

Joan M. Dukes
Chair
Oregon

Bruce A. Measure
Montana

James A. Yost
Idaho

W. Bill Booth
Idaho



Rhonda Whiting
Vice-Chair
Montana

Bill Bradbury
Oregon

Tom Karier
Washington

Phil Rockefeller
Washington

Council Meeting Portland, OR

March 7, 2012

Minutes

Council chair Joan Dukes called the meeting to order.

Reports from committee chairs:

Phil Rockefeller, chair, fish and wildlife committee; Jim Yost, chair, power committee; and Bill Bradbury, chair, public affairs committee.

Fish and Wildlife Committee chair Phil Rockefeller said the committee discussed the MERR process, including the draft MERR document, and agreed it should be posted on the website for comment. We had a discussion of high-level indicators, Rockefeller continued.

The committee had a panel presentation on the ocean research projects, Rockefeller said, describing findings reported by the panelists. Rich Alldredge presented the Independent Scientific Review Panel (ISRP) review of the ocean projects, and Bill Maslen raised the issue of how closely the research, funded by BPA, links to the Federal Columbia River Power System. The Washington Department of Fish and Wildlife said the work is valuable to fish managers; it is an issue for us to consider, he said.

Rockefeller reported on a Mitchell Act Hatchery presentation and a briefing on quagga and zebra mussels. Maslen gave us a presentation on the BPA budget, he continued. BPA is operating with a lot of constraints and struggling to match funding demands with available funds, Rockefeller said. He noted that no new solicitations have taken place since 2007.

The committee had a briefing on the latest NOAA five-year status review, and there are no changes contemplated to the ESA listings, Rockefeller said. We had a report from the Lamprey Technical Work Group, which is addressing questions raised by the ISRP, he said, adding highlights of the discussion. In addition, fish managers gave a briefing on the 2012 run forecast, Rockefeller said. Patty O'Toole and Grover reported on the upcoming F&W program amendment process and suggested we conduct a workshop on predation, he added. Lynn Palensky provided the committee a briefing on the ISRP review of resident fish, data management, and coordination projects, Rockefeller concluded.

Tom Karier conducted the Power Committee meeting in Jim Yost's absence. Karier reported that the committee discussed data used in the region's adequacy calculation. There is a new set of assumptions for the revised analysis, and we reviewed and helped to confirm them, he said. The committee discussed oversupply and the likelihood of such events occurring, Karier said. Staff is comparing its analysis with that conducted by BPA to understand the different findings, he said.

The committee also delved into the topic of energy load carrying capability and the contribution of wind generation. Staff is developing an analysis and provided an update, he said. The committee supports the release of a direct use of natural gas paper, Karier stated. The committee also looked at the midterm assessment of the Sixth Power Plan and is comfortable with the schedule, Karier concluded.

Bill Bradbury, Public Affairs Committee chair, reported that the committee met to discuss the activities and details for the Congressional staff visit in August that will take place in the Wenatchee, Lake Chelan area, Bradbury said. The Council is working on an updated website, and the committee discussed the high-level indicators.

Rhonda Whiting made a motion that the Council add to the agenda of this meeting under Council Business a discussion and decision on whether to reauthorize the charter for the Independent Economic Analysis Board; find that Council business requires this discussion; and find that no earlier notice was possible. Bradbury seconded the motion, which passed unanimously on a roll call vote.

Public comment on any issue before the Council

Dukes asked if any members of the public wished to comment. There were none.

1. Council decision on Project(s) from previous month committee actions:

Mark Fritsch

- **Project #2008-311-00, Monitoring Wild Populations of Spring Chinook Salmon (*Oncorhynchus tshawytscha*) and Summer Steelhead (*O. mykiss*) in Tributaries of the Lower Deschutes River within the Boundaries of The Confederated Tribes of the Warm Springs Reservation of Oregon.**

Staffer Mark Fritsch said sponsors of an ongoing project to monitor wild populations of chinook salmon in the Lower Deschutes river had responded to the latest ISRP comments. In its latest review, the ISRP said the project meets scientific review criteria with qualifications, he said, adding that the qualifications were suggestions for the sponsor related to analyzing data and the efficiency of its fish trap operations. Based on discussions with BPA, staff feels the qualifications can be dealt with through the contracting process, Fritsch said. The Fish and Wildlife Committee made a positive recommendation to approve the project, he stated.

