

Bill Bradbury
Chair
Oregon

Henry Lorenzen
Oregon

W. Bill Booth
Idaho

James A. Yost
Idaho



Northwest Power and Conservation Council

Jennifer Anders
Vice Chair
Montana

Pat Smith
Montana

Tom Karier
Washington

Phil Rockefeller
Washington

Council Meeting Spokane, WA

April 8-9, 2014

Minutes

Council Chair Bill Bradbury called the meeting to order at 1:40 pm on April 8th and adjourned it at 4:50 pm on April 9th. All members were present, except Jim Yost who participated by telephone.

Vice-chair Jennifer Anders moved that the Council meet in Executive Session on Friday, April 18, 2014 to discuss confidential commercial and financial information and certain matters the premature disclosure of which would be likely to significantly frustrate implementation of a Council action. Pat Smith seconded, and the motion passed on a roll-call vote.

Reports from Fish and Wildlife, Power and Public Affairs committee chairs:

Phil Rockefeller, chair, fish and wildlife committee; Pat Smith, chair, power committee; Henry Lorenzen, chair, public affairs committee; and Jennifer Anders, Vice-Chair, reporting on Transboundary Conference.

Phil Rockefeller reported the Fish and Wildlife (F&W) Committee had a presentation by StreamNet on habitat protections and designations and how StreamNet data will be used in future hydropower development. We also reviewed the F&W program draft, he said, noting the committee made some changes to the document, which have been provided to the Council as an addendum sheet.

Pat Smith reported the Power Committee had a briefing by Energy GPS on California markets and how they could affect the Northwest, as well as an update on resource adequacy. We also had a report on the Regional Portfolio Model RFP vendor selection, he said, adding that the list has been narrowed to three candidates. The committee had an update on the latest power price forecast and a report on a recent meeting of

regulators and state energy office representatives held in Arizona, Smith noted. We also discussed environmental methodology for the Seventh Power Plan, and staff will draft a paper on the issue for the committee's review, he said.

Henry Lorenzen, head of the Public Affairs Committee, reported that at the last meeting of the committee a month ago, it approved funding for the Council to co-sponsor a Columbia River estuary workshop. We also discussed the upcoming Congressional staff tour, which this year will be hosted by Oregon, he said.

Anders gave an update on the work the Council and the Columbia Basin Trust have put in getting ready for the transboundary conference on the future of the Columbia River. The conference will be held October 21 to 23 in Spokane, and the theme is "Learning From Our Past to Shape Our Future," she said. Anders reported that more than \$25,000 in contributions to support the conference have been received.

1. Utility representative comments on proposed amendments to the Fish and Wildlife Program:

Fred Rettenmund, Inland Power and Light; Steve Eldrige, Umatilla Cooperative (by phone); and Terry Flores, Executive Director, Northwest RiverPartners.

A group of utility representatives, organized by Northwest RiverPartners' Terry Flores, weighed in with the Council on the impacts the Council's Fish and Wildlife (F&W) Program has on the region's ratepayers. Bo Downen of the Public Power Council led off by observing that the costs of today's fish and wildlife program are now 100 percent higher than they were seven years ago, and that's a real concern, he said.

The Council has to protect, mitigate, and enhance fish and wildlife, but you have an equally important mission, which is to assure the region an adequate, efficient, economical, and reliable power supply, Downen told the Council.

Steve Eldrige of Umatilla Electric Cooperative, based in Hermiston, Oregon, began his presentation by saying he understands that the spill experiment has not been put into the current fish and wildlife program draft, but he warned, "it will continue to lurk out there."

If the spill test were to go forward, it would reduce our 112 average megawatts (aMW) of Tier 1 power to 105.5 aMW, and we would probably have to replace it with fossil fuel generation, Eldrige said. Reducing Tier 1 power affects BPA's ability to back up wind, he noted. The spill experiment would also have an eight to 10 percent impact on our wholesale cost of power, Eldrige added.

To replace \$35/MWh firm hydro with \$80/MWh gas-fired power is a bad deal for us, he said. Now, 16 percent of our ratepayers' bills are for the fish and wildlife program, and if we add this spill experiment, 25 percent of the bill would be for salmon recovery, Eldrige stated.

