

Mike Milburn
Chair
Montana

Doug Grob
Montana

Jeffery C. Allen
Idaho

Ed Schriever
Idaho



Northwest Power and Conservation Council

Thomas L (Les) Purce
Vice Chair
Washington

KC Golden
Washington

Margaret Hoffmann
Oregon

Charles F. Sams III
Oregon

March 4, 2025

MEMORANDUM

TO: Council Members

FROM: Patty O'Toole, Fish and Wildlife Division Director

SUBJECT: Fish and Wildlife Program Amendment Work Session for March

BACKGROUND:

Presenter: Fish and Wildlife Division

Summary: Council staff will continue briefings of the 2014 Program and its 2020 Addendum. Staff will review three sections: 1. Part Two, Section III: Assuring the Pacific Northwest an adequate, efficient, economic and reliable power supply (AEERPS provision of the NPA). 2. Part Four: Adaptive Management, and 3. Part Five: Subbasin Plans.

Relevance: The Council [called for recommendations](#) to amend its Columbia River Basin Fish and Wildlife Program in January 2025. The recommendations are due to the Council on **April 17, 2025**. The staff will brief the members over the next two months on key elements of the Fish and Wildlife Program.

Workplan: Program planning and coordination, Columbia River Basin Fish and Wildlife Program amendment

Background: The first of three March briefings will be on the provision in the Northwest Power Act that is to assure the region an adequate, efficient, economic and reliable power supply (AEERPS). Staff will review the Act's provision, the history of its implementation, substance, and conclusions in the past, and review context for

2025-2026. Attached to this memo (1) is an outline of the main points that staff will review with members at the March meeting.

Staff will also review Part Four of the Program, Adaptive Management. Staff will briefly review the concept and definition of the adaptive management cycle, its history in the Program, and review the elements of the strategy itself in the Program.

Finally, staff will review Part Five of the Program, the Subbasin Plans. In January, staff described the Program Framework and the role of subbasin plans. In March, staff will review their purpose, how they were developed, and by whom, along with their adoption into the Program and how they are used today.

Looking ahead to April, staff will cover remaining Program topics in briefings to the members, including the Program's Implementation provisions from 2014 and 2020, and review the extensive appendices for the 2014 Program.

More info:

The [2014 Columbia River Basin Fish and Wildlife Program](#) and its [2020 Addendum](#)

Attachment 1. Assuring the Pacific Northwest an adequate, efficient, economic and reliable power supply (AEERPS)

Northwest Power Act, Section 4(h)(5):

“The [fish and wildlife] program shall consist of measures to protect, mitigate, and enhance fish and wildlife affected by the development, operation, and management of such facilities *while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply.*”

- Key terms - *adequate, efficient, economical, and reliable* - are not defined. Not much guidance on meaning of these terms in the rest of the Act or its legislative history. Basic principles of law would say that in the absence of specific definitions, apply common-sense or well used meanings of these terms.
- AEERPS is a consideration in fish and wildlife decision-making. But there is little guidance in the Act as to *how* the Council is to make this decision and especially on how to demonstrate or document the determination.
- AEERPS involves a power system analysis and conclusion, and so it seems a more appropriate consideration for the power plan. Yet, AEERPS is not officially a decision-making standard for the power plan in Sections 4d and 4e. On the other hand, AEERPS is one of the overarching purposes of the Act. See Section 2(2): A purpose of the Act is “to assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply”. And the fish and wildlife program is part of the power plan as well. So, AEERPS is also an important consideration in power planning too – see more below.
- All of this leaves room for Council discretion and judgment in how to make and document the AEERPS conclusion when also deciding on the amended fish and wildlife program.

We do know a few things:

