Northwest Power and Conservation Council

Council Meeting
Portland Oregon

October 13-14, 2010
Minutes

Council Chair Bruce Measure called the meeting to order at 1:05 pm on October 13th and adjourned it at 11:55 am on October 14th. All members were present, except Dick Wallace.

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

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

Tom Karier reported that the Power Committee met on October 11 and reviewed the power division's work plan and received an update on Regional Technical Forum activities. We also had an update on what's going on with California's Renewable Energy Standards policy, he said. The Committee discussed 2009 efficiency acquisitions and why achievements declined, Karier stated.

Bill Booth reported that the Fish and Wildlife (F&W) Committee reviewed several F&W project funding requests and had an update on the Research, Monitoring, and Evaluation (RM&E) and artificial production categorical review, as well as various aspects of the F&W program, including the multi-year action plan and program objectives. In December, we will bring an overview of all F&W program activities under way to the Council for discussion, Booth stated.

Rhonda Whiting reported that the Public Affairs Committee is working with staff on various publications, including the Council's Fast Facts guide.

Report on the October 7 meeting with the Board of Directors of the Columbia Basin Trust:

Bruce Measure, Council chair.

Measure reported that several Council members and staff met with the Board of Directors of the Columbia Basin Trust (CBT) on October 7 and that it was a very successful meeting. Staffer John Shurts said since it is the 10th anniversary of the Council's original understanding with the

CBT, at the meeting, it was decided the two entities would reaffirm the relationship and put it in the form of a Memorandum of Understanding. The Council and CBT representatives discussed plans for the Columbia Basin database to be housed at Selkirk College in British Columbia in the future, he said.

Another topic on the agenda, according to Shurts, was the symposium that will be held on Columbia River Treaty issues at Oregon State University November 7 and 8. The federal agencies will be there to talk about their Treaty studies, he said. The Council and the CBT are the sponsors of the meeting, but it is university-driven, Shurts added.

1. Presentation of Independent Economic Analysis Board annual report:

Dr**.** Roger Mann, Chair, IEAB.

Roger Mann, chair of the Independent Economic Analysis Board (IEAB), presented the results of the board's first annual report. The IEAB's main activities during 2010 were a study of the economic risks associated with zebra and quagga mussels in the Columbia Basin, and a review of chapter 11 of the draft Sixth Power Plan, he said.

We are now working on several tasks, Mann said, including evaluating irrigation efficiency, hydropower, and fish flows. We are looking at a comparison of water acquisition as a strategy versus direct payments for conveyance efficiency improvements, he explained. Other topics we are discussing involve fish-friendly and more efficient hydropower turbines and the costs of wind integration from alternative accounting perspectives, Mann noted.

This year, the IEAB began participating in the Council's review of research, monitoring, and evaluation (RM&E) costs and the Council's Monitoring, Evaluation, Research and Reporting (MERR) plan, he reported. We have ideas about criteria for RM&E activities to see if they are cost-effective and a good investment for the region, Mann said. Considering the magnitude and cost of these activities, it's something the IEAB should be involved in, he stated.

We are also considering a hatchery cost comparison, focusing on potential cost benchmarking for BPA-funded projects, Mann said. In sum, we look forward to fulfilling our cost-effectiveness mandate and working with you, he told the Council.

Dukes asked about the IEAB's proposed hatchery work. We thought we'd do more cost benchmarking for BPA hatcheries, but now there's an interest in how the Hatchery Scientific Review Group (HSRG)'s recommendations will change the cost of hatcheries, and whether the Mitchell Act report's recommended alternative will involve HSRG recommendations, Mann said. We'll have to see how the EIS recommendations would affect our work, he added.

Measure thanked the IEAB for its service to the Council.

2. Presentation on sustainability efforts at Kettle Foods, "Chipping Away at Sustainability":

Jim Green, Kettle Foods Ambassador.

Jim Green, Kettle Foods ambassador, described the potato chip manufacturing company's energy-efficiency activities. Kettle Foods has two plants, one in Salem, Oregon, and one in Beloit, Wisconsin, and we were the first company to make organic potato chips, he noted.

