of the border about matters of mutual interest including, for example, invasive aquatic fish and plant species, anadromous fish reintroduction above Grand Coulee Dam, climate change impacts, and power issues.

Administrative Overview

Budget Overview

The funding necessary for the Council to carry out its activities and responsibilities under the Northwest Power Act is provided by the Bonneville Power Administration based on the Council's adopted annual budget. Bonneville is a self-financing power marketing authority under the U.S. Department of Energy. The Northwest Power Act establishes a funding mechanism for the Council based on an estimate of Bonneville's forecasted, annual firm-power sales. Funding for the Council does not come from annual federal appropriations or from state governments.

Throughout its history, the Council has managed its budget and finances responsibly and professionally, consistently managing the budget below the rate of inflation. The Council typically underspends its budget and "returns" unspent money to Bonneville at the end of each fiscal year.

Fiscal Year 2022 Revised Budget

The Council's Fiscal Year 2022 revised budget of $12,132,000 is an increase of $190,000 from the previously submitted Fiscal Year 2022 budget request.

Over the next few years spending is projected to be uneven, as some costs projected for 2022 and 2023 will be one-time expenditures. One example is the Council's need to move its website to a new platform because the existing platform will no longer be supported by its designers. This is an additional expenditure that will require a bigger expenditure in the initial phase of the project than in subsequent years where only maintenance will be required. Additionally, there are technology upgrades needed both in-office and possibly for staff working from home even after the central office re-opens. The Council wants to retain the flexibility to move toward a hybrid workforce and explore ways to reduce its office footprint to allow staff more flexibility while also being fiscally prudent.

The Council's increased reliance on virtual communications and paperless processes during the pandemic provided an opportunity to review business practices to determine if changes or modifications can be made to improve operational and fiscal efficiency. Some of those changes will include updating and streamlining communications and information storage technologies. The initial upgrades are projected to be greater in Fiscal Year 2022 but are anticipated to be less in years following until the next significant upgrade is necessary. Maintenance costs and integration costs will

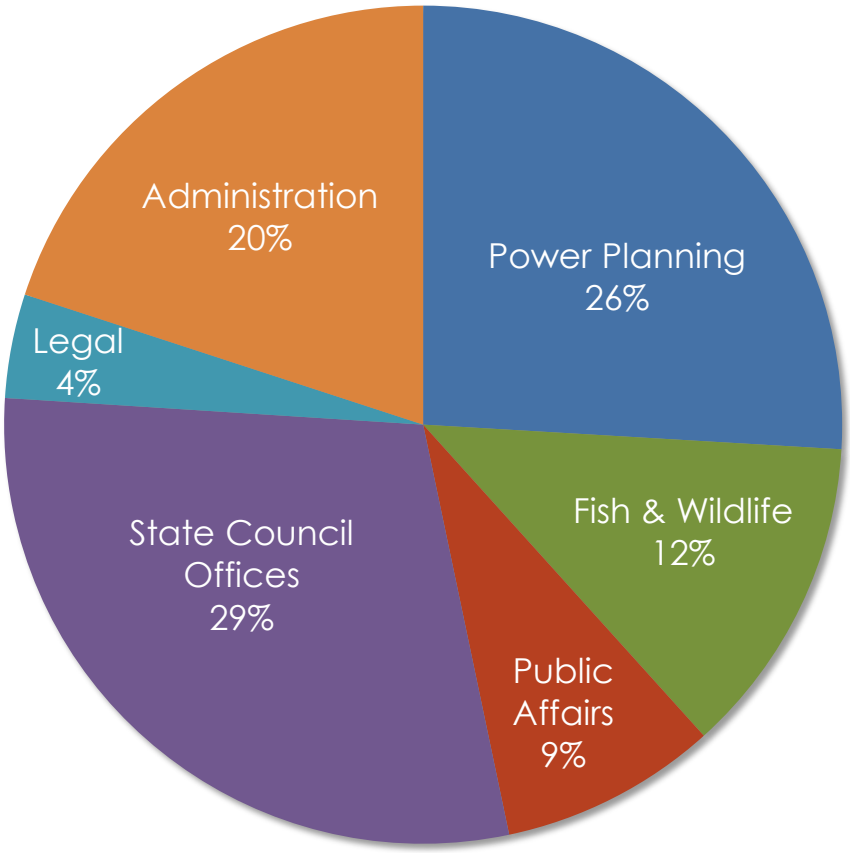
also continue. Similarly, remote business and financial operations require implementation and maintenance of information systems that are integrated, secure, and accessible to a hybrid office staff. The Council anticipates the continued use of virtual communication technology after the central office re-opens as the Council adapts to new ways of conducting day-to-day business and meeting with its regional partners and stakeholders.

Background About the Council

The Northwest Power Act of 1980

The Council was authorized by Congress in 1980 in the Pacific Northwest Electric Power Planning and Conservation Act (the Power Act), giving the states of Idaho, Montana, Oregon, and Washington a greater voice in how we plan our energy future and protect our fish and wildlife resources. The Act gives the four Northwest states a formal role in making decisions about the allocation of new energy resources for the region.

Budget by Function for FY 2023: $12,190,000



* Includes central office legal, fiscal, executive and administrative services

In the late 1960s and early 1970s, the years leading up to the congressional debate over the Act, the Bonneville Power Administration and many of the region's utilities were concerned that the region's expected growth would outstrip the power system's ability to meet electricity demand. As a result, Northwest utilities made decisions to build a number of new energy plants, including five nuclear power plants in the state of Washington. When the Act was passed in late 1980, many in the region had come to realize that those earlier decisions, based in part on inaccurate electricity demand forecasts, were a disastrous mistake. Only one of the plants, the currently operating Columbia Generating Station, formerly known as Washington Nuclear Plant 2, was completed. Due to exorbitant cost overruns, the other four plants were abandoned or mothballed prior to completion. Two of the unfinished plants were responsible for one of the largest bond defaults in the history of the nation, while the financing for the other three plants was backed by the Bonneville Power Administration. Even today, 41 years after the Northwest Power Act was enacted, Bonneville pays debt service for two of the unfinished nuclear plants, plus the one that was completed.

Congress concluded that an independent agency, controlled by the states and without a vested interest in selling electricity, should be responsible for forecasting the region's electricity load growth and helping determine which generating and energy-efficiency resources should be built. The Council does that in the Northwest Power Plan, which includes a component Columbia River Basin Fish and Wildlife Program to mitigate the impact of hydropower dams on fish and wildlife. The Act directs the Council to review the plan at least every five years. The Act also directs the Council to ensure widespread public involvement in formulating regional fish and wildlife and energy policies.

The Northwest Power and Conservation Council

The governors of Idaho, Montana, Oregon, and Washington each appoint two members to the Council. The eight-member Council sets policy and provides overall leadership for Council activities.

The Council's work is performed, depending on the tasks, by the Council's professional staff (including staff in a central office in Portland and in each state), by consultants under contract, or by public agencies and Indian tribes under intergovernmental agreements. The Council's executive director is responsible for coordinating with the Council, supervising the central office staff, administering contracts, and overseeing the day-to-day operations of the Council. The Council approves major contracts and the overall work plan. The Council has 59 employees.

The central staff is organized into five divisions: Power Planning; Fish and Wildlife; Public Affairs; Legal; and Administrative. Professional staff in each state provide technical review and assistance to Council members in evaluating matters before the Council. State staff also participate in designing and developing public-involvement programs that focus on the implementation of the power plan and fish and wildlife program in their particular states. This support is provided through existing state agencies or by individuals directly under Council member direction.

The Council, known until 2003 as the Northwest Power Planning Council, is an interstate compact agency authorized by Congress in the 1980 Power Act and created by the legislatures of Idaho, Montana, Oregon, and Washington. The Council's first meeting was in April 1981.