Umatilla County is 24 percent Latino and Morrow County 33 percent, he noted. Eldrige said his daughter teaches fifth grade and 80 percent of her students are Latino. These families are just getting their feet on the ground, and a 10 percent rate increase is the last thing they need, he stated. And if you couple that with the next BPA rate increase we already expect, they could be facing a 20 percent increase, Eldrige said.

He noted the historic abundance of salmon in the region, and said by the 1930s, the runs had declined 50 percent, but the first dam wasn't built until 1933. My question to you, Eldrige said to the Council, is: when the Columbia River was unfettered, why couldn't the salmon restore themselves?

Spill proponents say if we only had more spill, there would be salmon restoration, he added. But the problem may be the overall pervasive effects of modern society, where we have changed the environment so dramatically and have a town and a city on every river, Eldrige said. Given that, he asked: How can someone say that changing one element like spill – “pulling on one string” – will recover salmon?

Fred Rettenmund of Inland Power and Light said his utility has 39,000 customers in eastern Washington and northern Idaho and is 85 percent residential. Like most utilities served by BPA, we are 85 percent renewable power, and we have an active conservation program, he noted.

Inland supports a sound, science-based fish and wildlife program, Rettenmund said. We are glad the Council prepares an annual report on fish and wildlife spending and that the report includes foregone revenues because one-third of BPA's wholesale rate is affected by the F&W program, he stated.

When I worked at BPA years ago, the fish and wildlife program costs were near zero, which was probably not the best thing, but now they have reached \$13 billion, Rettenmund said. We support a science-based program and are happy to see that great progress has been made and trend lines are up, he continued.

The spill experiment doesn't seem to pencil out at all, Rettenmund told the Council. It would cost \$110 million a year, and “that's real money,” he said. We serve a number of low-income people and have many customers for whom a \$10 to \$12 a month charge means a lot, Rettenmund stated.

Given the scale of your fish and wildlife program, there should be numerous opportunities to find efficiencies, he told the Council. We would be happy to work with you to see if there are ways to lower the costs of some of these fish and wildlife activities, and determine whether we could “take some things off the table,” Rettenmund added. And the fish and wildlife program can't be considered alone because BPA has a lot of capital spending needs coming down the pike, he said. We encourage you to look at ways to make the program more efficient, rather than adding new elements to it, Rettenmund stated.

The Council continues to push for improvements in our program, Tom Karier said. We could all work together, including representatives of Northwest RiverPartners, on getting

the program to be more effective and efficient, he suggested. All of us need to look at what we are doing and do it smarter and better, Rettenmund responded.

Everything related to fish and wildlife is not a BPA responsibility, stated Eldrige. When other people have “skin in the game,” they do a better job, he said. Eldrige suggested that when people come to the Council “with a great idea,” Council members ask them “what are you going to contribute to this or do you just have your hand out?”

It is very important for us to hear from customers on a regular basis, Bill Booth told the panel. I don’t think we hear often enough from you, he added.

2. Presentation on Avista activities:

Jason Thackston, Senior Vice President, Avista.

Avista celebrated its 125th anniversary last month, and we are planning our investments for the next 125 years, Jason Thackston of Avista said. Hydroelectricity is a tremendous part of our legacy, as it is for the region, he stated. Thackston described Avista’s resource mix, which is 48 percent hydro, 35 percent natural gas, 9 percent coal, 6 percent wind, and 2 percent biomass.

Last year, we filed an Integrated Resource Plan, which shows our load growth is about 1 percent annually, not as robust as it has been in the past, he noted. We have sufficient resources now, but by about 2019, there will be a deficiency, Thackston reported. We plan to cover that need through natural gas and conservation, he said.

Avista is planning to build simple-cycle combustion turbines, one in 2019 and one in 2023, Thackston reported. As for conservation, our commitment goes back decades, long before I-937, he said. We have exceeded the targets under I-937, but going forward, conservation will be a challenge for us and for the region, Thackston told the Council.

At a PNUCC board meeting last week, for example, we heard that the increasing requirements of federal codes and standards will reduce the trajectory of load growth going forward, he said. We want to look for new ways to capture energy efficiency opportunities, Thackston added, noting the utility recently received approval from the Idaho PUC for additional research to do that.