Bruce Measure asked for more detail on the ISRP qualifications and whether the project sponsor has satisfied them. Fritsch responded that the ISRP reviewed the project six times in three and a half years. He said in its latest review, the ISRP felt the project is adequate and provided quite a

few favorable comments. The six suggestions offered by ISRP were meant to strengthen the project, Fritsch said.

Whiting made a motion that the Council recommend that Bonneville implement Project #2008-311-00, Monitoring Wild Populations of Spring Chinook Salmon and Summer Steelhead in Tributaries of the Lower Deschutes River within the Boundaries of the Confederated Tribes of the Warm Springs Reservation of Oregon as presented by staff and recommended by the Fish and Wildlife Committee. Rockefeller seconded the motion, which passed unanimously.

2. Progress report on Synopsis of Lamprey-Related Projects Funded Through the Columbia River Basin Fish and Wildlife Program:

Dave Ward and Christina Luzier, co-chairs Lamprey Technical Workgroup
Lynn Palensky introduced panelists, who co-chair the Lamprey Technical Work Group, to provide a progress update on the Lamprey Synthesis Report.

Dave Ward said the synthesis report responds to a recommendation from the ISRP made during the RME/AP review. Ward summarized current research projects on lamprey, and Christina Luzier provided a response to specific questions posed by the ISRP.

Ward cited the list of topics the ISRP asked about in its recommendation and proceeded to provide a chronological review of lamprey projects in the Columbia River basin. The projects fall into three categories, he said: translocation, low-elevation structures, and genetics. Starting with the first lamprey project in 1994 located in the Umatilla Basin, Ward described a number of efforts on behalf of lamprey and their results. The projects, carried out by various agencies, included moving lamprey into blocked habitat; providing new passage; taking genetic and population surveys; and studying habitat use, migration and timing.

He described issues in current lamprey survey projects, and went over a current tribal Pacific lamprey restoration plan, as well as work in the Willamette Subbasin, which holds a relatively high proportion of the lamprey in the Columbia River Basin. Ward commented on the importance of the escapement estimate at Willamette Falls, which is an area where lamprey are harvested. He also noted the Corps of Engineers has a lamprey passage improvement project ongoing.

Luzier discussed questions posed by the ISRP, such as whether lamprey are recovering in the basin, limiting factors, and impediments to recovery. She said that while scientists don't have fine-scale population information about lamprey, it appears they are not recovering. Luzier provided maps that show historic versus current population distributions, which indicate a decline in almost all areas of the basin. In some areas, the population has disappeared or is imperiled, she stated.

Bradbury asked why lamprey would be doing better in the Willamette, one of the most populated areas in the Columbia River Basin. Luzier said urban growth is a major issue affecting lamprey in the Willamette. They can, however, scale Willamette Falls; passage is not so easy on the mainstem, she said.

Luzier went on to report responses to ISRP questions. Primary limiting factors for the lamprey are passage, dewatering and flow management, stream and floodplain degradation, poor water quality, predation, ocean conditions, and climate change. There is a wide range of threats that affect lamprey, she said, explaining a number of the factors in more detail.

Luzier said a major impediment to recovery is the lack of resources and the fact the lamprey are not listed under the ESA and there is no legal requirement for recovery. She said the Corps of Engineers has a 10-year lamprey plan, and federal agencies have prepared a document on best management practices to address lamprey decline.

Bradbury asked whether the best practices for lamprey are at odds with best practices for salmonids. Luzier said it depends on the situation, but in general, habitat restoration helps both. Generally, restoration activities benefit both.

Luzier described a tribal restoration plan finalized in December 2011, and other programs to address lamprey. She said a third regional lamprey summit will take place in June 2012.

Bradbury asked about the status of an ESA listing for lamprey. Luzier said 2003 was the last time there was a petition filed for listing. The effort has been to get actions in place so a listing isn't necessary, she stated.

Booth asked about predation issues with lamprey. They are high in calories and a preferred diet for sea lions, Luzier stated. Many animals eat them, including birds, raccoons, minks, native fish, and sturgeon, and nothing is being done about predation, she said. Ward said lamprey are also a preferred food for smallmouth bass.

Ward said the final synthesis report will be provided to the Independent Scientific Advisory Board within a couple of weeks.