The Northwest Power Act gives the Council three distinct responsibilities: 1) to assure the region an adequate, efficient, economical, and reliable electric power supply; 2) to prepare a program to protect, mitigate, and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia River Basin affected by the development and operation of any hydroelectric project on the Columbia River and its tributaries; and 3) to inform the Pacific Northwest public regarding these issues and involve them in decision-making. This annual report is organized around the Council's key responsibilities and five divisions.

The Power Act created a special relationship between the Council and the federal agencies that regulate and operate dams in the Columbia River Basin and sell the electricity that is generated. The administrator of the Bonneville Power Administration, the federal power marketing agency that sells the output of the Federal Columbia River Power System (a system that includes 29 federal dams within the basin and two in southwestern Oregon, and one non-federal nuclear power plant, the Columbia Generating Station), is required to make decisions in a manner consistent with the Council's Northwest Power Plan and its Columbia River Basin Fish and Wildlife Program. Other federal agencies with responsibilities for federal and non-federal dams in the Columbia River Basin (the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and Federal Energy Regulatory Commission) are required to take the Council's power plan and fish and wildlife program into account "at every relevant stage of decision-making to the fullest extent practicable," in the words of the Act.

Despite its relationship to federal agencies, the Council is not a federal agency and its employees are not federal employees. The eight-member Council consists of two members from each state, appointed by their respective governors. The Council headquarters are in Portland.

The Columbia River Basin Fish and Wildlife Program

A key element of the Council's planning efforts is developing and periodically revising (by law, at least every five years) a program to protect, mitigate, and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia River Basin that have been affected by hydropower dams – both federal and those licensed by the Federal Energy Regulatory Commission. Consistent with direction in the Power Act, the Council first created and subsequently has revised, the fish and wildlife program, followed by the initial creation and subsequent revisions of the Northwest Power Plan (see below). That sequence is because the Act requires the Council to include measures in the fish and wildlife program to improve survival of anadromous fish – those that are born in freshwater, spend most of their lives in the ocean, and then return to freshwater to spawn

– at and between dams on the Columbia and Snake rivers. Because these measures can take water away from hydropower generation – by spilling over dams to improve fish-passage survival, for example – the Council anticipates that hydropower generation could be reduced as a result of the program and accounts for this potential loss with cost-effective generating and energy-efficiency resources in the power plan. The highest-priority resource in the Power Act is energy efficiency, also called energy conservation.

The Act directs the Council to develop its program and make periodic major revisions by first requesting recommendations from the region's federal and state fish and wildlife agencies, Indian tribes within the basin, and other interested parties. The Council also takes comment from the designated entities and the public on those recommendations.

The Council then issues a draft amended program and initiates a public comment period on the recommendations and proposed program amendments that includes extensive written comments, public hearings in each of the four states, and consultations with interested parties. After closing the comment period and conducting a review and deliberation period, the Council adopts the revised program. The Council develops its final program on the basis of the amendment recommendations, information submitted in support of the recommendations, views and information obtained through public comment and participation, and consultation with fish and wildlife agencies, tribes, Bonneville customers, and others. The program amendments are not concluded until the Council adopts written findings as part of the program explaining its basis for adopting or not adopting program amendment recommendations.

The program is implemented through projects financed by the Bonneville Power Administration and undertaken by federal agencies including the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Federal Energy Regulatory Commission and its licensees, and by state fish and wildlife agencies, Indian tribes, and occasionally private contractors. Projects proposed to the Council to implement the program are reviewed by the 11-member Independent Scientific Review Panel to be sure is it based on sound scientific principles and is consistent with the Power Act.

The Northwest Power Plan

Following final approval of the fish and wildlife program, the Council revises the power plan. Under the Power Act, the fish and wildlife program is part of the power plan.

The plan is a 20-year blueprint to meet future demand for power that includes an electricity demand forecast, electricity and natural gas price forecasts, an assessment of the amount of cost-effective energy efficiency that can be acquired over the life of the plan, and a least-cost generating resources portfolio. The plan guides Bonneville's decision-making to meet its customers' electricity load requirements and also serves as a useful guide for investor-owned utilities in their own least-cost planning.

In the Northwest Power Act, a law that was ahead of its time, Congress concluded that energy efficiency should be the highest-priority energy resource for meeting the region's future load growth. The Act includes a provision that directs the Council to give priority to cost-effective energy efficiency, followed by cost-effective renewable resources to meet future demand for power. In effect, for the first time, energy efficiency was deemed to be a legitimate source of energy on par with generating resources.

The rest is history. Since the release of the Council's first Northwest Power Plan in 1983 (one year after the first fish and wildlife program), the region's utilities have acquired the equivalent of around 7,200 average megawatts of energy efficiency. Expressed as electricity, that is more than enough to power six cities the size of Seattle.

During the roughly two years after the revision of the power plan and the beginning of work on the next fish and wildlife program, the Council and its staff monitor implementation of the two planning documents, meet with energy and fish and wildlife experts to discuss contemporary issues, and monitor progress toward goals in the plan and program.

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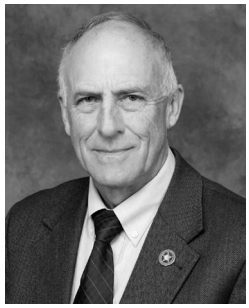

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Comments by the Bonneville Power Administrator

Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

EXECUTIVE OFFICE

April 14, 2022

In reply refer to: AI-7

Guy Norman, Chair
Northwest Power and Conservation Council
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Dear Chair Norman:

Thank you to the Northwest Power and Conservation Council for a constructive and productive 2021. We appreciate the collaboration between our organizations in our ongoing efforts to address both power and fish and wildlife matters under the Pacific Northwest Electric Power Planning and Conservation Act.

The Bonneville Power Administration appreciates the Council's important work completing the 2021 Power Plan. As Bonneville continues to supply firm power under existing Regional Dialogue power sales contracts and begins to lay the foundation for its post-2028 firm power sales contracts, the Power Plan remains essential in guiding our resource strategies for ensuring Bonneville has an adequate and reliable supply of power for the customers and communities we serve. As states move forward with clean energy policies and the region's utilities become increasingly concerned about resource adequacy, the Council's continued understanding of how these issues affect the region's power system is essential. Implications for the region's energy efficiency efforts is also an important aspect of the 2021 Power Plan. Though the region's power system is transforming, energy efficiency continues to be a vital resource in the region's clean energy future, delivering great value for Bonneville and its customers. We look forward to continued collaboration with the Council as we adapt to the changing energy landscape.

Although the global COVID pandemic continued to affect how we conducted business, 2021 was another productive and successful year for on-the-ground fish and wildlife mitigation. We are encouraged that the Council initiated an effort to summarize the accomplishments under the Council's Columbia River Basin Fish and Wildlife Program, dating back to its inception in 1980. Capturing the historic successes in mitigating for the impacts of hydroelectric facilities in the Columbia River Basin is crucial for helping the region understand the significant accomplishments already achieved, and what still needs to be done. We look forward to working with the Council in its ongoing efforts to summarize Program accomplishments and performance.

Bonneville looks forward to a successful and collaborative 2022 for both of our organizations.

Sincerely,

John L. Hairston
Administrator and Chief Executive Officer

METOLIUS RIVER, OREGON, PHOTO BY MARK WALKER

COVER PHOTO: UNSPLASH.COM/@WINESINK

Northwest **Power** and
Conservation Council

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BILL EDMONDS, EXECUTIVE DIRECTOR | DOCUMENT 2022-4

The State of the Columbia River Basin

DRAFT

Fiscal Year 2021
ANNUAL REPORT

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

October 1, 2020 - September 30, 2021

Document 2021-07
December 2021

Submitted to the

Committee on Energy and Natural Resources
United States Senate

Committee on Energy and Commerce
United States House of Representatives

and

Committee on Natural Resources
United States House of Representatives

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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 the Northwest providing for energy policy within the Northwest 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 to the public at the Council's website, here: https://www.nwcouncil.org/about/bylaws or under the "About" tab on the Council's homepage, https://www.nwcouncil.org/.