He described several issues of concern to Avista on the horizon. One is distributed generation, which he explained by showing the California “duck graph.” Because of the growth of rooftop solar, starting around 2015, the net load profile of California will have changed dramatically, Thackston noted. Loads are likely to drop dramatically in the afternoon and then could more than double in a matter of hours, he said. Such changes make distributed generation a big issue for our industry and the region to consider and deal with, Thackston stated.

Another issue is coal, he continued. Colstrip provides 9 percent of our capacity and 15 to 20 percent of our energy, Thackston said. Hydro can be volatile, depending on the water year, and the wind can blow or not, he stated. Natural gas is reliable, but the fuel source can be volatile, Thackston added. For us, coal is “the sliver that provides reliability from a price and generation perspective,” he said.

If we had to replace Colstrip today, it would cost our customers \$50 million a year, Thackston stated. It’s a complex issue, and made more so by the multi-party, multi-state ownership of Colstrip, and we’ll have to think what to do with this resource in the future, he added.

I like the legacy we have of working together to solve problems in the Northwest, Thackston said. There needs to be a regional dialogue on the issue of distributed energy resources, he stated, noting that PNUCC has been working on an analysis of the costs and benefits of distributed solar.

Avista and other utilities are working to advance energy storage technologies, and there is a lot of collaboration under way on energy imbalance market design and the development of tools and processes to define and address capacity needs across the region, Thackston said. And we are looking forward to working with you in the development of the Seventh Power Plan, he told the Council.

Karier expressed thanks for Avista’s participation on many of the Council’s advisory committees. Referring to the duck graph, Karier asked if Northwest utilities might purchase the surplus power that becomes available in the daytime. It’s an opportunity for the Northwest, more than a threat or a risk, Thackston replied. Having the flexibility of gas turbines lets us shape our generation to take advantage of such opportunities, he added.

Is distributed solar energy becoming an issue in your service area? Phil Rockefeller asked. Not yet, but that could change depending on federal and state incentives, replied Thackston. We are trying to stay ahead of the curve, and if our customers want solar, we’d like to be able to facilitate that, he said.

3. Council decision on Fish Data Product:

Nancy Leonard, fish, wildlife and ecosystem monitoring and evaluation manager; Peter Paquet, manager, wildlife and resident fish; and Tony Grover, director, fish and wildlife division.

Staffer Nancy Leonard presented a request for \$85,000 for continued implementation of the Fish Data Product project, noting that the Fish and Wildlife Committee had approved the funding support. The funding would be used to: maintain and update the fish and wildlife program’s Dashboard status and trend graphics and related high-level indicator (HLI) graphics; develop resident fish graphic sets for the program’s Dashboard and HLI report; and improve the connection between the program Dashboard and HLI report for a more efficient data update and maintenance process, she explained.

In response to a question from Tom Karier, Leonard said that the \$85,000 would be used to update data that otherwise would be outdated by the time the Council decides on a whole new approach for fish data and reporting, which might not occur until 2017. Karier said he could not support the funding request because of the absence of a competitive process and his determination that improvements and cost efficiencies that he had expected to see had not taken place. I thought we would defer all work on this until after the F&W program is completed, he stated.

Does the timing presented here make sense from a staff perspective? Anders asked. Yes, because by 2017, the information would be out of date, replied Leonard. We are just stop-gapping until we can take a more comprehensive look at these needs and trying to make sure the information doesn't become out of date, added staffer Tony Grover.

I acknowledge my Washington colleague's concerns, but I think this work needs to be completed, Rockefeller said. Will BPA use a competitive process for this contract? Karier asked. I can't predict what BPA will do, replied Grover. I will abstain, and encourage BPA to make it a competitive process and to share their statement of work with us, Karier said.

Anders moved that the Council support the Fish Data Product project (2013-001) for continued implementation by BPA for the purposes described by staff and at a cost not to exceed \$85,000 per year. Bill Booth seconded, and the motion passed on a roll-call vote. Karier abstained.

4. Report on RFP RPM Selection Process:

Charlie Black, director, power division.

