Northwest Power and Conservation Council

Council Meeting
Hood River Oregon

May 10-11, 2011

Minutes

Oregon Council Member Bill Bradbury welcomed the Council to Oregon and the Columbia Gorge Hotel.

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

Bill Booth, chair, fish and wildlife committee; Tom Karier, chair, power committee; and Rhonda Whiting, chair, public affairs committee.

Power Committee chair Tom Karier reported on the committee's Go to Meeting session May 5. Staff gave us an update on electricity and gas prices relative to the forecasts in the Sixth Power Plan. Gas prices and growth are lower than forecast, but the wholesale electricity price forecast was very close, as was consumption, and the update indicates the Sixth Power Plan is on track, Karier said.

The committee heard a presentation on how staff develops thermal resource assumptions that go into the Council's models, which is a very technical process, he continued. PacifiCorp presented its Integrated Resource Plan, and like others in the region, the company is focused on conservation, wind generation, and natural gas in the future, Karier said. We saw a list of the people who are under consideration for the Policy Advisory Committee on the Regional Technical Forum, and we approved renewing the charter of the Natural Gas Advisory Committee, he said.

Staff is making an effort to anticipate wind development in the region; once everything that is under construction is finished, we will have over 6,000 megawatts of capacity in the Northwest, Karier stated. Over the next 10 years, we could have another 4,000 to 6,000 MW in the region, he said. There were a lot of comments on the Council's issue paper, Karier said, adding that staff is trying to complete the paper and bring it to the Council for final approval.

Bill Booth, Fish and Wildlife Committee chair, reported on the May 10 committee meeting. We took up the effort on the research, monitoring, and evaluation (RME) categorical review and worked to finalize a programmatic document on the review that is being authored by John

Shurts, he said. We received the list of 58 projects on the Phase 2 list, Booth said. He said the list would be published soon, as will the programmatic paper, which reflects the public comment received. Booth reported that the committee will meet again May 24 to finalize the Phase 2 list and the programmatic document so it is ready for a decision at the Council's June meeting.

The committee discussed the programmatic issues and had NOAA representatives present to discuss the CHaMP project, which has been controversial, he continued. We also talked about coated-wire tagging, Booth said.

Staff is preparing the next phase of the categorical review, and the topics will be coordination, data management, and resident fish in the blocked areas, he said. The F&W committee had a presentation from the Washington Department of Fish and Wildlife that focused on WDFW's partnership with Council, and we also had a period for open comment, he concluded.

Rhonda Whiting said the Public Affairs Committee would meet later in the day, and she listed their agenda.

1. Council decision on project reviews:

Mark Fritsch, manager, project implementation.

- **Quarterly Review of Within-Year Project Funding Adjustments for Implementation**

Staffer Mark Fritsch reported that the Budget Oversight Group received six requests for in-year budget adjustments in the second quarter, two of which are up for decision at this meeting. The first project is a $2.2 million request from the Kootenai Tribe to restore natural recruitment of Kootenai River white sturgeon by designing and constructing in-stream structures and habitat modifications, he said. The F&W committee recommended approval of the project, according to Booth.

Dick Wallace made a motion that the Council recommend to Bonneville the implementation of proposed activities for Project #2002-002-00, Restore Natural Recruitment of Kootenai River White Sturgeon, in an amount not to exceed $2,250,000 in Fiscal Year 2011 expense funding to design, construct, implement, monitor and evaluate in-stream structures and other habitat modifications in the Kootenai River, as presented by the staff and recommended by the Fish and Wildlife Committee. Joan Dukes seconded the motion, which passed unanimously.

The second project is a request from the Cowlitz Tribe to fund an $89,921 coordination proposal, Fritsch said. The F&W committee gave the project a favorable recommendation with the condition that funds beyond fiscal year 2011 will be determined as part of the coordination/data management categorical review, he said.

Wallace made a motion that the Council recommend to Bonneville the implementation of the Cowlitz Tribe program coordination proposal, Project #2011-012-00, in an amount not to exceed $89,921 in Fiscal Year 2011 expense funds, with implementation and funding level beyond Fiscal Year 2011 to be determined as part of the coordination/data management categorical review, as presented by staff and recommended by the Fish and Wildlife Committee. Dukes seconded the motion, which passed unanimously.

– **Project #2010-086-00 Protect and Restore the Crooked and American River Watersheds**

Fritsch presented two additional projects that are sponsored by the Nez Perce tribe and intended to satisfy commitments under the Biological Opinion. The first project is a $3,027,600 project (2011 through 2014) to protect and restore the Crooked and American river watersheds for the benefit of fish species, he said.