Contents

Letter From The Executive Director

(Will be added following the public comment period)

The Council's View:

Overview

Fiscal Year 2021 was one of success and adaptation for the Northwest Power and Conservation Council. The Council successfully completed a draft of its 2021 Northwest Power Plan, released it for public comment, and conducted four public hearings by webinar – each hosted by a state represented on the Council, and did this while staff and Council members continued to work remotely in response to the Covid 19 pandemic. The Council closed its offices to staff and the public in March 2020, directing its employees to work remotely. Like many other employers, public and private, the Council offices remained closed through all of 2021.

Despite the disruption of a pre-pandemic routine that became nearly forgotten, the Council's work continued without interruption. The Council continued its regular practice of monthly meetings, and all were conducted by webinar. Work on the Draft 2021 Northwest Power Plan continued, as noted above, and work on the Columbia River Basin Fish and Wildlife Program continued as well, as the Council launched an effort to improve monitoring and evaluation of the program consistent with the 2020 Addendum to the 2014 Program.

Meanwhile, the Northwest continued to improve the efficiency of the regional power supply, although the pace slowed a bit from previous years as building activity slowed during the pandemic. Regardless, the region acquired 1,039 average megawatts of energy efficiency from 2016 through 2020, bringing the regional total since 1982 to about 7,200 average megawatts. Expressed as electricity, that much would power six cities the size of Seattle for a year.

In 2021 the Council also hosted a forum on diversity, equity, and inclusion to explore 1) how energy data and metrics can be used to reveal and describe inequities; 2) the importance of public engagement in the design of energy policy and programs; and 3) the use of equity-assessment tools to prompt energy policy makers and energy program designers to incorporate equity considerations. Information from the forum was incorporated in the Draft 2021 Power Plan.

Fiscal Year 2021 also was significant as it was the 40th anniversary of the first meeting of the Council, which took place in Portland on April 28,1981. The four Northwest states formed the Council in January 1981 after President Carter signed the Northwest Power Act into law in December 1980. In the Act, Pacific Northwest legislators and policymakers took a revolutionary leap of faith, working to end the construction of expensive and environmentally intrusive power plants and instead prioritize meeting much of the region's future power demand through more efficient energy use. And for the first time, fish and wildlife affected by Columbia River Basin hydropower dams were to be protected in a manner that provides equitable treatment with the other purposes of the dams.

At that first meeting, Governors Atiyeh of Oregon, John Spellman of Washington, Ted Schwinden of Montana, and John Evans of Idaho addressed the Council members they had appointed, highlighting the cooperation among the states in writing what Governor Schwinden called a 'blueprint for this region's energy future' while also

protecting fish and wildlife in the Columbia River Basin. Over the years, the Council's power plan, which includes the fish and wildlife program, has met that challenge, guiding the region to a more efficient, reliable, and affordable energy supply while mitigating the impacts of Columbia River Basin hydropower dams on fish and wildlife.

Energy Overview

The 2021 Northwest Power Plan

In September 2021, the Council completed work on the draft 2021 Northwest Power Plan, the latest version of the plan that the Council revises every five years. Public comments were accepted through November, and approval of the final version of the plan was anticipated in February 2022.

The 2021 Plan envisions a future much different than what we anticipated in past plans, as the Northwest and West Coast electricity supply adjusts to comply with clean-energy policies enacted by states and some municipalities and utilities. Inefficient thermal plants, mainly older generators fueled with coal, are expected to retire during the next decade, removing several thousand megawatts of capacity from the power supply. In their place, thousands of megawatts of renewable resources, mainly solar and wind power, are expected to be built and come online.

This development complicates power planning because of the variable output of those renewables – wind plants don't generate when there is no wind, and solar plants don't generate overnight. Adding to the complexity is the fact that the existing high-voltage transmission system may not be capable of moving all the new renewable energy from where it is generated to where it is consumed in time to comply with clean-energy milestones that begin as early as 2030, only nine years in the future. Major transmission lines typically take at least a decade to build.

The 2021 Power Plan responds to the many challenges ahead -- new economic signals, new resource development and dispatch, changing system operations, uncertainty about the future – with a resource strategy designed to propel the region through the changes while maintaining an adequate, efficient, economical, and reliable power supply. Key elements of the strategy include:

- **Energy efficiency**: The Council recommends that the Bonneville Power Administration and regional utilities plan to acquire between 750 and 1,000 average megawatts of cost-effective energy efficiency by the end of 2027 and a minimum of 2,400 average megawatts by 2041. This is less than in past plans, underscoring the high achievements of the last 40 years. Much of the inexpensive efficiency has been achieved, and what remains is close to the price of power from the least-expensive generating plants – wind and solar, for example.
- **Demand response**: The Council recommends utilities examine two types of demand response (demand response is the voluntary reduction of power use during periods of high demand and limited resource availability, such as in the early morning and early evening, in return for compensation): 1) residential time-of-use (TOU) rates, and 2) demand voltage regulation (DVR). Our assessment shows that about 200 megawatts of TOU and 520 megawatts of DVR are available by 2027.
- **Renewable resources**: The Council recommends the region acquire at least 3,500 megawatts of renewable resources by 2027 as a cost-effective option for meeting energy needs and reducing emissions.

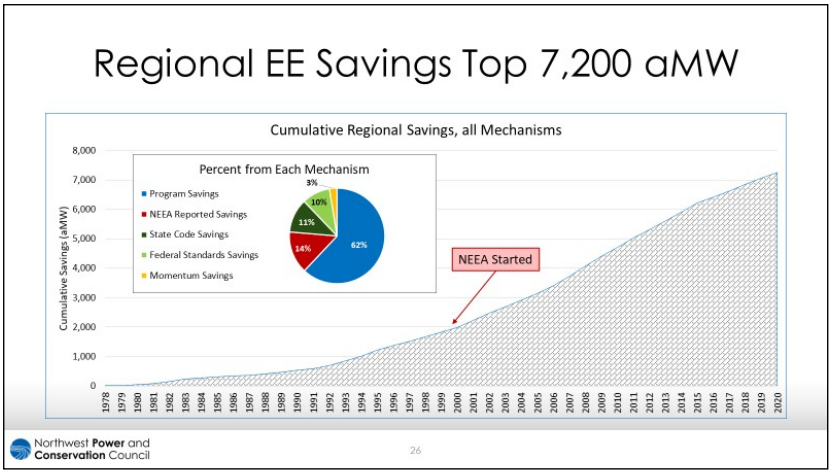
- **Existing resources**: Electricity imports from outside the region, particularly solar power from California, will be important to the future Northwest power supply. Solar and wind power have become so inexpensive that they are beating practically every other type of power in the wholesale market, making many inefficient thermal plants uneconomical to operate. The Council recognizes that the transition to an increasingly clean and low-cost power supply can't happen so fast that reliability and adequacy are compromised, so the draft plan recognizes existing thermal plants – coal, natural gas, nuclear – as an important component of the power supply.
- **Regional collaboration**: In addition to these resources, the Council recommends that Bonneville and regional utilities, along with their associations and planning organizations, work together and with others in the Western electric grid to explore the potential costs and benefits of new market tools, such as capacity and reserves products, that contribute to system accessibility and efficiency. The Council expects that greater regional collaboration would produce significant cost savings and introduce more efficiency into system operations.

Northwest Energy Efficiency Total Reaches 7,200 Average Megawatts

The region acquired 1,039 average megawatts of energy efficiency from 2016 through 2020. That's slightly below the five-year goal (1,115 average megawatts) in the Council's Seventh Power Plan, issued in 2016. The total over the last 40 years now stands at about 7,200 average megawatts. Expressed as consumed energy, that's enough for six cities the size of Seattle for a year. The 2020 slowdown was partly due to the impacts of the pandemic and partly due to the increasing cost of efficiency measures. Much of the inexpensive efficiency improvements were achieved in past years.