The company processes all its waste cooking oil into biodiesel and operates company cars and a delivery truck on biodiesel, Green said. Kettle Foods headquarters in Salem has one of the largest commercial solar power arrays in the Northwest, he stated. The panels were installed with the help of Portland General Electric and the Energy Trust of Oregon, he noted.

3. Overview of the Columbia Land Trust's Conservation Work:

Glenn Lamb, Executive Director; Scott McEwen, Conservation Director; and Nadia Gardner, Coast and Estuary Conservation Lead.

Glenn Lamb, executive director of the Columbia Land Trust, gave a presentation on the Trust's work to conserve lands in the Columbia River Basin. We are now a significant player in the conservation world, Lamb said. To date, the Columbia Land Trust has conserved over 10,000 acres of property, Lamb pointed out.

He described some of the efforts under way in the Northwest, such as the conservation of over 3,000 acres of bull trout habitat in the Mount St. Helens Forest and salmon recovery work along the Klickitat River. In 2005, the Trust conserved one of the key chum spawning sites on the mainstem of the Columbia River, Lamb noted.

Scott McEwen of the Trust talked about the recent decommissioning of the Powerdale Dam on the Hood River and the Trust's involvement in figuring out ownership for the riparian land in the area. Nadia Gardner described Trust initiatives in the lower Columbia River area, including the conservation of 793 acres on the Long Beach Peninsula. Lamb said the Trust is building a permanent stewardship fund to take care of various properties, and that they expect to have $3 million from private donations by the end of the year.

Karier asked if anyone is tracking all the lands being conserved by trust, private, and government actions, and if so, would they show a net gain? We do have a national survey of land trusts, replied Lamb. We recently had a year where our conservation activities were even with the amount of land going into development, he noted. In the past, our efforts were always less than the amount of land being developed, Lamb added.

Do you receive title to the land and do you pay taxes on it? Jim Yost asked. We do both, replied Lamb. Sometimes our conservation goal for a piece of property is an easement, in which case the land stays in private ownership, he said. If we want to do restoration work, it's more important to own the land, Lamb stated. In rural counties, our ownership of thousands of acres of land is significant, and so we do pay property taxes in those counties, he said.

4. Presentation on new sustainable hydropower:

Introduction by Denny Rohr, D. Rohr & Associates; Andrew Munro, Grant PUD Director of External Affairs/President, National Hydropower Association; and Jessica Matlock, Government Relations Director, Snohomish County PUD.

Denny Rohr of D. Rohr & Associates kicked off a presentation on new sustainable hydropower. He introduced Andrew Munro, director of external affairs for Grant PUD and president of the National Hydropower Association, noting he is the son of former BPA administrator Sterling Munro.

New sustainable hydropower has the potential to create 1.4 million new jobs in the United States and provide 60,000 MW of new capacity by 2025, Munro said. Hydropower accounts for 7 percent of the nation's electricity generation, he noted. There are 80,000 dams in the United States, but only 3 percent are used to generate electricity, Munro said.

Permits for new hydro projects are up 30 percent at the Federal Energy Regulatory Commission in the last few years, he pointed out. The increase stems from the availability of tax credits, grants, and clean energy bonds, as well as hydro's potential to reduce greenhouse gas emissions, Munro said.

A study this year by Navigant Consulting found that a national renewable energy standard of 25 percent by 2025 would create 274,000 new jobs per year in the hydro, wind, solar, and biomass industries, and every state would gain jobs, he noted. Navigant's assessment of 59,650 MW of hydropower potential by 2025, Munro said, included estimates of inland and ocean-based hydro.

The inland hydro potential consists of: 8,900 MW of efficiency and capacity improvements at existing projects; 10,000 MW of new capacity from non-hydro dams; 1,000 MW from greenfield sites; 2,000 MW from inland hydrokinetic projects, such as canals; and 24,000 MW from pumped storage projects, he reported. The U.S. Dept. of Energy (DOE) is particularly interested in pumped storage, Munro noted. The estimates of ocean potential, he said, are: 9,000 MW of wave energy projects; 750 MW of ocean current projects; and 4,000 MW of tidal in-stream energy conversion.