The Independent Scientific Review Panel (ISRP) reviewed the project for scientific adequacy and sent back questions for the sponsor, Booth reported. The sponsor responded, and the ISRP subsequently found the project met scientific review criteria, and it is now moving forward, he said.

Wallace made a motion that the Council recommend to Bonneville the implementation of proposed Project #2010-086-00, Protect and Restore the Crooked and American River Watersheds, as presented by staff and recommended by the Fish and Wildlife Committee. Dukes seconded the motion, which passed unanimously.

– **Project #2007-092-00 Protect and Restore Selway River Watershed**

A second Nez Perce tribe proposal is for $800,000 (2011 through 2014) to protect and restore habitat in the Selway River watershed. According to a staff memo, the ISRP reviewed this project and requested more information from the sponsor. The project was subsequently reviewed again, and the ISRP gave it a favorable review.

Wallace made a motion that the Council recommend to Bonneville the implementation of Project #2007-092-00 to protect and restore the Selway River Watershed, as presented by staff and recommended by the Fish and Wildlife Committee. Dukes seconded the motion, which passed unanimously.

2. Briefing and summary of U.S. Army Corps of Engineers 2010 Anadromous Fish Evaluation Program research:

Marvin Shutters, Chief, Environmental Analysis Section, Walla Walla District; and Brad Eppard, AFEP Coordinator, Portland District, U. S. Army Corps of Engineers.

Ruff said the Corps' presentation on its Anadromous Fish Evaluation Program (AFEP) is part of an ongoing effort to keep the Council apprised of Research, Monitoring and Evaluation (RME) projects.

Brad Eppard said the purpose of AFEP is to gather scientific information that helps with decisions on configuration and operation of the Corps' federal hydro projects. Our priority is to achieve the juvenile survival targets in the BiOp and meet requirements in the Columbia Basin Fish Accords, he said. Of the $87.6 million in the Corps' 2010 Columbia River Fish Mitigation budget, $38.3 million is for AFEP, which covers research on salmon and lamprey, Eppard said.

He went on to describe specific projects within the following categories: juvenile fish passage, turbine survival, juvenile fish transportation, pacific lamprey, adult fish passage, predation, and the estuary. Eppard described the flows in 2010, which he said were below the 10-year average

in spring, but peaked higher than average in summer. The flow picture gives context to the AFEP results, he explained.

With regard to juvenile passage work, Eppard said results show the process of tagging juvenile fish is having an effect on their survival. In 2010, we finalized work on standard protocols for tagging, which cover surgeon training, anesthetics, and sutures, he said. The Corps is also working to downsize acoustic transmitters, and will have results in a couple of years, according to Eppard.

He explained the passage measures and results at the Corps' mainstem projects. The survival and passage efficiency results for the behavioral guidance system at Bonneville Dam have been mixed, Eppard indicated. Among the other studies, in 2010 the Corps conducted a post-construction evaluation of the $51 million spill wall at The Dalles, which is designed to steer fish coming over the spillway away from predators and speed them into the main river channel, he said. The results indicate an 8 percent gain in survival compared with passage before the spill wall, Eppard said.

At John Day Dam, the Corps has installed an "avian array" that keeps gulls away from the area where juveniles congregate to pass the dam, he went on. The array has proven successful in moving the gulls downstream, and with it in place, we saw a marked increase in survival, Eppard said. Eppard said the Corps has arrays at other dams, but not as extensive. The Dalles Dam array covers more area.

Bruce Measure commented on a graph that shows passage survival for yearling chinook is higher with less spill. Eppard responded that survival is good at both 30 percent and 40 percent.

Marvin Shutters reported on turbine survival studies. The Corps studied survival at McNary Dam with turbines operating at the "best operating point" and at the upper end of the range of 1 percent peak efficiency. In this study, we took a closer look at descaling of juvenile fish, and found that descaling for chinook salmon was higher with operations at the "best operating point," he said. Debris on the trash rack also likely caused injury. Results show the fish fare better passing through the turbines or the fish passage routes, but as total discharge increases, spillway survival goes up for all species, he said. The "tag burden" relative to the fish weight also influences survival.

Shutters went on to describe studies that look at the effects of turbine pressure on survival. The AFEP transportation study is targeting the question of when in the season to begin transporting, Shutters explained. We are collecting some good data about what forage is available in ocean and when.