3. Briefing on 2012 Columbia River Basin fish run forecasts and 2011 fishery retrospective:

Bill Tweit, Columbia River Policy Lead, Washington Department of Fish and Wildlife; Ed Schriever, Chief of Fisheries, Idaho Department of Fish and Game; and Tom Rien, Columbia River Investigations Program Leader, Oregon Department of Fish and Wildlife.

Bill Tweit of the Washington Department of Fish and Wildlife kicked off a panel presentation on the Columbia River Basin 2012 salmon run forecasts and a retrospective on the 2011 returns. He said the forecasts are developed by the *U.S. v. Oregon* Technical Advisory Committee (TAC).

In a run-by-run report, Tweit said upriver spring chinook are expected to have “a reasonably good year,” with 314,200 forecast to return. The run should offer a good fishing opportunity, he said. The endangered Upper Columbia wild spring run is not seeing much recovery, however, with only 2,800 adults forecast to return to the spawning grounds, Tweit reported. The Upper Columbia summer chinook, an unlisted run, are looking “very very good” and 2012 could be a recent-year record, he said. These fish have recovered from three decades of depressed runs, Tweit stated, predicting a good selective fishery on the run.

The forecast for sockeye is “nothing short of amazing,” he continued. This run includes sockeye headed for the Snake and overall, 462,000 are predicted to return, Tweit stated. If the forecast is correct and we get the number of sockeye returns expected for the Okanogan, “it will be quite something to see,” he commented.

In other run highlights, Tweit said TAC’s 483,500 forecast for fall chinook is a good return. Hanford Reach upriver brights are one of the primary components of the fall chinook run, and we expect another healthy Hanford return, he stated.

Coho aren’t faring as well as other salmon, Tweit went on. We expect around 150,000, which is about the same as the last couple of years, he said. There is an overall increase in coho since the mid-1990s, the result of reintroduction projects the Council has been supporting, Tweit noted. These runs are showing very good progress, he said, but the Lower Columbia runs are the weak ones. It won’t be “an awful year,” but it is not as good as what we are seeing for chinook, Tweit added.

He recapped the 2011 fishing season, noting the recreational fishing below Bonneville Dam was “extraordinary,” with records for angler trips across all five salmonid species. There was a high level of effort, even when spring conditions were adverse, Tweit reported. The non-Indian commercial fishery didn’t break any records, he said, explaining what it takes to stay within the Endangered Species Act and conservation objectives. The tribal platform fisheries were very good, with lots of sockeye taken, Tweit concluded.

Tom Rien of the Oregon Department of Fish and Wildlife (ODFW) addressed the status of white sturgeon in the Columbia River and declining abundance below Bonneville Dam. ODFW has reduced the sturgeon harvest, setting the rate and numbers to support population trends and long-term objectives, he said. The population decline is primarily in “legal” sturgeon, those that fall within the harvestable range, Rien stated. While other segments of the population remain stable, we are concerned about the decrease in that slot, he added.

ODFW has seen these declines before and also seen rebounds, Rien continued. After reducing harvest in the 1990s, the population began to climb, he said. Sturgeon are supported totally by natural production, and we thought we were harvesting at a sustainable rate; but we are in a declining situation and have reduced harvest again, Rien noted.

Predation by sea lions has become a big problem for the sturgeon population, he said. Stellar sea lions prey on them, while California sea lions are rarely observed doing so, Rien explained. In 2010, sea lions were observed eating sturgeon as early in the season as October, he reported. But when chinook started to run, there was a big drop in sturgeon predation as the sea lions turned to more favored prey, Rien added.

Above Bonneville Dam, there is no sturgeon predation, and some reservoir populations are increasing, he said. With increased abundance in John Day reservoir, we’ve been allowing more harvest, Rien said, noting that harvest is also good in the Bonneville reservoir. ODFW is developing a mitigation plan for sturgeon between Bonneville and McNary dams, as well as a comprehensive basinwide framework it will bring to the Council in July, he stated.

Measure said he has heard criticism that the fish slotted for harvest are just coming into productivity. Is that a concern for keeping the population up? he asked.

Rien said the harvest slot is for fish four to five feet in length. We think the slot limit is fundamental to keeping the fish population healthy, he added. The aim with harvest management is to assure we have continuing growth in the broodstock, and we harvest sturgeon at a size before they spawn, Rien said. “We think the fish are not just there for our enjoyment, but for our harvest,” he stated.