Annually, the Council collects information about energy efficiency achievements from Northwest utilities, the Bonneville Power Administration, and the Northwest Energy Efficiency Alliance. The Alliance, an association of more than 140 utilities and energy efficiency organizations, works to increase the adoption of energy-efficient products, services and practices. Here are some highlights from the 2020 efficiency report:

- The region achieved 187 average megawatts of efficiency improvements in 2020, which is about a 14-percent decline from 2019
- The Northwest Energy Efficiency Alliance reported 61 average megawatts of savings in 2020
- Bonneville achieved 326 average megawatts of savings between 2016 and 2020, 31 percent of the total regional savings for that time period. Bonneville achieved 35 average megawatts in 2020.



Council Supports Revised Efficiency Standards For Consumer Products

The Council supported administrative changes intended to improve the process of reviewing and adopting energy efficiency standards for electrical devices including consumer products and commercial equipment.

In a May 2021 letter to the federal Department of Energy (DOE), the Council said revisions proposed by DOE would restore long-standing and well-accepted practices by the agency and its constituents, remove obstacles, and help enable a more effective review of standards and test procedures.

The Council has participated in federal efforts to improve energy efficiency for decades as part of its work to improve the efficiency of electricity use in the Northwest.

Council Forum Addresses Energy Equity

Early in 2021, the Council hosted a forum on diversity, equity, and inclusion in its power planning and for its 2021 Power Plan. The forum – with 130 attendees – built on past work in the Council's advisory committees to address underserved communities and marked a step forward in ensuring equity in our energy planning.

The forum explored how data and metrics can be used to reveal and describe inequities; the importance of public engagement in the design of energy policy and programs; and the use of equity assessment tools to prompt policy makers and program designers to incorporate equity considerations.

"In our work, we engage with a vast four-state region on energy and fish and wildlife issues," noted Council Executive Director Bill Edmonds. "We must understand the impact of this work on everyone in the region – this includes our close consultation

with tribal sovereigns on fish issues and in deepening our understanding of the unique effects on hard to reach communities on the power side."

Information from the forum was incorporated into the draft power plan.

Northwest Power System's 2019 Greenhouse Gas Emissions

In the Pacific Northwest, the power system's carbon emissions are directly related to how much hydropower is produced. In a good water year, emissions are lower because less natural gas and coal are dispatched and conversely, emissions tend to be higher in poor water years as fossil fuel generators are dispatched more often.

In 2019, the latest year for which figures were available, the region experienced its worst water year since 2005, leading to an increase in emissions of about 16 percent—from about 48.5 million metric tons in 2018 to about 56.6 million metric tons in 2019.

As coal-fired generators begin to retire in the region, and in the country, and existing natural gas generation continues to displace coal generation, emissions will begin to trend downward in the coming years. Natural gas is less carbon-intensive, releasing roughly half the emissions of coal.

The extent of the trend will depend on what kind of resources come online. But with state renewable portfolio standards and other clean-energy policies in place, it's likely the region will see an increase in zero-carbon resources such as energy efficiency, renewables, and energy storage.

Wholesale Electricity Prices Come Into Focus

Throughout the West, retiring coal plants and a plethora of clean energy policies in states, municipalities, and utilities have changed how electricity markets function, adding even more uncertainty to an already challenging enterprise: forecasting the future.

The Council predicts that future wholesale prices will be low in the winter and spring, reflecting the impact of the Northwest's reliance on hydropower and increased renewables throughout the West. In years with a larger runoff, negative pricing is a possibility as inexpensive renewables, particularly solar power, flood the market. The summer month prices are expected to be comparatively higher, especially during the evening hours when the sun goes down and solar generation drops to zero. But even summer prices become lower over time on an average basis because the low prices midday decrease as more solar generation is added throughout the West. Carbon emissions are expected to decrease over time, with higher avoided emissions during the summer.

Fish and Wildlife Overview:

Council Moves Ahead on Measuring Program Performance

For 40 years, the Council's Columbia River Basin Fish and Wildlife Program—the nation's largest regional effort to protect and enhance natural resources—has worked to mitigate the effects of the hydropower system on fish and wildlife. Over the life of the program, which is updated every five years, an emphasis on performance has always been important. In response to a measure in the 2020 revision of the program, the Council worked with fish and wildlife managers to reorganize the goals and objectives of the program and to develop strategy performance indicators to better understand how well the program strategies have been implemented over time.

The first step in improving measurement of program performance is to better understand the work that has been done and describe the accomplishments from that work, both at the basin and ecological province scale. At the basin scale, the Council staff will look at how the program has developed over time; how different strategies have been implemented; and program investments. At the ecological province scale, staff will look at the geographic distribution of investments, the relationship between implementation and priorities, and other geographic information.

An initial set of strategy performance indicators, developed in collaboration with fish and wildlife managers through a series of workshops during development of the 2020 Program Addendum, are a critical component of the effort. A workgroup was formed in early 2021 and has been working to help identify sources of data, compile the information and report on the status of the strategy performance indicators.

It's an ambitious undertaking given the complexities of understanding natural processes and our impact on them. And the program covers a diverse geographic area and entails a wide range of actions. Trying to assess hundreds of projects and multiple other actions that have been implemented at different times for different durations will be challenging. But determining the program's impact will go a long way in pinpointing where the region's long-term investments mattered most, and delineating a path to future success in the Council's efforts to secure the region's fish and wildlife health.

~~Cost Savings Will Benefit~~Maintaining Program Hatcheries and Fish Screens

In Fiscal Year 2021, $450,000 was available for allocation to special maintenance of Program ~~H~~hatcheries and fish screens, in addition to those projects' established annual budgets. ~~will received $450,000 from the cost savings placeholder in the budget for the Council's fish and wildlife program.~~ The 2014 Program recommended ~~using~~ reallocating savings from certain existing project budgets to fund ~~new projects that implement~~ program priorities recommended by the Council. ~~These~~ includ~~e~~ing maintenance of high-priority past investments.

Council and Bonneville Power Administration staff work~~ed~~ together to ~~review projects for savings (either they are discontinued or have significant cost reductions) that can be re~~allocate~~d~~ funds available from past project savings to other one-time project needs. The asset management strategic plan they develop~~ed~~ addresses non-recurring maintenance needs for hatcheries, fish diversion screens, and mitigation lands to ensure the benefits of past investments. Based on this plan, a prioritized list of maintenance equipment and tasks is developed each year.

Commented [A1]: Since this is a retrospective report, suggest this section be drafted in the past tense. In particular, the hatcheries and fish screens funding discussed below has already occurred.

Commented [A2]: Suggest "mitigation" or "mitigation work" as the more relevant to examination.

Commented [A3]: Suggest rephrasing as follows for closer adherence to statutory scope of the Program:

"… to protect, mitigate, and enhance fish and wildlife affected by hydroelectric facilities of the Columbia River basin."

~~The~~ In Fiscal Year 2021, these fundssavings ~~will be used to~~ purchased needed equipment, repair buildings, upgrade electrical systems, and to purchase materials for fish screens.

Projects included the Nez Perce Tribal Hatchery; Sherman Creek Hatchery; Spokane Tribal Hatchery; Umatilla Hatchery; and fish screen projects for the Idaho Department of Fish and Game; Washington Department of Fish and Wildlife; and Oregon Department of Fish and Wildlife.

Anadromous Fish Habitat and Hatchery Project Review Continues

Every five to seven years the Council and its Independent Scientific Review Panel review all of the projects that implement the Council's fish and wildlife program. The anadromous fish habitat and hatchery project review, the fourth and largest category of projects to be reviewed during the current review cycle initiated in 2017, progressed in Fiscal Year 2021. Other reviews already completed include wildlife projects, mainstem and program support projects, and resident fish projects.