Lamprey studies include looking at passage success with various modifications to ladders at dams, and operational changes have also been made to aid lamprey passage.

With regard to avian predation in the estuary, the tern colony is getting smaller, but cormorant numbers are increasing, Eppard reported. Predation rates based on PIT-tag recovery indicate cormorants are taking the largest number of fish, he said. And marine mammal predation studies show fewer California sea lions now but more stellar sea lions at Bonneville Dam, Eppard concluded.

3. Panel of fish and wildlife representatives on possible cumulative impacts of wind power development in the region:

Bill Tweit, Columbia River Policy Lead, Washington Department of Fish and Wildlife; John Pierce, Chief Wildlife Scientist, Washington Department of Fish and Wildlife; and Gregg Servheen, Idaho Department of Fish and Game.

Tom Karier introduced panelists to talk about the cumulative impacts of wind development on wildlife. With the growth of wind development in the region, it is timely for the Council to hear about the state of the art in studies on the effect of wind machines, he said.

Bill Tweit of the Washington Department of Fish and Wildlife (WDFW) said "This is the opening chapter" in a conversation about issues arising as the region gets into the wind power build-out, he said. We are flagging the parts of the planning that need more attention," Tweit said.

Rachel Shimshak of the Renewable Northwest Project said her organization is interested in creating more renewable projects and balancing them with wildlife and the environment. Shimshak pointed out that the Northwest will see the retirement of three fossil fuel plants – Boardman and two facilities at Centralia – and we must replace that power. We have a lot of experience in the region working together to create guidelines that add certainty for the wind industry and do the best job we can to minimize impacts on wildlife, Shimshak said.

John Pierce of WDFW described studies being done on impacts to Ferruginous Hawk and Greater Sage Grouse. Both are at-risk species heavily represented in shrub steppe landscapes, and they are resident in many wind development areas, he said. Wind power is a rapidly growing industry and the Columbia Basin is an area with great potential, Pierce said. Pierce said studies have documented wind turbine impacts on hawks, both through direct mortality and indirect effects, such as loss of habitat. He described a cumulative impact study in Washington and Oregon. Over the last 10 years, there has been a growing overlap of wind projects with areas important to ferruginous hawks. Hawks have large-scale seasonal movements, which are important to consider as more wind projects come onto the landscape, he stated.

Greater sage grouse are dependent on the shrub-steppe landscape, he continued. Pierce identified the Withrow project in Washington, which is planned for one of two core areas for sage grouse in the state. Through early planning and engagement on the project, we were able to work together to redesign the installation to minimize impacts to the grouse, he said.

In summary, we need to do assessments beyond individual project impacts, Pierce said. We need to consider ecological values at the large landscape levels, including migration routes and connectivity of areas important to the species, he said. We need to identify crucial habitats prior to site selection and project design, Pierce concluded.

Gregg Servheen of the Idaho Department of Fish and Game described efforts sponsored by the Western Governors Association (WGA) to study key migration corridors and develop crucial habitat tools ahead of upcoming renewable resource projects. He explained the effort to develop a Decision Support System (DSS) to provide information at the early stages of project planning. The DSS effort calls for having the system developed by 2013.

Tweit suggested the Council think about the issues and consider hosting a regional workshop since "a lot of folks want to be in this conversation." A workshop could address the scope of the cumulative effects concerns, evaluate alternate scenarios for wind build-out, and consider the types of data and analytical tools available, he said.

Karier noted the study of cumulative effects falls into both the Council's power and fish and wildlife arenas. Bill Bradbury asked whether the impacts are greatest from concentrated wind energy developments or from projects that are spread out.

Tweit said there are strengths and weaknesses in both approaches. Shimshak pointed out that from an operations standpoint, diversity in siting is better. Another thought is that "if you have already disturbed an area, concentrate the development there," she said. Pierce pointed out that it is an optimization process, and a workshop would help sort out the answer.

4. Summary of Columbia River Treaty Analyses:

John Fazio, senior power systems analyst; and Jim Ruff, manager, mainstem passage and river operations.

Staffers John Fazio and Jim Ruff briefed the Council on results of the Phase One analyses the Bonneville Power Administration and the Corps of Engineers have conducted on the Columbia River Treaty. Fazio explained that with 10 years' notice, the treaty can be terminated in 2024. The flood control regimen will change in 2024 regardless of the decision made to maintain or terminate the power provisions, he said.