Paul Kline of the Idaho Department of Fish and Game provided the Snake River update. The fall chinook run was very strong in 2010 and 2011, and the 2012 forecast continues that trend, he said. With natural origin and hatchery fish together, the run is expected to top 25,000 fish, Kline reported.

The sockeye runs were also strong in 2010 and 2011, and 2012 is shaping up to be in the same ballpark of over 1,500 fish, he said. Kline reported that the summer steelhead forecast of over 200,000 is near the 2011 returns and one of the strongest runs in decades. The forecast for natural origin and wild fish is over 50,000, a number we haven’t seen in decades, he said.

Kline called spring and summer chinook Idaho’s “bread and butter” species. The numbers have rebounded since the early 2000s; 2010 was a strong year and last year was “decent,” he stated. In 2012, we are predicting the largest run in some time, with about 90,000 fish, Kline said.

It is positive news that we’re seeing strong natural wild runs across all species coming back into Idaho, Booth stated. The “proof is in the pudding” for efforts that have been ongoing, and when you see natural counts growing as a percentage of runs, it is positive news for the region.

4. Update on Environmental Impact Statement for Mitchell Act Hatcheries:

Allison Purcell, NOAA Fisheries

Allison Purcell, NOAA Fisheries’ project manager for the Mitchell Act EIS, provided the Council with a status report. She recounted that the purpose of the EIS is to guide the distribution of Mitchell Act funds, which have been used for hatcheries in the Columbia River Basin since 1946. The Act is very general and doesn’t explicitly say how funds are to be used, Purcell stated. The Act says only that the funds could be used for conservation of fisheries resources. The second purpose is to inform NOAA fisheries future review of individual hatchery programs under the ESA.

In 2004 and 2008, we asked the public what alternatives we should look at, and we got a range of suggestions, Purcell said. As a result of the input, NOAA Fisheries came up with five general alternatives, she said. No preferred alternative was proposed in the draft, Purcell stated. There was a comment period in 2010 on the draft, and it became apparent there was no agreement on how to operate the hatcheries in the region and commenters said decisions need to be made subbasin by subbasin, she said. In addition, there were comments that the Mitchell Act needed to support Tribal trust obligations, Purcell said.

The next steps are to get to a preferred alternative and publish a supplemental or final EIS by the end of the year, she said.

Rockefeller asked how hatchery reform figures into the EIS. Purcell said it is a factor but the EIS won't identify specific details like the maximum level for hatchery fish or the number of fish on the spawning grounds. We will address the factors "at the 10,000-foot level, she added.

5. Presentation on IEAB report on cost-effectiveness of the fish and wildlife program:

Terry Morlan, Director, Power Division and Roger Mann, IEAB Chair.

Morlan introduced a report from the Independent Economic Advisory Board (IEAB) on the cost-effectiveness of the Council's fish and wildlife (F&W) program by saying the inquiry provided a unique opportunity to look back over the program through the history of the Council. He recapped requirements of the Northwest Power Act for an adequate, efficient, economical, and reliable power system and pointed out that a 1996 amendment to the Act called for using minimum cost alternatives to achieve the biological objectives in the F&W program.

Morlan described the evolution of the program, noting that the latest innovations were adoption of subbasin plans, implementing categorical reviews, and development of high-level indicators to gauge program effects. He said changes over time have contributed to the program's overall cost-effectiveness.

IEAB chair Roger Mann said he has been working with Council staff on the cost-effectiveness report for almost a year. He listed opportunities identified for further cost-effectiveness improvements, including moving toward measurable biological objectives, like the high-level indicators, and increasing the consideration of alternatives to reach objectives.

Mann said the IEAB is limited in its ability to assess the cost-effectiveness of F&W program measures by the lack of ways to gauge biological health and abundance "in an assessment of program effects relative to costs." Significant management improvements have been made to the F&W program over time, but cost-effectiveness requires considering alternatives and there hasn't been enough of that, he stated.

"People need to go shopping," Mann said, meaning that when options exist to achieve an objective, they should be considered. The development of biological health measures are needed to document the program's effects, measure cost-effectiveness, and prioritize projects and strategies, he added.