- The language is *not* written as a balancing effort or a tradeoff – it’s written in a way that tells the Council to do both, that is, to create a program that protects, etc. fish and wildlife and to do so while also assuring the region a continuing adequate, efficient, economical and reliable power supply. One implication of this is that the power plan resource strategy becomes important in the Council being able to realize both objectives, as explained below.
- The focus is to be on “region’s” “power supply”
 - As the Ninth Circuit said in 1994 (in a footnote) – what the Council is to assure is an adequate, etc. “power” supply, not “hydropower” supply. “This highlights, again, conservation and the development of other resources as purposes of the Act.”
 - Note also and especially that the focus is to be on the *region* and whether the *region’s* power supply as a whole is adequate, reliable, economical, etc. The focus is not on (or not just on) the federal system and Bonneville and its power supply and financial situation. *But see more below.*
- Also, from both the provisions in the Act and the legislative history, we know that Congress expected that the fish and wildlife program would derate the hydropower system to a degree – shifting water and generation to periods of less value to the power system, and also reducing generation overall - making the power supply as a whole that much less adequate, efficient, and reliable. Congress also expected that the fish and wildlife operations, dam passage improvements, and other program measures would cost the power system money – either in direct expenditures or in reduced revenue - thus ensuring that the fish and wildlife program will inherently make the power system more expensive and less “economical” in that sense. This means (a) the AEERPS consideration is thus to be a relative and subjective conclusion, not a bright line – at least up to some uncertain point. And (b) that the power plan’s resource strategy becomes key to making sure the system may remain adequate and reliable in the most cost-effective (or economical) way.
- So one obvious key to making this work is the power plan resource strategy. The Act assumes the Council would use the power plan to adapt the power system, adding the necessary least-cost resources to make sure the system stays adequate and reliable and as least-cost and economical as possible, and to do so in a way that makes sure Bonneville can meet its obligations. Those obligations are defined in Section 6(b) to include not just Bonneville’s contractual power sales obligations, *but also* Bonneville’s ability to implement the requirements of Section 4(h), that is, the requirements to protect, mitigate and enhance fish and wildlife affected by the hydrosystem in a manner consistent with the Council’s program. A shorthand way to say it is that the power plan’s resource strategy and Bonneville’s conservation and generation resource acquisitions are intended to allow Bonneville and the other federal agencies to reliably implement the operations for fish while also having a reliable power supply to meet contract loads.

History of how the Council has implemented the AEERPS provision:

- Pre 1994 – In developing the Fish and Wildlife Program, the Council assessed generation and cost effects; looked at rate impacts especially as compared to elsewhere in the nation; and concluded the standard is satisfied.

- 1994 Fish and Wildlife Program

- Context/issue

- Fish and wildlife costs and other system costs were up, especially as new ESA listings and additional recommendations for fish and wildlife were in the pipeline. At the same time, power market prices were down, and there was real concern about Bonneville's financial situation and its future, especially how attractive its power would be to offer for sale when the first set of power sales contracts under the Act ended in 2001
 - Fish and wildlife operational impacts and costs were just a part of this overarching situation, and really not the critical part - but still, this was the consideration Council had to address at this moment of adopting the 1994 Fish and Wildlife Program, which ramped up operations and added off-site measures.
 - Also, Council recognized that the particular issues with regard to Bonneville were not the same as the effects of the program on the overall regional power supply and regional economy. So, how to factor in the Bonneville piece?
 - Obvious need to delve into AEERPS subject with more consideration.

- What the Council did

- Collaborative effort led by the Power Division (especially Dick Watson as director with Fazio and Morlan); Legal Division (Volkman and Shurts); Fish and Wildlife (especially Applegate the director and Ruff).
 - Result was Appendix B and especially Appendix C to the 1994 Fish and Wildlife Program. Appendix B was a thorough data-driven analysis of the impacts of the fish and wildlife program on hydrogeneration, system power supply, and costs. Appendix C was the first detailed analysis of what AEERPS is to mean; how to understand and analyze the individual terms and the standard as a whole; what might be the relevance of the Bonneville situation in what is otherwise an evaluation of the region's power supply and economy; and a recommended conclusion.
 - The Council then adopted these appendices as part of the 1994 Fish and Wildlife Program, and wrote a summary explanation and conclusion in the text of the program itself.
 - And, the Council made clear that the analysis and conclusion in the Fish and Wildlife Program would always be *tentative* - dependent on and assuming certain things about the follow-on power planning.

Substance of the analysis and conclusions in 1994

- With regard to the terms “adequacy,” and “reliability” in particularly:
 - These are well-understood terms in the industry, and so Council will use those meanings, although we may develop our own relevant metrics.
 - As noted above, the Council recognized that the fish and wildlife operations make the power system to some extent less adequate, efficient and reliable – intentionally so, as expected by Congress - but that alone is not a reason for concern, just expected.
 - In general: Satisfying these three concepts is really mostly a matter of time and money. That is, any reduction in the system’s adequacy and reliability due to fish operations can be remedied with the addition of resources, with enough lead time and bearing the costs. The Council would identify in the fish and wildlife program analysis the possible effects of the program measures on adequacy, reliability, etc.; then further study the impacts in the power plan, and solve any adequacy and reliability issues in the power plan resource strategy. Pace and costs of implementation were key.
 - Council did recognize there can in theory be a bright-line limit that would justify rejecting a program measure. In 1994, CRITFC recommended flow measures that analysis showed would or could result in a failure to refill the reservoirs in critical water years, presenting potentially serious problems for system reliability. This was the only time the Council rejected a recommended program measure based on the AEERPS analysis and standard in Section 4h5.
- Whether the power system remains “economical” is what most people were caring about in 1994, and even more at that time from a Bonneville perspective than a regional perspective. That is, could Bonneville bear the financial impacts of increased fish operations and increased fish and wildlife expenditures and, in combination with other considerations, continue to be able to sell power and cover its costs? This was really a different question than would the regional power supply still be economical. How to analyze the issue as a whole?
 - Again, the Council recognized this as a “relative” consideration, as the Council knew the power supply would cost more with the fish and wildlife program and thus be less economical in that sense, an effect that was expected of and required by the Act’s fish and wildlife provisions
 - Also, a “relative” consideration, because there is no obvious fact or metric for whether the power supply is “economical.” More of a judgment call than a hard consideration
 - Main context or focus per the Act has to be on the *region*’s economy,