Evaluating the benefits, costs and risks of changing the status of the treaty is extremely complex, Fazio continued. At this point, it is more important to focus on the process for analyzing the impacts than it is to be concerned with exact numbers, since they are preliminary, he added. The treaty review process has a number of steps, from Phase 1 studies to refining the analysis, which will lead to a recommendation from the U.S. Entity – BPA and the Corps – to the Department of State by September 2013, Fazio explained.

The Phase 1 studies provide preliminary information about post-2024 power and flood control operations with and without the treaty, he continued. None of the system constraints imposed by the Biological Opinion (BiOp) or fish and wildlife (F&W) operations in the United States are part of the analysis, Fazio pointed out. In 2024, regardless of the treaty outcome, the current flood control operating plan will be replaced with a new operation, he stated.

Jim Ruff explained that the United States bought flood control storage from Canada when the treaty took effect in 1964. After 60 years in effect, the flood control provisions of the treaty transition to a called-upon operation, he said. The United States can call upon storage in Canada only if floods cannot be adequately controlled using storage here, Ruff said. Canada must be consulted for flood control, and the provisions are that called-upon storage will provide no greater degree of protection than existed prior to 2024, he added. The United States must pay for the called-upon operations, Ruff said.

He went through the assumptions used in the Phase 1 studies for flood control. The studies assume a maximum flow limit at The Dalles and peak flow objectives of 450 kcfs (thousand cubic-feet per second) and 600 kcfs to bracket the range of impacts, Ruff said.

Tom Karier asked how the U.S. Entity defines what is included under the called-upon operation. Is it only the current storage projects? he asked.

Ruff said the United States includes the federal storage currently used for flood control plus Brownlee. The Canadians, however, say all projects in the United States should be used before Canada is called upon, even non-federal projects, like Kerr, he added.

John Hyde of BPA said there is debate on flood control, and the Corps is writing a white paper to spell out the U.S. position.

Fazio said the power studies in Phase 1 make assumptions about future U.S. loads and resources, including BPA's projections for renewable resources and conservation, as well as future Canadian operating scenarios without the treaty. The Canadian scenarios include British Columbia operations for flood control only, which Fazio called unlikely, and operations for BC power needs.

Assuming the treaty stays in place, the Phase 1 studies indicate the Canadian Entitlement – energy the United States sends to Canada under terms of the treaty – decreases from 470 average megawatts (MWa) in 2025 to 290 MWa in 2040, Fazio said. Entitlement capacity is not expected to change much, he said. With the treaty, planners also have more certainty about inflows into the U.S. hydro system, Fazio reported. "A benefit of keeping the treaty in place is certainty," he added.

Without the treaty, the average annual energy production in the United States and Canada stays essentially unchanged, but the monthly generation shape changes, Fazio explained. There would be more generation in the winter/spring and less in the summer, he stated. Fazio added that the studies show the United States loses about 225 MWa of firm hydro generation, but the modeling did not include the BiOp flow/spill requirements "so the numbers are meaningless."

A supplemental report was put out as a companion piece to the Phase 1 studies, Ruff picked up. That analysis includes the BiOp and other fish operations in the United States, and studies were done with and without the called-upon flood control operation, he said. The purpose of the supplemental report was to assess more realistically the impacts of post-2024 operations with and without the treaty, Ruff said.

In these studies, reservoirs in the United States would be drafted deeply during the January to April period and provide higher flows and more generation in those months, he said. The probability of reservoir refill would likely decrease except in high water years, and flows would be lower more often from July to September, Ruff said.

The results in these studies are driven more by flood control assumptions than by the treaty status with regard to power, he stated. Ruff presented graphic illustrations comparing elevations at four storage reservoirs – Grand Coulee, Libby, Hungry Horse and Dworshak – under the status quo,

with no treaty and 450 kcfs flows, and with no treaty and 600 kcfs. The Corps manages flows to 450 kcfs to prevent flood damage, he said.

Based on the supplemental analyses, hydro generation across all water conditions was reduced by about 90 MWa, Fazio said. On average, hydro generation increased in the winter and spring, and decreased in the summer and fall, he said. In the driest years, hydro generation was reduced by 230 MWa annually and as much as 1,460 MWa during the summer, Fazio said.

Bill Booth asked whether the United States could store more water in the dry years. Fazio responded that flood control drives how deep reservoirs have to be drafted, and Ruff pointed out that the Corps has flood control operations even in dry years. Hyde also noted that the summer power deficit can't be made up with more storage because of BiOp requirements for flows.