Anadromous and hatchery project sponsors discussed their work with the Council's Independent Scientific Review Panel, which then drafted its preliminary review of the 124 projects and released it in September. The ISRP found that 32 project proposals met scientific review criteria defined in the Northwest Power Act, 41 proposals met scientific review criteria with conditions, and 12 proposals were not amenable to scientific review and thus received "not applicable" determinations. The ISRP requested responses on 37 proposals to determine whether they fully meet scientific review criteria. Project proponents were invited to respond by November 2021. Those responses will inform the ISRP's final report to the Council, scheduled to be completed by February 10, 2022.

Projects in this category include hatchery operations and maintenance, fish screen operation and maintenance, habitat restoration, and the monitoring and evaluation activities associated with these projects. The projects are implemented by a variety of organizations. The total budget for the projects is about $134 annually.

Commented [A4]: Since this date has passed but the overall project review will be ongoing at the close of the Council's comment period for this Annual Report, consider revising this sentence to simply note the anticipated end date of the overall project review rather than the next incremental step in the process.

Commented [A5]: FY21 SOY value for this portfolio is approximately $140 million.

Council Adds Website With Information On Hatcheries

The Council, in partnership with the region's fish and wildlife managers, unveiled a new website (https://hatchery.nwcouncil.org/) about the region's hatcheries, their historical beginnings, how science has informed their evolution, and the status of hatcheries throughout the Columbia River Basin.

The site is intended for a general audience but has links to detailed, technical information. The goal is to make key information easily available and understandable to all users through bold data points in visual graphics, combined with simple stories that provide background information and context.

We intend the website to be a useful resource for anyone interested in hatcheries and how they have changed over time. The site will continue to be updated. This is part of an ongoing effort to explain the regional collaborative work to improve fish and wildlife in the basin.

Letter of Support for Continued Funding to Control Marine Mammals

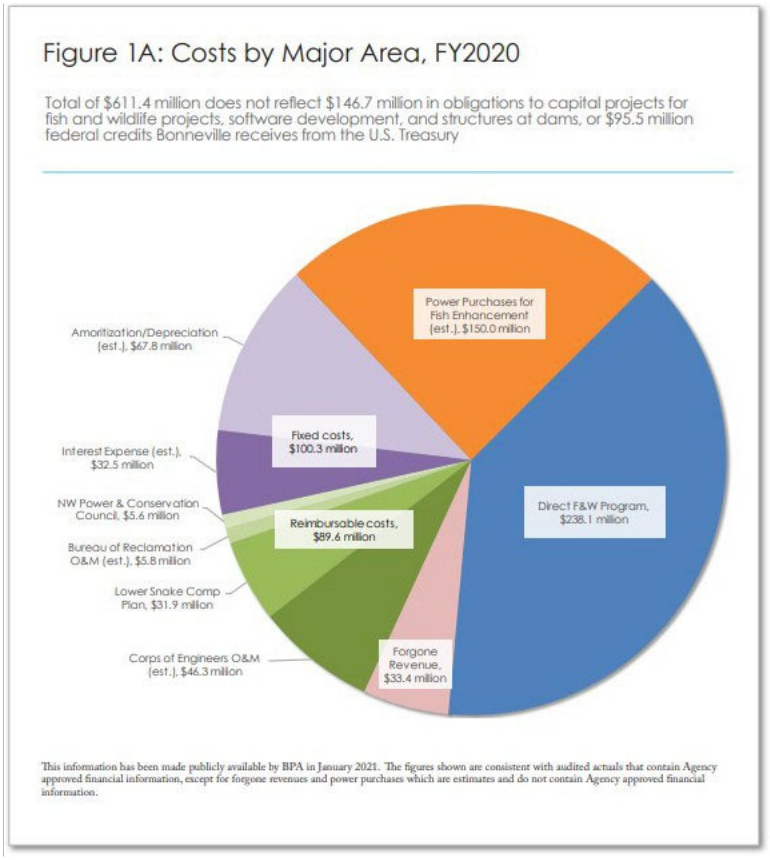
In October 2020, the Council sent a **letter to NOAA Fisheries** urging permanent federal funding for ongoing, critical research into the impact of marine mammals – sea lions and seals – on adult spring Chinook salmon and other species in the Columbia River.

To date, the research has been funded through annual grants. NOAA has reported that as much as 40 percent of the annual spring Chinook return disappears between the ocean and Bonneville Dam and attributes this disappearance to predation by marine mammals, after accounting for other possible sources of mortality.

Fish and Wildlife Survival and Program Cost Updates

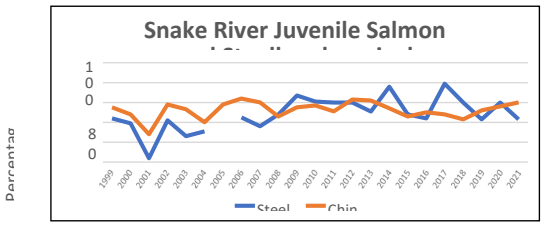
Commented [A6]: Bonneville is not aware of any Program data related to "wildlife survival." With respect to anadromous fish survival, the absence of accompanying narrative or context makes it difficult to determine what purpose these graphs serve in the context of this report. For example, the relevance and connection of the few data sets underlying these graphs is unclear, and inclusion of these graphs along side each other seems to suggest a comparison of apples to oranges. Specifically, the first graph pertains to juvenile survival (presumably both hatchery origin and natural origin) for the Snake River, the second is limited to juvenile ***hatchery*** survival for the Upper Columbia, and the third looks adult returns at Bonneville without indicating how those numbers relate to the two preceding data sets or why there is no analgous graph for lower river juvenile survival given that those juveniles also contribute to the overall adult returns at Bonneville Dam.

Overall, it's unclear what the survival graphs are supposed to say about the Council's Fish and Wildlife Program for 2021, especially when one of the graphs doesn't include 2021 data and when, for adult returns, those 2021 numbers actually reflect hydro operations from a few years earlier, plus ocean conditions, estuary predation, etc.

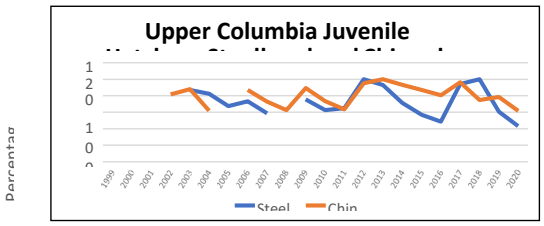


Source: Bonneville Power Administration; FY 2021 costs will not be available until early in calendar year 2022.

Commented [A7]: BPA recently provided these FY21 data to Council staff. Consider updating this figure accordingly.



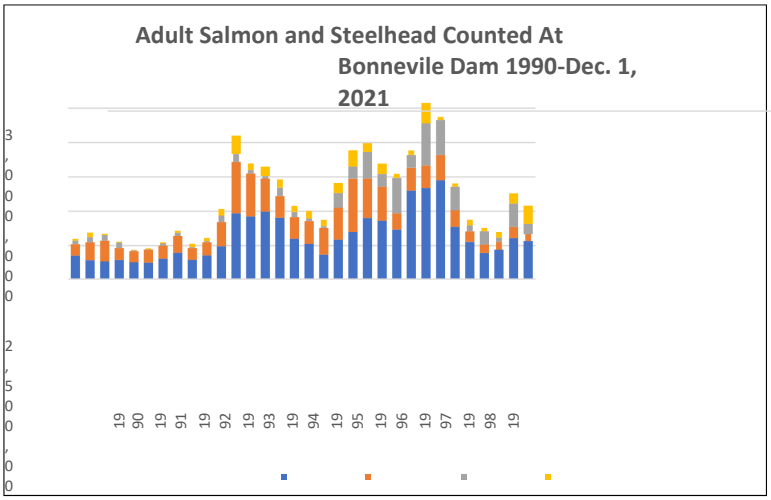
(Steelhead data not available in 2005)



(Data for some years is not available; NOAA does not estimate survival in Columbia River reaches above McNary dam.)