- Comparison to rates elsewhere in nation is part of it, but not all
 - Council should also look at impact on region's economy; also look at impact on important sectors of the region's economy (types; geographic regions)
 - In this part of the analysis, the 1994 program's financial impact on the regional power supply and regional economy was significant and measurable but not exceptional or problematic – and especially, not a factor significant enough by itself to be an issue.
 - But, Council also needed focus the analysis on Bonneville and its financial situation and future: If Bonneville's power is uneconomical for the region compared to alternatives/market, Bonneville may ultimately not be able to generate revenue to cover obligations the Act imposes, including fish and wildlife.
 - So Council looked at Bonneville, too, in 1994 assessment. Significant analysis, but again no magic threshold. The analysis was in many ways more important than the conclusion; not clear what would be the AEERPS implications if the Council couldn't see light at the end of the Bonneville tunnel, other than it would not be fair or right to put the onus only on fish and wildlife - tis was a system problem; saw a path out in 1994 conclusion but needed more study and regional work.
- Post-1994: Council has used the same basic approach or template to the AEERPS analysis/conclusion/documentation in subsequent fish and wildlife programs decisions: 2003 mainstem amendments, 2009 program, 2014 program, 2020 Addendum.
 - **Decision summary:**
 - In 1994 the Council produced an extensive analysis explaining its understanding as to what it means to maintain these elements of the power supply in the context of approving the fish and wildlife program. This became Appendix C to the 1994 Fish and Wildlife Program, "Assuring an Adequate, Efficient, Economical and Reliable Power Supply and the Ability to Carry Out Other Purposes of the Power Act" ([1994 FWP App C AEERPS](#)), combined in the analysis and AEERPS conclusion with Appendix B, "Summary of Hydropower Costs and Impacts of the Mainstem Passage Actions" ([1994 FWP App B Hydro](#)), plus a summary explanation and conclusion at pages 1-15 to 1-18 of the text of the 1994 Program ([1994 FWP Section 1](#))
 - The Council has understood and applied the statutory AEERPS provision in a consistent way both before and after the 1994 explanation, although the 1994 analysis has been the most extensive discussion. All of the others tier off the 1994 analysis:
 - Appendix A to the 2003 Mainstem Amendments, "Analysis of the Adequacy, Efficiency, Economy, and Reliability of the Power System" ([2003 FWP Mainstem App A AEERPS](#)), plus a summary explanation and conclusion at pages 7-8 of the text of the amendments ([2003 FWP Mainstem Amendments](#)).

- Appendix R to the 2014 Fish and Wildlife Program, “Assuring the Pacific Northwest an adequate, efficient, economical and reliable power supply” ([2014 FWP App R AEERPS](#)), plus a summary explanation and conclusion at pages 18-19 of the 2014 Program text ([2014 FWP, Part Two III](#)).
- 2020 Addendum, Findings on Recommendations and Responses to Comments, at pages 1, 173-76 ([2020 FWP Addendum Findings Responses](#)). The short AEERPS statement in the 2020 Addendum is quite useful for its discussion of how to understand the role of the AEERPS analysis of a particular fish and wildlife program decision in the context of the significant transition underway in the regional power supply.

Now in 2025-26?

- The approach first developed in 1994 remains a useful template - we do not propose to take a fundamentally different baseline approach to the AEERPS standard – consistent in terms of the meaning of standard and of its terms, how to document; etc. Not prejudging at this moment what the conclusions will be.
- Situation now is similar to the context of the 2020 Addendum: Power system is in the midst of a significant transition. A lot of factors will affect whether the system remains adequate and reliable and what it will cost; fish and wildlife costs and operational impacts are just a part of the equation, and presumably not the most critical at this point – and especially not the incremental effects that are likely to flow from the fish and wildlife program decision in 2026. Power supply adequacy, reliability, economics etc. will depend mostly on whether the region takes the necessary resource steps to keep the system adequate and reliable in the most low-cost, cost-effective way, etc., an issue for the power plan.
- Even so, we will be analyzing the impact of the program amended recommendations and proposed fish and wildlife program measures for potential impacts to flows, generation, revenue, costs and reliability impacts. And the Council will have to reach some tentative conclusions about assuring the region an AEEPRS, albeit pending and assuming the success of our work in developing the 9th Power Plan's resource strategy.