The Council had a number of comments and observations on the report, particularly with regard to the consideration of alternatives and the range of funding discretion. Phil Rockefeller suggested there may be a way to use an RFP process to meet an element of the program with the most cost-effective means.

Bruce Measure referred to Mann's shopping analogy. "We've been shopping at boutiques and we may need to look at Walmart," he said. We need to consider other opportunities when they arise and not continue projects just because we are comfortable with them, Measure stated.

We are operating within a program driven by legal requirements, Bill Booth said. He pointed out that the Council has an opportunity to improve the cost-benefit ratio in research, monitoring, and evaluation (RME) by cutting duplicate spending. Booth also said the Council could work with

the science panels to establish protocols for routine projects, like fencing cattle away from streams.

Since the effects of fencing can be pretty well assured if the fence is installed, all we may need to know with a fencing project is that the installation took place and the fence is still there, rather than do a lot of expensive RME, he said. “The project sponsor could build more fence instead of undertaking a lot of monitoring,” Booth stated.

Morlan reported that the IEAB charter, which sunsets every two years, is up for renewal. It was last renewed in 2010, and there are no changes proposed to the charter at this time, he said.

Whiting made a motion that the Council approve the reauthorization of the charter for the IEAB as recommended by staff. Karier seconded the motion, which passed unanimously.

6. Presentation on Washington State Energy Strategy:

Howard Schwartz, Washington Council staff; and Tony Usibelli, Director, Energy Policy Division, Washington State office of Trade and Economic Development.

Tony Usibelli of Washington’s office of Trade and Economic Development briefed the Council on the state’s energy strategy. Why a state energy strategy? Energy infrastructure underlies the entire economy, energy expenditures are over \$20 billion a year or 6 percent of the state’s economy, and clean energy technologies are growing and drawing large investments, he said. In addition, we need to deal with climate change issues and address energy independence and security, Usibelli added.

Washington set three goals for its energy strategy, he continued: maintain competitive energy prices that are fair and reasonable; increase competitiveness by fostering a clean energy economy and jobs; and meet obligations to reduce greenhouse gas emissions. These are laudable goals, Usibelli said, “but they can be contentious.” He also listed nine legislated principles for the energy strategy, including pursuit of conservation as the preferred energy resource.

Usibelli said the strategy was developed in a multi-agency process. In a graphic of how energy flows in Washington, he pointed out that petroleum is the dominant energy input in the state. The energy strategy focuses on transportation because it is the largest sector in terms of input and consumption, and it is the least efficient, Usibelli said. The efficiency in getting oil from the ground to driving our cars is about 20 percent, he explained.

Usibelli noted the per capita greenhouse gas footprint in Washington is lower than elsewhere in the country. That is due primarily to the large amount of hydro for generating electricity, he said.

Usibelli said the energy strategy focuses on three areas: transportation efficiency, buildings efficiency, and distributed energy. There is legislative interest in the latter area, particularly with regard to combined heat and power, he added.

The strategy makes near-term recommendations in all three areas, Usibelli said. Among them is a call for supporting electric vehicles, he said. Seattle and Portland have been chosen as markets to deploy electric vehicles, and we are looking for opportunities to help with developing the infrastructure, Usibelli stated. In the long term, policy makers are considering how declining use

of gasoline will affect the money available for infrastructure, since a gasoline tax is currently a major source for those funds, he said.

The strategy also recommends funding and financing mechanisms for promoting efficient buildings, and targeting low income and rental housing for efficiency measures since they are typically underserved markets, Usibelli said. In addition, there are recommendations to increase the development of distributed energy resources, including combined heat and power opportunities in the pulp and paper industry, he stated.

Staffer Howard Schwartz reported that two bills passed the Washington legislature in 2012 that amend I-937. One allows legacy biomass plants to count as renewable energy and another affects the way the state determines if a resource qualifies as a renewable, he said.

Tom Karier pointed out that there is not a lot about electricity in the Washington energy strategy. The strategy group recognized the role and importance of the Council and BPA in power planning, he said. Usibelli agreed, adding, we didn't want to reproduce the power plan. But we wanted to apply the same type of analytical rigor to the transportation sector, he said.

7. Presentation by SoloPower:

Tim Harris, President and Chief Executive Officer, SoloPower.