Staffer Charlie Black gave the Council a progress report on the RFP process to select a resource planning software vendor to redevelop the Council's Regional Portfolio Model (RPM). Three vendors have been short-listed, and they are Ascend Analytics, Energy Exemplar, and Navigant Consulting, he said.

Black reported on meetings held in March with each vendor and the Council's evaluation team and then with each vendor and an ad hoc stakeholder advisory committee, including representatives from Puget Sound Energy, Seattle City Light, Northwest Energy Coalition, BPA, the Public Power Council, and the Oregon PUC. The vendors are now responding to our follow-up questions, he said. We asked the stakeholder group to give us feedback from their meetings, and we found there was a remarkable consistency in the evaluations from the stakeholders and our staff review, Black stated.

The Council agreed to hold an executive session meeting by phone at 11 am on April 18 and then to hold an open-to-the-public conference call on the process at 1 pm that same day.

5. Council Decision on Environmental Methodology, Sixth Power Plan Ninth Circuit Remand:

John Shurts, general counsel.

Staffer John Shurts explained that one of the two reasons the Ninth Circuit remanded the Sixth Power Plan to the Council last year was to allow public notice and comment on the proposed methodology for determining quantifiable environmental costs and benefits. In response, staff released for public comment in January Appendix P to the Sixth Power Plan, "Methodology for Determining Quantifiable Environmental Costs and Benefits," he said.

The comment period ended March 5, and the Council received four comments, Shurts reported. After reviewing the comments and the methodology and the administrative record of the plan, staff prepared a three-part recommendation for how the Council should proceed, he said. We won't make any changes in the Sixth Power Plan, Shurts added.

Anders moved that the Council:

Re-approve Appendix P as the statement of the methodology for determining quantifiable environmental costs and benefits for the Sixth Power Plan;

After further review of the methodology, the comments, and the rest of the administrative record, make no changes to the Sixth Power Plan's resource strategy adopted in February 2010 or any other element of the power plan; and

Approve the statement explaining the reasons for the above actions and responding to the comments, as a supplement to the Sixth Power Plan's Statement of Basis and Purpose/Response to Comments approved by the Council in April 2010.

Smith seconded, and the motion passed on a roll-call vote.

6. Council Business:

– **Approval of minutes**

Anders moved that the Council approve the minutes of the March 11-12, 2014 Council meeting held in Portland, Oregon. Booth seconded, and the motion passed.

7. Comments by the Spokane Tribe on amendments to the Fish and Wildlife Program:

Matt Wynne, Spokane Tribal Council Member; and B. J. Kieffer, Natural Resources Director.

Matt Wynne, Secretary of the Spokane Tribal Council and chair of the Upper Columbia United Tribes, told the Council the pursuit of the goal of having anadromous fish above

Grand Coulee Dam is critically important to the Spokane Tribe. We were alarmed when we heard the fish and wildlife program draft might delay doing work on this issue, but we are glad to hear that is no longer the case, he said. I was going to use my time to oppose taking a wait-and-see approach, but now I don't have to, Wynne stated.

The Council and its fish and wildlife program are the best hope the region has to ever get anadromous fish above Grand Coulee, he said. I sit on the Columbia River Treaty group, and that group is including fish passage into Canada as a goal, Wynne noted. But Columbia River Treaty implementation is a decade away and is in the control of others, in Washington, DC and in Ottawa, he said. These future actions don't relieve the Council of its duties under the Power Act, Wynne added.

You need to address this issue now, he told the Council. There are scientific uncertainties, but don't use those as an excuse to "kick the can down the road for another generation," Wynne said.

The Power Act gives the Council authority to create a program to address the whole Columbia River and its tributaries, he stated. You can demand that BPA fund the studies needed, Wynne said. You can state clearly what needs to be done to mitigate impacts the Federal Columbia River Power System has had on the loss of our resources and start studies for anadromous fish passage above Grand Coulee Dam, he told the Council. Not one salmon has reached our homeland since the dam was put into operation, Wynne added.

For two generations, we haven't had salmon return to our homelands, said Carol Evans, vice-chair of the Spokane Tribal Council. If there were a way to get salmon to our people, it could help us heal from the losses we have suffered and with losing part of our culture, she stated. Please make this a priority, Evans urged.