The Navigant study also looked at job and resource potential by state, Munro said. In the Northwest, new hydropower's potential stacks up like this: Idaho: 35,443 jobs and 2,000-4,999 MW; Montana: 28,195 jobs and 2,000-4,999 MW; Oregon: 115,612 jobs and 5,000-7,999 MW; and Washington: 218,381 jobs and 5,000-7,999 MW.

He offered examples of non-hydro dams converted to power generation in the Northwest. At the Arrowrock Dam in Idaho, built by the Bureau of Reclamation in 1912-1915, Clatskanie PUD added 18 MW of hydropower generation in 2010, Munro said. In 1988, Seattle City Light developed 101 MW of generation at the Lucky Peak Dam in Idaho, a Corps of Engineers project built in 1949-1955, he pointed out.

Munro described Grant PUD's modernization efforts at Wanapum and Priest Rapids dams, involving the installation of 20 new turbines for a capacity increase of over 430 MW. Grant PUD also installed advanced, fish-friendly Kaplan turbine runners, he noted.

Jessica Matlock, government relations director for Snohomish PUD, said the PUD's board has decided to meet all new load growth with conservation or generation from renewable resources. She reported on the PUD's study in 2008 of 145 sites for small hydro development, noting they only looked at sites above fish-bearing streams.

The study resulted in 12 possible sites, Matlock said. We then held meetings to work with stakeholders, and as a result, we are now pursuing two projects: a 0.65 MW facility on Woods Creek and a 7.5 MW project on Young's Creek, she noted. We are also doing further due diligence on three additional small hydro projects, Matlock added.

We have begun construction at Young's Creek, and the project will be finished in 2011, she said. These projects are small, but they are important to us because they are renewable energy and can help us firm our intermittent resources, Matlock stated.

Tom Karier asked if the projects are new construction. Woods Creek is a rehabilitation of an existing structure, and Young's Creek is a new small dam, Matlock replied.

Munro reported on a surge of interest in hydropower in Washington D.C. The Secretary of Energy, Dr. Steven Chu, expressed the opinion at the time of the Presidential inauguration that hydropower is "maxed out," but since then, he has investigated the issue, and now he says the nation's hydropower can be doubled with minimal impact, Munro stated. It's not by building large new dams, but from utilizing existing infrastructure -- the non-hydro dams in the country and from pumped storage projects, Munro noted.

Are you seeing such a change in the attitude on the regulatory side? Booth asked.

We have work to do on the regulatory side, and "a change of mindset" in our own industry is needed too, replied Munro. The growing interest in controlling carbon emissions has forced people to take a new look at hydro, he said. One thing we are doing is highlighting job-creation opportunities, Munro continued. He gave the example of the Voith Hydro company in York, Pennsylvania, which has patented fish-friendly turbine runners. Voith has grown 27 percent and added 194 jobs during a recession, Munro noted.

He also reported on a new high-tech plant to be built in Moses Lakes, Washington by BMW and SGL Group that will produce carbon fiber components for all-electric vehicles. The plant will create 80 new local jobs, and a critical factor in the decision on facility location was the availability of a green energy source, Munro said.

He described the Hydropower Improvement Act of 2010, which has been introduced in Congress. It would establish a national policy to double hydropower capacity and expand credits and loan guarantees for hydro, Munro said.

We are also working with federal agencies on "smarter licensing" procedures that would only take two years, he reported. In March, DOE, the Dept. of Interior, and the Dept. of the Army signed a memorandum of understanding to increase hydropower generation at federal facilities, Munro noted.

There are efforts under way to bridge the previous divide between industry and environmental groups, like American Rivers, he said. The "old adversarial ways" weren't getting us anywhere so we are trying to work together to find new solutions for expanding renewable energy, according to Munro.

Secretary Chu has called hydro America's "best-kept secret" and has said, "I'm for hydro, because I'm an environmentalist," Munro reported. Members of Congress also have a new enthusiasm for hydropower, he said. There's been a remarkable change in Washington, D.C., agreed Matlock. Before, hydropower was "a bad word," but now it's valued as a way to firm up renewable resources, she said.