SoloPower CEO Tim Harris gave the Council a primer on thin-film photovoltaic cells and modules, which, because of their light weight, can be installed on rooftops that cannot support traditional solar panels. He pointed out that 82 percent of existing rooftops in Los Angeles cannot support traditional panels, but a product that can convert a rooftop into a revenue-generating area is “an attractive proposition.”

Harris said SoloPower is looking at projects of 50 to 500 kilowatts in size. He described the flexible nature of the thin-film product, which, combined with lightweight racks, can work for almost any rooftop. The idea is to create a product that can be used on any rooftop anywhere, Harris stated, adding that the film can be laminated directly onto the roof. Thin-film is much more economical than the competition, he said.

Harris described the applications for thin-film PV cells and the promising markets. He noted that Germany consumed half of the world's solar panels last year, but it is becoming increasingly difficult to convert the country's farmland to solar fields. There is a big push to get panels onto roofs, Harris stated.

The thin-film product has been optimized to be manufactured simply and cost-effectively, he said. One of the keys to SoloPower's planned production is a loan guarantee from the U.S. Department of Energy, Harris acknowledged. The company is in the process of equipping a manufacturing site in Portland, where incentives, such as a business tax credit, location within an enterprise zone, and access to transportation, are available for what he called “an export-driven business.” Converting the existing facility to SoloPower's needs is a \$12 million task, Harris said, adding that it will be up and running this summer.

Bill Bradbury asked how Harris has made it work economically to employ a couple of hundred employees to manufacture a global product in Oregon. Without DOE and support from Portland,

we couldn't have been competitive, Harris stated. In China, the central banks have invested \$40 billion in solar, so you have companies "with free capital," he said. But we have a unique product with an existing market and demand, Harris pointed out. We are going to keep our core technology safe in our factories here, he said.

8. Briefing on electricity oversupply analysis:

John Fazio, Senior Power Systems Analyst; and Steve Kerns, Manager, Power Generation Schedule Planning, Bonneville Power Administration.

Staffer John Fazio said he teamed up with Steve Kerns of BPA to compare the technical assessments they had made of the likelihood and size of generation oversupply on the power system. Oversupply conditions occur when minimum system generation exceeds the amount of firm load and the secondary sales markets, he said. Basically, it happens when there is a lot of water and wind at the same time, but it also occurred before there was so much wind power in the region, Fazio noted.

In planning the analyses, he and Kerns agreed to use the same assumptions regarding Northwest and out-of-region resources that can be displaced in oversupply conditions. There are about 1,400 megawatts of "must-run" resource in the region, and the out-of-region resources are most notably in California, Fazio said. He explained that he used the entire record of water years to make his assessment for 2013. Kerns' made an assessment for 2012 using the current runoff forecast, Fazio added.

The likelihood of oversupply greater than the Southwest market (secondary) and Intertie capacity was broken down by months from April to June 2013, he continued. The likelihood is greatest in May, with a 20 percent chance the oversupply will exceed the Southwest market, and 12 percent chance it will exceed the Intertie capacity, Fazio said. This assumes the Southwest market is about 5,500 MW and Intertie capacity is 7,000 MW, he clarified.

Once the Northwest and Southwest markets are saturated, system operators can use additional bypass spill to avoid oversupply, Fazio said. The Biological Opinion provides a bypass spill target at all of the mainstem hydro projects and also sets limits on the amount of dissolved gas that is allowed when spill takes place, he explained. While bypass spill can absorb some of the oversupply by rerouting water away from turbines, there are gas limits to observe, Fazio noted.

The magnitude of the oversupply potential in 2013 is greater than what occurred in 2011 under BPA's environmental redispatch policy, he went on. In 2011, BPA had 100,000 MW-hours of oversupply, but results of the assessment put the potential for 2013 at 300,000 MW-hours, Fazio stated. There were a couple of factors at play in 2011 that affected the outcome, including an extended outage at Columbia Generating Station and a couple of turbine outages at Grand Coulee, he added.

Kerns explained the advent of the BPA oversupply analysis, saying that in discussing the question with Fazio, they decided it was a good problem for the Genesis model. In analyzing how big the oversupply problem is, our results indicate in low water years there is "a little problem," in moderate water years, there is "some problem," and in high water years, we have "a big problem," he stated.