In the talks about the Columbia River Treaty, there was a vision developed of reintroduction, and we need to put our efforts toward that, said Karier. This needs to start out as a serious research effort, he stated. I encourage you to help us understand "critical uncertainties" involved in this and help us organize the research, Karier told the tribal panel. The Columbia Basin Trust would be a good partner in this work too, he said.

We've met with First Nations about this, Wynne responded. He urged not waiting for the Treaty to take effect, but instead trying some different approaches, such as releasing sockeye and seeing if they'll move further upstream.

Bradbury said he had also been inspired by the serious conversations about the reintroduction issue during the Columbia River Treaty discussions. "I hope to be alive when the salmon go above Grand Coulee again," he added. I do too, said Wynne.

8. Discussion of proposed amendments to the Fish and Wildlife Program (breaks as needed):

Tony Grover; Patty O'Toole, program implementation manager; and Laura Robinson, program implementation and liaison specialist.

The Council began a page-by-page review of the draft fish and wildlife program, making editorial changes and flagging areas for staff to rewrite. Rockefeller explained the Fish and Wildlife Committee's process for putting together the draft document and thanked the staff for all their hard work on it.

Much of the 2009 fish and wildlife program was carried forward into this draft, he said. The 2009 program had a lot of good features, and we didn't want to lose the value of them, Rockefeller added. A major effort in preparing this draft was made to put together a more coherent framework for accountability, he stated. Key elements are the vision, goals and objectives, measures and action steps, and metrics, Rockefeller said.

We hope to release a draft to the public by May 1 for 60 days of public comment, he stated. Once we hear from stakeholders in the region, that dialogue will allow us to better prioritize the work we are engaged in, Rockefeller said. Staff noted that additional sessions for the Council to finish reviewing the draft have been scheduled for April 14, 21, 30, and May 1.

The 2009 program had "emerging needs" like toxics, invasive, non-native species, and climate change, and those issues now are "emergent," Rockefeller stated. We have discussed how to respond to those issues and are moving cautiously to define appropriate roles for entities in the basin, he said. We can bring parties to the table who have authorities that we don't have, Rockefeller added. If we don't address these issues, they may undermine the substantial investments we are making in fish and wildlife, he said.

Adaptive management is another theme of the program, and research, monitoring, and evaluation are the principal tools we use for adaptive management, Rockefeller stated. Public engagement is another key theme in the program, he noted.

Anders pointed out the fish and wildlife program has been around for 32 years, and this year, in writing the draft program, there was an effort to ask questions like "what have we accomplished and how do we go forward?" Yesterday we heard comments from utility representatives urging us to become more efficient in the program, and this framework is trying to move in that direction, she said.

Rockefeller referred to comments received the day before from the Spokane Tribe, and pointed out there is a section in the draft that discusses how to address uncertainties and gauge feasibility for reintroduction of salmon above Grand Coulee and Chief Joseph dams.

Staffer Patty O'Toole went over the document's Table of Contents, noting that an effort was made to make the pieces of the program more consistent and to be clearer about how all the parts fit together. She said this year, we are moving away from so much printing and more to a web-based, on-line program.

O'Toole led a walk-through of the document, pointing out which sections are wholly new, which are from the previous program, and which were rewritten from the previous program. She highlighted sections of the draft that received many comments from the public, for example, the section about "in-lieu expenditures by BPA."

O'Toole pointed out the draft includes a completely new section that sums up "program successes" and "program challenges." This section is important for improving public engagement, said Rockefeller. We need to "tell the story" so people understand the value of the work being pursued under the program, he added.

O'Toole said the program's vision remains the same as before. The section on "scientific foundation and principles" has been rewritten and the number of principles reduced from eight to six, she noted. Many of the principles were recommended to us by the Independent Scientific Advisory Board, added staffer Jim Ruff. Staffer Nancy Leonard went over a rewritten section "Objectives-What Changes We are Trying to Achieve," pointing out that the impetus for the rewrite is to be more explicit on this topic.

In the section of the document called "Strategies-How the Program Will Achieve the Changes," which Rockefeller characterized as "the program stated in measures," the Council discussed language related to the natural hydrograph and the inclusion of a new section on "strongholds" for populations of native, wild, and naturally spawning fish.