What's the cost of energy from these small retrofits? Jim Yost asked. There's a wide range, and DOE is doing a study of the costs, replied Munro. Karier asked how much of a hurdle permitting is for new hydro. We didn't have problems with our two projects because we engaged state agencies, tribes, NGOs, and the public before we started, said Matlock. We worked hard to make the project acceptable from the very beginning, she added.

Melinda Eden asked what the DOE assessment of hydropower would cover. It is an assessment of non-hydro dams that will look at all factors, including flows and the feasibility of adding generation, replied Munro.

5. Update on the North American Salmon Stronghold Partnership:
Mark Trenholm, Wild Salmon Center.

Guido Rahr and Mark Trenholm of the Wild Salmon Center made a presentation on the North American Salmon Stronghold Partnership. Rahr thanked the Council for its participation in the Partnership and explained more about the Wild Salmon Center, a international non-profit organization formed to protect the best wild salmon ecosystems of the North Pacific.

Trenholm said the North American Salmon Stronghold Partnership involves local communities, government agencies, nonprofit organizations, tribes, businesses, and landowners in efforts to protect the healthiest remaining salmon ecosystems in North America. The threats to wild salmon are climate change, population growth, and resource extraction, and salmon conservation must focus on maintaining the viability of salmon populations in healthy watersheds over the long term, he stated.

We've split North America into "salmon ecoregions," Trenholm said, and we are about to run our process to identify strongholds and confer status on them in Oregon, Washington, and Idaho, he stated. Once we identify strongholds, we would set priorities for investments and solicit proposals for on-the-ground protection and restoration projects, according to Trenholm.

The main source of funding for our efforts would be the Pacific Salmon Stronghold Conservation Act of 2009, he noted. It has passed the Senate Commerce Committee and is in committee in the House, Trenholm said. It's a bipartisan bill, and we hope it will pass during Congress' lame-duck session this year, he told the Council.

The legislation, which is cosponsored by the entire West Coast delegation, would establish a federal program to support the protection and restoration of a network of salmon strongholds, Trenholm said. The National Fish and Wildlife Foundation would administer the grants.

He asked the Council to assist their activities in various ways, including financial support for the Partnership's board, support for the stronghold identification work in the Columbia Basin, and collaboration to explore mechanisms to increase investments in salmon strongholds. Trenholm said they will start looking at salmon populations in Oregon, Washington and Idaho I n December and it takes three to four months to complete the work.

Public Comment

John Platt, representing the Columbia River Inter-Tribal Fish Commission (CRITFC), asked the Council to schedule an agenda item at its November meeting that would further examine the information presented by NOAA Fisheries staffer Mike Ford at the Council's meeting in September. Ford's report dealt with research relating to the effects of hatchery fish on wild salmon.

We weren't made aware of the September presentation, Platt stated. The NOAA research reported could lead to drastically cutting tribal programs in the Columbia River Basin, he said. NOAA consulted with all the tribes except the four that I work for – the Yakamas, Nez Perce, Warm Springs, and Umatillas, according to Platt.

Dr. Ford treated an important question from one side, he said. Tribes have been working to improve hatcheries, and if Dr. Ford is right, you've spent hundreds of millions of dollars in your program for nothing, Platt told the Council.

It's important that the Council deal with these issues and come down on one side or the other, he stated. Platt said he has provided the Council with documents that address scientific and management issues germane to the discussion.

We have some top scientists who believe Dr. Ford's data is biased and his conclusions are wrong, he noted. This is a cutting-edge scientific issue: do hatchery fish cause naturally spawning fish to die out? Platt said. We don't think that's the case, and we think the risk is very slight, he stated.

6. Council decision on project reviews:

Mark Fritsch, manager, project implementation

- **Project #1988-064-00, Kootenai River White Sturgeon Aquaculture Conservation Facility**

Staffer Mark Fritsch presented a request for the Kootenai River White Sturgeon Aquaculture Conservation Facility to proceed to Step Two activities. Sue Ireland, representing the Kootenai Tribe of Idaho, made a presentation on the project's master plan by phone. She said the Kootenai River subbasin encompasses nine million acres, two states, one province, and involves

multiple jurisdictions and multiple endangered species, making for complicated management issues.