Source for the two figures above: NOAA Fisheries, *Preliminary survival estimates for the passage of spring-migrating juvenile salmonids through Snake and Columbia River dams and reservoirs, 2021,* October 7, 2021. NOAA does not estimate survival of fall-migrating fish.

Commented [A8]: Three points are offered for consideration:
1) Perhaps exercise caution using survival data as an element of Council Program performance. Survival takes into account factors outside the Council's purview or ability to influence, including ocean conditions.
2) Consider describing the data for the two survival graphs as either 'yearling Chinook' or spring-summer Chinook. In NOAA's version, Chinook looks flatter than steelhead – steelhead had a boost in survival around 2005-2007 that we attribute to surface passage, but this version seems to have the same values but it doesn't make that increase jump out as much.
3) Consider the graph "Upper Columbia Juvenile…" shows 0-100% survival whereas NOAA constraints y-axis to 30-80% NOAA (ultimately making this graph look flatter or lower variation than NOAA's). Including the standard error bars are important because they reflect a more accurate representation of how counts are estimated.
1201_Smith_Smolt_Survival_and_Transportation_2021_TMT_Year-End.pptx (live.com)



Source: Fish Passage Center/U.S. Army Corps of Engineers.

Public Affairs Overview

Outreach, information, and communication

The Northwest Power Act directs the Council to provide for the participation and consultation of the Pacific Northwest states, tribes, local governments, consumers, electricity customers, users of the Columbia River System, and the public at large in developing regional plans and programs related to energy efficiency, renewable energy resources, other energy resources, and protecting, mitigating, and enhancing fish and wildlife that have been affected by hydropower dams in the Columbia River Basin. The Council's Public Affairs Division has the primary responsibility to implement this portion of the Act.

The Division uses a variety of communication tools to perform its mission, including printed and electronic publications, the Council's website, social media platforms, video, public meetings, and press releases that are posted as news items on the website and then communicated to the news media and other interested parties via email and social media.

The Council's website, www.nwcouncil.org, functions as the hub of its outreach efforts and public information strategy. The Council continuously updates its website, making it faster to load and easier to use. This is important during the pandemic, when many people are working from home and accessing website and electronic media more often. The website contains myriad documents, publications, databases, and other forms of information. Included, for example, are the Northwest Power Plan, the 2014 Columbia River Basin Fish and Wildlife Program and 2020 Program Addendum, as well as links to the monthly Council meetings and materials, a calendar of events, Council news, Council white papers, official public comment on Council documents, PowerPoint presentations, videos, Council newsletters, photos, and links to the Council's social media platforms.

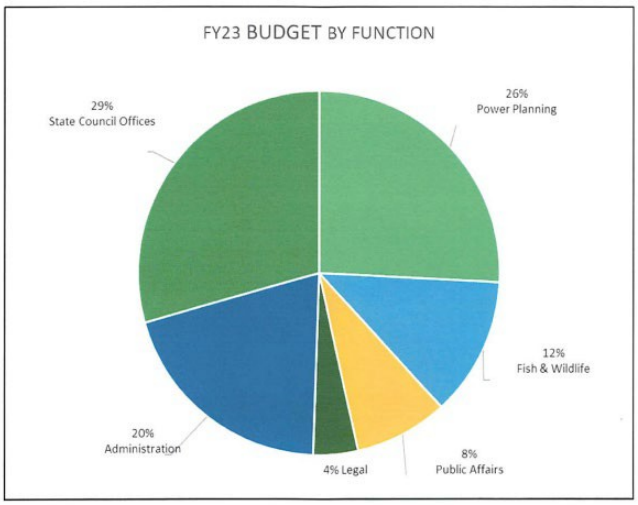
The Council maintains various social media accounts. These include Facebook, Twitter, LinkedIn, Instagram, Vimeo, and Flickr accounts, all of which are available on the Council's News page. The monthly Council Spotlight newsletter, distributed by email and posted on the website, includes news about Council meetings and links to posts on the website.

The Public Affairs Division also has the responsibility of advancing the Council's mission and accomplishments with members of Congress and their staffs. To assist this work, the Council conducts an annual field trip for staff members of the Northwest congressional delegation during the August Congressional recess. Because of the pandemic, the usual trips were canceled in 2020 and 2021. The Council has been conducting these informational trips for Congressional staff since 2008.

The Council also has a relationship with its closest counterpart agency in the Canadian Columbia River Basin, the Columbia Basin Trust. The Council and Trust agreed, through a 2000 memorandum of understanding, revised in 2013, to work together on projects to inform and involve the public on both sides of the border about matters of mutual interest including, for example, invasive aquatic fish and plant species, anadromous fish reintroduction above Grand Coulee Dam, climate change impacts, and power issues.

Administrative Overview

Council budget



Background:

The funding necessary for the Council to carry out its activities and responsibilities under the Northwest Power Act is provided by the Bonneville Power Administration based on the Council's adopted annual budget. Bonneville is a self-financing power marketing authority under the U.S. Department of Energy. The Northwest Power Act establishes a funding mechanism for the Council based on an estimate of Bonneville's forecasted, annual firm-power sales. Funding for the Council does not come from annual federal appropriations or from state governments.

Throughout its history, the Council has managed its budget and finances responsibly and professionally, consistently managing the budget below the rate of inflation. The Council typically underspends its budget and "returns" unspent money to Bonneville at the end of each fiscal year.

Fiscal Year 2022 revised budget

The Council's Fiscal Year 2022 revised budget of $12,132,000 is an increase of $190,000 from the previously submitted Fiscal Year 2022 budget request. Over the next few years spending is projected to be uneven, as some costs projected for 2022 and 2023 will be one-time expenditures. One example is the Council's need to move its website to a new platform because the existing platform will no longer be supported by its designers. This is an additional expenditure that will require a bigger expenditure in

the initial phase of the project than in subsequent years where only maintenance will be required. Additionally, there are technology upgrades needed both in-office and possibly for staff working from home even after the central office re-opens. The Council wants to retain the flexibility to move toward a hybrid workforce and explore ways to reduce its office footprint to allow staff more flexibility while also being fiscally prudent.

The Council's increased reliance on virtual communications and paperless processes during the pandemic provided an opportunity to review business practices to determine if changes or modifications can be made to improve operational and fiscal efficiency. Some of those changes will include updating and streamlining communications and information storage technologies. The initial upgrades are projected to be greater in Fiscal Year 2022 but are anticipated to be less in years following until the next significant upgrade is necessary. Maintenance costs and integration costs will also continue. Similarly, remote business and financial operations require implementation and maintenance of information systems that are integrated, secure, and accessible to a hybrid office staff. The Council anticipates the continued use of virtual communication technology after the central office re-opens as the Council adapts to new ways of conducting day-to-day business and meeting with its regional partners and stakeholders.

Members and Offices

Jeffery Allen, Idaho

email I 208-947-4080

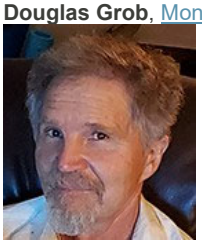
Jeffery C. Allen was appointed to the Council in March 2020 by Idaho Governor Brad Little. Prior to his appointment, Mr. Allen directed the Idaho office of the Council for 10 years, where he established and continues to maintain relationships with the people and organizations in Idaho that deal with issues the Council addresses in its planning activities, including protecting and enhancing salmon, steelhead, and resident fish affected by hydropower dams, water allocation, and ensuring the Northwest has a reliable and affordable electric power system. Before managing the Council's Idaho office Mr. Allen worked for the Governor's Office of Species Conservation, where he advised Idaho's effort to coordinate all state policies relating to the Endangered Species Act and led Idaho's efforts to delist the wolf and establish a compensation fund to pay for livestock lost to wolves. Earlier, Mr. Allen served as the State Director of Natural Resources for U.S. Senator Mike Crapo. Mr. Allen holds a Bachelor's in International Relations from Brigham Young University. He lives in Star with his wife, Annette, and four children.