Yost said that he has noted several areas of the draft that are of concern to him, and that he would send in his comments and suggested revisions to the Council.

Ruff noted that there had been a "whole gamut" of recommendations from fish agencies and tribes about how the program should treat non-native and invasive species. In the draft, we broke predators into three categories: fish, birds, and seals and sea lions, he said. Lorenzen urged the Council to be more aggressive in its language about bird predators. We spend enormous amounts of money to save these fish while these critters are eating them, he stated. The Council agreed to strengthen the language.

O'Toole pointed out the Council received many comments on protected areas. There is a lot of local interest in this topic, she said. The Council also discussed a new section in the draft on toxic contaminants in the Columbia River, which urges Congress to provide funding to restore water quality in the basin, and a new strategy on climate change.

At the end of the day, having reached page 81, the Council agreed to resume the review at its next session set for April 14.

9. Briefing on the Independent Scientific Advisory Board Review of the Proposed Spill Study:

ISAB Members Greg Ruggerone, Vice-chair, and Alec Maule; Jim Ruff, ISAB Ex Officio; and Erik Merrill, ISAB Coordinator.

Greg Ruggerone and Alec Maule of the Independent Scientific Advisory Board (ISAB) gave a presentation on the findings from the panel's review of the spill experiment proposed by the State of Oregon and others for inclusion in the F&W program. The proposal would increase spring spill levels at each mainstem federal Snake and Columbia river hydro project up to 125 percent total dissolved gas (TDG) level in the tailrace, with monitoring of fish survival effects over 10 years.

The first question the Council asked us to answer is whether the proposal has an adequate hypothesis and appropriate study design, and "the short answer is no," Ruggerone said. There is no study plan at present, and a detailed one is needed, he said, listing what it should contain. Nevertheless, the ISAB believes the hypothesis has worthwhile merits, and a good dialogue has taken place, Ruggerone stated.

The Council asked if it is possible to isolate spill as a causative factor for changes in fish survival, and the ISAB thinks it is unlikely, but "multiple lines of evidence" can be used to evaluate the influence of increased spill, he said. The biological risks of the proposal that a study plans needs to address include: gas bubble disease in fish, delays in adult migration, interference with actions called for in the Biological Opinion (BiOp), and reduced availability of fish for transportation, according to Ruggerone.

Factors to consider with gas bubble disease are that chinook are less susceptible than steelhead, small fish are less susceptible than large fish, cooler water temperatures make it easier to resist the disease, and being deeper in the water can protect fish, said Maule. Our data show macro-invertebrates are pretty resistant to the disease, but there were frog mortalities at over 125 percent gas, and sturgeon could become vulnerable to predation due to changes in buoyancy, he noted. There is no information on lamprey, Maule added.

While most data suggest no significant issues related to going to 125 percent, there are unknowns, such as delayed mortality effects, and we think there should be every-other-day monitoring if the spill test were to take place, he said.

As for whether the spill experiment would enhance knowledge about spill, salmon survival, and adult returns, the answer is yes, assuming there is a study plan that addresses those issues, Ruggerone stated. Smolt-to-adult returns (SARs) are well below goals, so alternative approaches are worth exploration, he added.

What would it take to develop a hypothesis for this experiment? Council Chair Bill Bradbury asked, adding that he has been told about six to eight months. That seems long, replied Ruggerone. What will take a long time is peer review, he added. Depending on who you talk to, your report makes the spill proposal seem like either "the worst idea ever" or "a really sound experiment with only a few questions that need to be answered," Bradbury said.

Your report may be the most-read report in recent time, stated Karier. For the Council, we have to have a sense that this experiment would work – "you don't do a billion-dollar experiment if it's a long shot," he said.

Karier asked if the ISAB has looked at alternatives that would not raise the TDG to “potentially problematic levels.” We only did a quick review, replied Ruggione. The key point is that it’s an interesting concept and has some merit, but more work has to be done to examine questions the Council and others have raised, he added.