The two species at risk of extinction in the subbasin are the Kootenai River white sturgeon and the burbot, Ireland noted. She said the sturgeon has an aging population and virtual lack of recruitment for over five decades. Ireland explained the tribe's restoration goals and activities to protect and restore sturgeon.

Dukes moved that the Council recommend that Project #1988-064-00, the Kootenai River White Sturgeon Aquaculture Conservation Facility, proceed to Step Two planning and development, on the condition that the project sponsor develop during the Step Two process the additional information necessary to address fully the issues raised by the independent peer review of the master plan during Step One. Yost seconded, and the motion passed.

- **Project #2009-012-00, Willamette Bi-Op Habitat Restoration**

Fritsch presented two funding requests for Biological Opinion (BiOp) projects. The first was for the Willamette BiOp Habitat Restoration Project, sponsored by the Oregon Watershed Enhancement Board (OWEB). Ken Bierly of OWEB told the Council that the ISRP requests for monitoring for the project may outweigh the amount of funding the project sponsor has, but that OWEB would try to address the request. The state of Oregon has "got a lot of skin in this game" and we would like to see "more skin" from the federal government, he said. We'll be negotiating with BPA about whether the monitoring expectations can be met with the funding available, Bierly stated.

Karier encouraged OWEB to look at participating in a regional approach to habitat program effectiveness monitoring, rather using a project-by-project approach.

Melinda Eden asked if the project's M&E is part of the categorical review, and Fritsch said that currently it is not, but that over the next several months, OWEB and BPA will create an M&E plan.

Booth asked about the project's fiscal impact. Paula Burgess of OWEB said that "behind the scenes" BPA and NOAA Fisheries are discussing a "fish settlement" for the Willamette and it looks like the settlement will be "quite small." We thought it would be higher, and that's why we are in a dilemma about meeting the M&E required, she said. Burgess suggested the Council make a comment to BPA or NOAA recommending that the fish agreement have public review.

The Council is recommending this project be implemented, and I think the budget will be worked out, stated Eden. I'm prepared to move this ahead, given that we get some clarification on the budget in the next few weeks, said Booth.

Dukes moved that the Council recommend to BPA and the other federal agencies the implementation in Fiscal Year 2011 of Project #2009-012-00, Willamette BiOp Restoration. Booth seconded, and the motion passed.

– **Project #2010-001-00, Upper Columbia Programmatic Habitat Project**

Fritsch presented a request for a Council decision for the Upper Columbia Programmatic Habitat Project, a BiOp project proposed by the Upper Columbia River Salmon Recovery Board. This project consolidates 14 BiOp habitat projects, he noted.

Eden moved that the Council recommend to BPA the implementation of Project #2010-001-00, Upper Columbia Programmatic Habitat. Yost seconded, and the motion passed.

7. Presentation on Bonneville's 2010 Resource Program:

Suzanne Cooper, Manager, Power Policy and Rates; and Birgit Koehler, Regional Coordination Manager**,** Bonneville Power Administration**.**

Suzanne Cooper and Birgit Koehler of BPA gave a presentation on the agency's final Resource Program, which explains how BPA will meet its power supply obligations from 2012 through 2019. In developing the program, we relied heavily on data developed for the Sixth Power Plan, Cooper noted.

Koehler reported on BPA's evaluation of power needs in the years 2013 and 2019, which found that in both years, the agency would not need additional power in the winter, but could have a deficit in August. "Late summer is what I worry about," she said.

What percentage of wind are you including? Booth asked. BPA only gets 300 MW from wind, and we plan on about 35 percent of that, Koehler replied. BPA is obligated to provide balancing reserves for all the wind installed in its service area, she stated. While 90 percent of that wind is contracted to utilities in the Northwest and California, the obligation to provide reserves falls to BPA, Koehler said.

We are worried about our ability to provide reserves for the region's current wind fleet of 3,000 MW, especially near the end of 2014, she said. That won't stop us from integrating more wind, but we need to work really hard to accommodate the need for reserves, according to Koehler.

Are you getting paid for providing reserves for wind? Yost asked. We charge wind developers for reserves through our rates, replied Cooper. Even though BPA is charging for those services, that doesn't mean it doesn't use up flexibility on the BPA system, said staffer Terry Morlan. "It looks like BPA needs to buy a coal plant," Yost quipped.