Ginny Burdick, Oregon (Term began November 1, 2021)

email | 503-229-5171

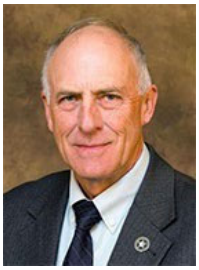
Ginny Burdick, a fourth generation Oregonian, grew up in Portland where she attended elementary and high school and then received her Bachelor of Arts degree from the University of Puget Sound and a Master of Arts degree in journalism from the University of Oregon. Burdick worked for 10 years as a reporter and editor in the Pacific Northwest and Washington, D.C., specializing in environmental and energy policy. She switched from journalism to policy work in Washington, D.C. in the late 1970s and worked in the energy industry as a consultant and employee in Washington and Los Angeles for five years. Upon returning to Oregon in 1984, she continued her policy work and worked on political campaigns before starting her own business in 1989, specializing in crisis communications. In 1996, Burdick was elected to an open Senate seat and has continued to serve in the Senate since 1997. She has chaired several committees, including Judiciary, Rules and, most recently, Finance and Revenue. She was elected Senate President pro tempore in 2011 and served until 2015, when she was elected Senate Majority Leader. She held that job until 2020. Burdick lives in Portland and has a grown daughter and a very spoiled cat named Tucker.

Douglas Grob, Montana



email | 406-603-4014

Douglas Grob was appointed to the Council by Governor Greg Gianforte in January 2021. Grob was born, raised, and educated in Montana. He taught high school in Australia and spent several years abroad in New Zealand, Asia and Europe. Before his appointment to the Council, Grob was a trustee of the Flathead Electric Cooperative, first elected in 2002, and later was elected board president. At the cooperative, his focus was on the Bonneville Power Administration and power supply issues. His considerable experience includes serving on the Montana Electric Cooperative Association and as past president of the Western Montana Generating and Transmission Cooperative, Inc. Grob served on many boards and as an alternate on the Public Power Council Executive Committee. He is an honors graduate of the University of Montana and lives in Kalispell.



Mike Milburn, Montana

email | 406-603-4016

Mike Milburn was appointed to the Council by Governor Greg Gianforte in May 2021. Milburn is a Montana native who was raised on a family cattle ranch in central Montana. He graduated from Montana State University with a geology degree. He married his childhood sweetheart and has three children and seven grandchildren. He is a retired Air Force pilot, having served on active duty and in the Montana National Guard. He served four terms in the Montana House of Representatives, his last term as Speaker of the House. Most recently he was the Director of the Montana Department of Justice and then served on Governor Gianforte's executive team until his appointment to the Council.

Guy Norman, Vice Chair January through October; Chair November through December 2021 Washington

email | 360-816-1173

Guy Norman was appointed to the Council by Washington Governor Jay Inslee in September, 2016. He has worked with the fish and wildlife resources of the Columbia River Basin since 1977. He retired in 2016 after 33 years with the Washington Department of Fish and Wildlife (WDFW) where he had been the Southwest Washington Regional Director since 2004. Guy also spent three years with the Oregon Department of Fish and Wildlife (ODFW) as the Interjurisdictional Fisheries

Director during 1999-2002 and was a private consultant for two years working on Columbia basin fish recovery projects before returning to WDFW in 2004.For more than 20 years he represented either WDFW or ODFW on the *U.S. v. Oregon Policy Committee* and the Columbia River (fishery) Compact. He has also been a state representative in domestic and international fisheries forums, including the Pacific Fisheries Management Council, the Pacific Salmon Treaty, and the North Pacific Anadromous Fishery Council. Guy has also been a state participant in several NOAA ESA forums, including the FCRPS BiOp Regional Implementation Oversight Group. He has a B.S. in Environmental Science Technology from the Oregon Institute of Technology.

Patrick Oshie, Washington

email | 360-870-2218

Patrick Oshie was appointed to the Council by Washington Governor Jay Inslee in April, 2020. Mr. Oshie received his law degree from the University of Washington in 1980. His legal experience includes matters of federal Indian law, environmental and energy law, and utility regulation. Mr. Oshie began working in utility regulation in 1984, serving as counsel to the Committee for Consumer Services in Utah. In 1987, he and his family returned to Washington, where he represented Seattle City Light in its Skagit River Hydroelectric Project relicensing proceeding and the construction of the Lucky Peak Power Project on the Boise River. He later worked with the Yakama Nation to plan and develop the Yakima/Klickitat Fisheries Project and on other fisheries and environmental restoration undertakings, including cleanup work at the Hanford Nuclear Reservation. In 2001, Mr. Oshie was appointed by Governor Gary Locke to serve on the Washington Utilities and Transportation Commission. After serving two terms, he joined the Western Electricity Coordinating Council and later served as Vice-President and General Counsel of Peak Reliability, the interconnection's Reliability Coordinator. Mr. Oshie joined energy law firm Davison Van Cleve in 2016 as Of Counsel, representing industrial and large volume electricity customers before the Washington and Oregon utility commissions.

Louie Pitt, Jr., Oregon member; photo and bio to come.

Jim Yost, Idaho

email I 208-947-4080

Jim Yost was born in Rupert, Idaho and raised in the Magic Valley of Southern Idaho where he learned and applied knowledge of water, agriculture and natural resources. Jim graduated from the College of Southern Idaho in 1968 with an Associate of Arts Degree and then Boise State University in 1971 with a Bachelor of Arts degree in education. He was elected in 1972 to the Idaho State Senate at age 24, the youngest Idaho Senator/Legislator ever elected, and served two terms. He owned and operated a dairy distributorship for a number of years in Wendell, Idaho, and worked for the Union Pacific Railroad for 10 years. In 1988 he was named Assistant Public Affairs Director for the Idaho Farm Bureau and in 1991 was promoted to Public Affairs Director. In 1995 he worked for a time for the Council, then known as the Northwest Power Planning Council. Governor Phil Batt appointed Jim as his Natural Resources Senior Policy Advisor. He was retained by Governor Kempthorne from 1999-2006. He was retained again by Governor Risch for his term. In 2007 Governor Otter again retained Jim until his appointment to the Council in October of that year.

Background About the Council

The Northwest Power Act Of 1980

The Council was authorized by Congress in 1980 in the Pacific Northwest Electric Power Planning and Conservation Act (the Power Act), giving the states of Idaho, Montana, Oregon, and Washington a greater voice in how we plan our energy future and protect our fish and wildlife resources. The Act gives the four Northwest states a formal role in making decisions about the allocation of new energy resources for the region.

In the late 1960s and early 1970s, the years leading up to the congressional debate over the Act, the Bonneville Power Administration and many of the region's utilities were concerned that the region's expected growth would outstrip the power system's ability to meet electricity demand. As a result, Northwest utilities made decisions to build a number of new energy plants, including five nuclear power plants in the state of Washington. When the Act was passed in late 1980, many in the region had come to realize that those earlier decisions, based in part on inaccurate electricity demand forecasts, were a disastrous mistake. Only one of the plants, the currently operating Columbia Generating Station, formerly known as Washington Nuclear Plant 2, was completed. Due to exorbitant cost overruns, the other four plants were abandoned or mothballed prior to completion. Two of the unfinished plants were responsible for one of the largest bond defaults in the history of the nation, while the financing for the other three plants was backed by the Bonneville Power Administration. Even today, 41 years after the Northwest Power Act was enacted, Bonneville pays debt service for two of the unfinished nuclear plants, plus the one that was completed.

Congress concluded that an independent agency, controlled by the states and without a vested interest in selling electricity, should be responsible for forecasting the region's electricity load growth and helping determine which generating and energy-efficiency resources should be built. The Council does that in the Northwest Power Plan, which includes a component Columbia River Basin Fish and Wildlife Program to mitigate the impact of hydropower dams on fish and wildlife. The Act directs the Council to review the plan at least every five years. The Act also directs the Council to ensure widespread public involvement in formulating regional fish and wildlife and energy policies.