Does the ISAB know of alternative strategies that merit study? Rockefeller asked. We have talked about ideas like alternating high spill one year to the next, or alternating high spill one week and lower spill the next week during the spill season, replied Ruggione. BPA and the Corps have talked to us about adding spillway weirs, but I don’t know how many more can be added, he said. Karier asked about an alternative that would have high spill in low-flow years and low spill in high-flow years, and Ruggione said it was a good idea.

10. Presentation on the Wanapum Dam spillway fracture:

Chuck Berrie, assistant general manager, Grant PUD.

Chuck Berrie of Grant PUD explained how the utility has coped since a crack was found in a spillway structure at Wanapum Dam in February. There was no flood danger, but there was a lot of concern from the public about that issue at the outset, he said. We made communication with the public and agencies at all levels of government a priority from the beginning, issuing daily or even more frequent press releases, Berrie stated.

Once the crack was discovered, we set a series of goals, he said. The first was stabilizing spillway monolith 4, and that was accomplished March 4 with a headwater maximum of 545 feet, Berrie reported. We are investigating the root cause for the crack and have ruled out seismicity, but our work continues, and we expect a final report from our consultant in late April or early May, he said.

We are working on an intermediate pool raise, but it requires extensive analysis and data, Berrie stated. Our contractor is doing geotechnical investigative drilling, and we estimate that will take two months to complete, he reported. We are also working to restore the pool and spillway, Berrie noted. We have formed teams for temporary mitigation issues, he said, noting that two key issues have been public safety and cultural resources. The Wanapum shoreline is closed to the public, and we have hired extra security resources, Berrie reported. We have hired archeology firms and are working to deal with any cultural resources issues that may arise, he said.

Fish passage is another key issue, Berrie stated, explaining that fish ladders are being modified so they will operate at reduced elevations by April 15. We are also looking at a parallel “trap-and-haul” option to transport fish if the passage modifications aren’t working like we think they will, he said. We expect that downstream survival this year will still be quite strong, Berrie added.

Recreation has been a huge issue since Wanapum reservoir boat launches are inoperable, but we have created one temporary boat launch, he noted. We are working with 11 irrigators who water orchards from the reservoir, Berrie stated. They are

modifying their irrigation systems to prepare for the upcoming season, and we are helping them get streamlined permitting, he said.

Wanapum is generating at approximately half capacity now, and we are meeting load requirements with our current power portfolio, Berrie reported. We hold bi-weekly conference calls with Chelan and Douglas PUDs, BPA, the Corps, and Bureau of Reclamation, he said.

11. Presentation on Wanapum Dam spillway fracture's impact on Chelan PUD's projects and operations:

Tracy Yount, Director of External Affairs, Chelan PUD.

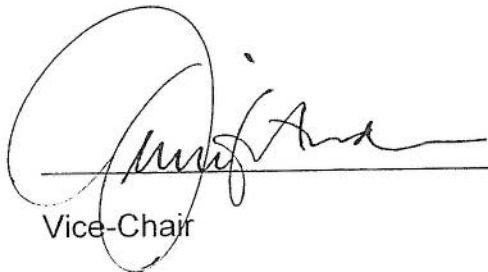
Keith Truscott of Chelan PUD gave a presentation on how his utility is managing fish passage challenges at Rock Island Dam in light of the Wanapum drawdown. We met with federal, state, and tribal authorities and developed an interim fish passage plan, which FERC approved in March and we are now implementing, he noted.

Our objectives are to provide adult fish passage by April 15, maintain the juvenile spill program, monitor and evaluate fish ladder passage, monitor and protect cultural resources, and maintain the Rock Island headwater elevation to support fish operations, Truscott said. He explained how they will operate to make sure passage will work in the spring and summer and to ensure lamprey passage is optimized.

All the river operators have shown tremendous cooperation in the wake of the Wanapum situation, Truscott stated. People have really banded together to coordinate flow, and BPA will supply 45 kcfs at Rock Island through the irrigation season to support fish operations, he said.

I have had positive reports from state agencies about the openness of your process, Karier told Berrie and Truscott. He asked if one sign of a problem with fish passage would be congregating adults below a dam. That would be an indication, replied Berrie. We will be looking to see if there is fallback, he added. At Rock Island, we will monitor daily to see if fish are moving through on a normal timeline, Truscott said.

Approved May 9, 2014



Vice-Chair