Ruff said the supplemental report also shows that the ability to meet fish flow targets during the late spring and summer would be reduced, most significantly at McNary Dam. There is little affect on meeting flow targets on the Snake, he added. And Ruff reiterated that reservoir refill and draft levels are affected primarily by the called-upon flood control and not by treaty status.

In summary, he listed the issues from a U.S. perspective: terminating the treaty increases uncertainty about the volume of water entering the U.S. system, making it more difficult to plan U.S. operations; without the treaty, the United States regains about 300 to 500 MWa of energy and about 1,300 to 1,500 MW of capacity; and the power gains would be offset somewhat by reductions resulting from not coordinating U.S and Canadian operations.

The U.S. Entity is still investigating how much called-upon flood control will be needed and how much it will cost, Ruff said. And the United States and Canada are still debating what constitutes a U.S. need for called-upon flood control, he added. U.S. reservoirs will likely have to be operated differently for flood control post-2024, which could have significant implications related to reservoir refill, fish flows, and costs, according to Ruff. Flood control is driving the treaty debate, he reiterated.

A number of studies are still under way, including the Corps' flood risk management assessment and refinement of studies to outline potential Canadian hydro operations post-2024, he said. The U.S. Entity is conducting the studies with the help of a Sovereign Review Team, which includes states, tribes, and federal agencies, Ruff said. And other Northwest stakeholders are able to participate in several ways, including regional workshops and technical consultations, he said.

Fazio noted that the Council staff has been asked by some participants to be more active in the process. The staff may be called on to evaluate or conduct studies, he wrapped up.

5. Council business:

- **Adoption of minutes**

Wallace made a motion that the Council approve for the signature of the Vice-Chair the minutes of the April 12-13, 2011, Council meeting held in Wenatchee, Washington. Bill Bradbury seconded the motion, which passed unanimously.

– **Council decision to release draft budget for public comment**

Staffer Sharon Ossmann presented the Council's draft fiscal year 2013 and revised fiscal year 2012 budgets. The draft 2013 budget is $10.3 million and the revised 2012 budget is $10.1 million, she said. Both budgets are below the budget cap, which is based on BPA's maximum firm sales, as defined in the Northwest Power Act. The comment period is 45 days, and the Council can take comments at its June meeting and adopt the budgets in July or August, Ossmann said.

Wallace made a motion that the Council release the Draft Fiscal Year 2013 and Fiscal Year 2012 Revised Budget for public comment for a period between May 12 and June 30, 2011. Bradbury seconded the motion, which passed unanimously.

– **Council decision on Independent Economic Analysis Board task order**

Morlan explained that the task proposed for the Independent Economic Advisory Board is to look over changes, such as adding scientific review panels, improving tracking and reporting, undertaking subbasin planning, and conducting categorical reviews to see if they have made the program better. The IEAB will also make recommendations to improve the program, he said. The cost of the study is $7,300, which Morlan said is "a bargain."

Wallace made a motion that the Council approve Independent Economic Analysis Board Task 181 on Fish and Wildlife Program Cost-Effectiveness to provide a retrospective on changes to the management of the Fish and Wildlife Program over the last 15 years that can be assumed to have improved the cost-effectiveness of the program. Karier seconded the motion. Booth commented that the proposal is a good task for the IEAB. The Council voted unanimously to approve the motion.

– **Proposed Regional Technical Forum Policy Advisory Committee Members**

Staffer Terry Morlan reported that progress is continuing to set up a Policy Advisory Committee for the Regional Technical Forum. The first meeting of the group is July 28, and the focus will be to reach agreement on funding allocations for the RTF and put the forum on a more stable five-year funding cycle, he said. In addition, the Policy Advisory Committee will review proposed guidelines for documenting savings for energy efficiency measures and consider any policy implications of the guidelines. Morlan offered a list of possible participants on the committee.

– **Council decision to renew Natural Gas Advisory Committee charter**

Morlan said the Natural Gas Advisory Committee has been helping the Council since its first power plan. The committee gives us access to expert knowledge about how fuel and energy markets work, he said. This has been a helpful group and has helped to further a dialogue between the gas and electricity industries, he said.

Karier noted that the Power Committee reviewed the proposal to renew the charter for the committee and unanimously supported it.

Wallace made a motion that the Council approve the renewal of the Natural Gas Advisory Committee Charter for a period of two years, and appoint Massoud Jourabchi as chair and Terry Morlan as vice-chair of the committee. Karier seconded the motion, which passed unanimously.

The Council meeting adjourned at 10:00 a.m.

Approved June 8, 2011 in Whitefish, Montana

/s/ Richard Wallace

Vice-Chair

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