The Northwest Power And Conservation Council

The governors of Idaho, Montana, Oregon, and Washington each appoint two members to the Council. The eight-member Council sets policy and provides overall leadership for Council activities.

The Council's work is performed, depending on the tasks, by the Council's professional staff (including staff in a central office in Portland and in each state), by consultants under contract, or by public agencies and Indian tribes under intergovernmental agreements. The Council's executive director is responsible for coordinating with the

Council, supervising the central office staff, administering contracts, and overseeing the day-to-day operations of the Council. The Council approves major contracts and the overall work plan. The Council has 59 employees.

The central staff is organized into five divisions: Power Planning; Fish and Wildlife; Public Affairs; Legal; and Administrative. Professional staff in each state provide technical review and assistance to Council members in evaluating matters before the Council. State staff also participate in designing and developing public-involvement programs that focus on the implementation of the power plan and fish and wildlife program in their particular states. This support is provided through existing state agencies or by individuals directly under Council member direction.

The Council, known until 2003 as the Northwest Power Planning Council, is an interstate compact agency authorized by Congress in the 1980 Power Act and created by the legislatures of Idaho, Montana, Oregon, and Washington. The Council's first meeting was in April 1981.

The Northwest Power Act gives the Council three distinct responsibilities: 1) to assure the region an adequate, efficient, economical, and reliable electric power supply; 2) to prepare a program to protect, mitigate, and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia River Basin affected by the development and operation of any hydroelectric project on the Columbia River and its tributaries; and 3) to inform the Pacific Northwest public regarding these issues and involve them in decision-making. This annual report is organized around the Council's key responsibilities and five divisions.

The Power Act created a special relationship between the Council and the federal agencies that regulate and operate dams in the Columbia River Basin and sell the electricity that is generated. The administrator of the Bonneville Power Administration, the federal power marketing agency that sells the output of the Federal Columbia River Power System (a system that includes 29 federal dams within the basin and two in southwestern Oregon, and one non-federal nuclear power plant, the Columbia Generating Station), is required to make decisions in a manner consistent with the Council's Northwest Power Plan and its Columbia River Basin Fish and Wildlife Program. Other federal agencies with responsibilities for federal and non-federal dams in the Columbia River Basin (the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and Federal Energy Regulatory Commission) are required to take the Council's power plan and fish and wildlife program into account "at every relevant stage of decision-making to the fullest extent practicable," in the words of the Act.

Despite its relationship to federal agencies, the Council is not a federal agency and its employees are not federal employees. The eight-member Council consists of two members from each state, appointed by their respective governors. The Council headquarters are in Portland.

The Columbia River Basin Fish And Wildlife Program

A key element of the Council's planning efforts is developing and periodically revising (by law, at least every five years) a program to protect, mitigate, and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia River Basin that have been affected by hydropower dams – both federal and those licensed by the Federal Energy Regulatory Commission. Consistent with direction in the Power Act, the Council first created and subsequently has revised, the fish and wildlife program, followed by the initial creation and subsequent revisions of the Northwest Power Plan (see below). That sequence is because the Act requires the Council to include measures in the fish and wildlife program to improve survival of anadromous fish – those that are born in freshwater, spend most of their lives in the ocean, and then return to freshwater to spawn – at and between dams on the Columbia and Snake rivers. Because these measures can take water away from hydropower generation – by spilling over dams to improve fish-passage survival, for example – the Council anticipates that hydropower generation could be reduced as a result of the program and accounts for this potential loss with cost-effective generating and energy-efficiency resources in the power plan. The highest-priority resource in the Power Act is energy efficiency, also called energy conservation.

The Act directs the Council to develop its program and make periodic major revisions by first requesting recommendations from the region's federal and state fish and wildlife agencies, Indian tribes within the basin, and other interested parties. The Council also takes comment from the designated entities and the public on those recommendations.

The Council then issues a draft amended program and initiates a public comment period on the recommendations and proposed program amendments that includes extensive written comments, public hearings in each of the four states, and consultations with interested parties. After closing the comment period and conducting a review and deliberation period, the Council adopts the revised program. The Council develops its final program on the basis of the amendment recommendations, information submitted in support of the recommendations, views and information obtained through public comment and participation, and consultation with fish and wildlife agencies, tribes, Bonneville customers, and others. The program amendments are not concluded until the Council adopts written findings as part of the program explaining its basis for adopting or not adopting program amendment recommendations.

The program is implemented through projects financed by the Bonneville Power Administration and undertaken by federal agencies including the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Federal Energy Regulatory Commission and its licensees, and by state fish and wildlife agencies, Indian tribes, and occasionally private contractors. Projects proposed to the Council to implement the program are reviewed by the 11-member Independent Scientific Review Panel to be sure is it based on sound scientific principles and is consistent with the Power Act.

The Northwest Power Plan

Following final approval of the fish and wildlife program, the Council revises the power plan. Under the Power Act, the fish and wildlife program is part of the power plan.

The plan is a 20-year blueprint to meet future demand for power that includes an electricity demand forecast, electricity and natural gas price forecasts, an assessment of the amount of cost-effective energy efficiency that can be acquired over the life of the plan, and a least-cost generating resources portfolio. The plan guides Bonneville's decision-making to meet its customers' electricity load requirements and also serves as a useful guide for investor-owned utilities in their own least-cost planning.

In the Northwest Power Act, a law that was ahead of its time, Congress concluded that energy efficiency should be the highest-priority energy resource for meeting the region's future load growth. The Act includes a provision that directs the Council to give priority to cost-effective energy efficiency, followed by cost-effective renewable resources to meet future demand for power. In effect, for the first time, energy efficiency was deemed to be a legitimate source of energy on par with generating resources.

The rest is history. Since the release of the Council's first Northwest Power Plan in 1983 (one year after the first fish and wildlife program), the region's utilities have acquired the equivalent of around 7,200 average megawatts of energy efficiency. Expressed as electricity, that is more than enough to power six cities the size of Seattle.

During the roughly two years after the revision of the power plan and the beginning of work on the next fish and wildlife program, the Council and its staff monitor implementation of the two planning documents, meet with energy and fish and wildlife experts to discuss contemporary issues, and monitor progress toward goals in the plan and program.

Letter From The Bonneville Power Administration

(Will be added following Council approval of the final version of the report.

Council Meetings Fiscal Year 2021

To assist in slowing the spread of COVID-19, beginning in March 2020 and continuing through all of 2021 the Council made all meetings completely virtual and prohibited access to the Council's offices. We encouraged people to engage with our staff and members by phone, webinar, email, and social media.

Here are links to Fiscal Year 2021 Council meetings and meeting notes:

October 2020:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-october-13-2020
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2020_10minutes.pdf

November 2020:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-november-17-2020
Meeting notes:
https://nwcouncil.app.box.com/s/o9ljpz4j4jru9eeibiah8nw39zi1x3fa

December 2020:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-december-15-2020
Meeting notes:
https://nwcouncil.app.box.com/s/sd43h1x97bx2f419bvg4zlrl56bzg5sj

January 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-january-12-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_0209_7.pdf

February 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-february-9-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_03_5minutes.pdf

March 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-march-9-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_0406_5.pdf

April 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-april-6-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_05_10minutes.pdf

May 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-may-4-2021

Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_06_7minutes.pdf

June 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-june-8-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_07_3minutes.pdf

July 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-july-13-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_08_4minutes.pdf

August 10-11, 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-august-10-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_0914_4minutes.pdf

August 23, 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-webinar-august-23-2021
(No notes; meeting only convened to approve release of the Draft 2021 Northwest Power Plan for public comment.)

September 2021:

Meeting agenda:
https://www.nwcouncil.org/meeting/council-meeting-september-14-2021
Meeting notes:
https://www.nwcouncil.org/sites/default/files/2021_1012_5.pdf

Comments On The Draft Report

(Will be added following the public comment period)