Kerns went through the details of BPA's analysis for 2012, saying he used actual forecasted load and resource information and combined it in the model with 70 water years (1929-1998), 15 hydro shapes (1996-2010), and 30 wind generation patterns that are consistent with those in BPA's rate case. The hydro shape turns out to be an important driver in oversupply, he noted.

Modeling the various water and wind conditions results in an average estimate of 414 MW-months (302,000 MW-hours) of oversupply, three times the 135 MW-months of wind power that was displaced in 2011, Kerns reported. In the settlement discussions BPA is having with wind generators over last year's environmental redispatch policy, the cost of displacing that much wind would amount to about \$12 million in lost contract revenue, production tax credits, and renewable energy credits, he said.

"We are waiting for load growth to outpace wind," Kerns said. When the economy returns, it will happen, he added.

Presentation of the NW Energy Coalition's *Resolution of Commendation for Terry Morlan and the Regional Technical Forum*:

Nancy Hirsh, Policy Director, Northwest Energy Coalition.

Morlan, director of the Council's Power Division, is retiring at the end of March. In recognition of his last Council meeting, several members of the Council recognized his valuable leadership and offered congratulations. In addition, Northwest Energy Coalition policy director Nancy Hirsh made a presentation, commending Morlan for his work on behalf of energy efficiency in the region.

9. Council decision on finalization of the direct use of natural gas analysis and Council policy (Council document 2012-01):

Terry Morlan; and Tom Eckman, Conservation Resources Manager.

Morlan said staff has finalized a paper on the direct use of natural gas. The paper is the latest effort on a topic the Council has visited many times in the past, under the rubric of "fuel switching," he said. It was prepared in coordination with members of the gas industry, Morlan added.

In addition to the final paper, staff is proposing only a minor change in the Council's policy on the direct use of gas, which it will put forward for the Seventh Power Plan, he said. The change amounts to rewording a sentence that currently reads "The Council also recognizes that in many cases the direct use of natural gas can be more economically efficient," Morlan said. The proposal is to change the word "many" to "some," he concluded.

Whiting made a motion that the Council approve the Direct Use of Natural Gas paper as presented by staff and recommended by the Power Committee. Karier seconded the motion, which passed unanimously.

10. Briefing on Quagga and Zebra mussels:

Raquel Crosier, Washington Council staff.

Staffer Raquel Crosier said the increased interception of quagga and zebra mussel-contaminated boats has highlighted the need to strengthen activities to prevent the spread of invasive mussels

into the Northwest. She said Council member Rockefeller will be having conversations about the mussels with officials in Washington, D.C. during an upcoming trip.

Federal officials play an important role in keeping mussels from spreading from Lake Mead, and Jim Yost has pointed out to us that Idaho is finding federal inspections and decontamination efforts are not working to prevent fouled boats from coming into other states, Rockefeller said. It seems logical for us to beef up our efforts on a state level, he added.

As a Council, we could work to reinforce our state efforts given the weakness of the federal intervention, Rockefeller said. He noted that boats are also coming into the region from the Great Lakes, which have been infested with the mussels. "Prevention is the name of the game and the longer we prevent, the better," Rockefeller added.

He noted that staffer Jim Ruff is attending a 100th Meridian Initiative meeting and should return with good recommendations to take to the region's Congressional representatives for additional funding. We have to be very targeted in what we seek and expect, Rockefeller added.

Bradbury asked if the mussels are in the Northwest. So far, we don't think so, but we have intercepted fouled boats coming into the Northwest, Rockefeller said. The federal screening at the source is not effective, he added. Crosier said there is a lot of screening for mussels at water bodies in the region, and the results are negative so far.

Rhonda Whiting said it is important to let the U.S. Fish and Wildlife Service know we need to get funds where they are needed beyond Lake Mead. It will be hard to get more money, so focusing on what is already available for Lake Mead will be very valuable, she stated.

This is a great initiative, and it is great for the Council to give it new life, Karier said. The priority is to protect the Northwest, and states need to talk together about a coordinated plan, he added. The states coordinate through the 100th Meridian Initiative, Crosier noted.

11. Council Business:

– Adoption of minutes

Whiting made a motion that the Council approve for the signature of the Vice-Chair the minutes of the February 7, 2012, Council meeting held via Webinar and in Portland, Oregon. Bradbury seconded the motion, which passed unanimously.

The meeting adjourned at 2:44 p.m.

Approved April __, 2012

Vice-Chair

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