Koehler listed uncertainties that could affect BPA's future obligations, including additional service to DSIs and new public utilities, more growth in wind, the Biological Opinion ruling, CGS performance, water conditions, natural gas and electricity markets, and climate change. Summing up, Cooper said BPA currently doesn't see the need to acquire any major resources and that the agency expects to meet short-term needs first with conservation.

Eden asked if BPA is looking to build new pumped storage or enhance existing projects. Enhancing existing capabilities, Cooper said. Steve Oliver noted that BPA is working with Reclamation to rehab and upgrade pumped storage units at Banks Lake.

8. Presentation on Columbia River High Water Operations:

Steve Oliver, Vice President, Generation Asset Management, Bonneville Power Administration.

Steve Oliver of BPA briefed the Council on a period in June when unexpected heavy rains caused difficulties in operating the Columbia River power system. BPA is on the cutting edge of the amount of wind generation being integrated into a hydroelectric system, and while we remain positive about this situation, we have some concerns as well, he said.

In late May and June, we had heavy rains and streamflows increased dramatically, Oliver recounted. The situation "was completely unexpected," and it surprised flood control managers, turning into "white-knuckle time," he stated. There was a lot of unexpected water in the system and none of our models picked this up, according to Oliver. The spill that ensued caused concerns about Total Dissolved Gas (TDG) levels and their effect on fish, he said, although later tests showed that effects on fish from gas bubble trauma during that period were minimal.

To minimize the excess spill, operators produced more than twice as much power as needed to meet BPA loads, Oliver said. He noted several other actions BPA took, including reducing wind balancing reserves for a short period, asking the Columbia Generating Station (CGS) to limit output, and asking B.C. Hydro to reduce flows at Arrow Dam.

We had an oversupply of generation and negative prices in the market, Oliver said. There were a lot of resources competing for load, but since it was spring, the load was light, he noted. The June event "was a wake-up call to us," Oliver told the Council.

So the region is at the confluence of a problem, he said. We are using conservation to reduce load growth, but as more wind generation comes on, the oversupply situation will become more of an issue, according to Oliver. We face some public policy questions, he said. For example, if there's an oversupply of wind and hydro, and we can't spill due to TDG concerns, and we've offered zero-cost energy -- if we displace wind, should we pay wind generators for that redispatch? And, if BPA pays, would that in effect transfer the costs of incentives like the Production Tax Credit to Northwest ratepayers, and is that equitable?

The Mid-Columbias and other hydro-dominant utilities have a similar problem, Oliver noted. I hope we can find a legislative fix that produces a "wind-wind solution," he said.

Oliver outlined innovative things BPA is doing to meet the new challenges, including a pilot project with Iberdrola in which that company supplies its own reserves, and another pilot in which BPA buys reserves from Calpine Corp. We are looking at additional tools for within-hour scheduling and have made "remarkable strides in improving wind forecasting," he pointed out. All these new efforts are aimed at expanding the capability of the system to integrate wind while maintaining reliability, Oliver stated.

The region has started a dialogue to address these questions, and BPA has received a lot of recommendations, he said. There are potential solutions, but if they don't solve the problem, we will need to define a rational approach for environmental redispatch of wind by next spring, Oliver added.

BPA is right to worry about this -- it's a situation that is likely to become more severe, Karier observed. What additional costs did BPA incur during the June event, and who paid for them? he asked. In this situation, we didn't pay anyone to take federal hydropower, Oliver replied. We offered 73,000 MW of energy free, and as a result, our revenues were lower than forecast, he said.

It raises the issue of opportunity cost, said Karier. Since we have wind generators here selling their power to California -- the question is whether we are subsidizing California wind generation.

We continue to look at that issue, Oliver responded. There's "an evolution of understanding" aimed at getting wind charges right, considering the cost to the Northwest of having oversupply and low prices in the spring, and the effect on the market when new resources are brought in, he said.

Wind is non-dispatchable, and our hydro is mostly run-of-river, so you have two fuels you can't store very well, Oliver stated. And there is an impact not being picked up in our wind rates involving California wind projects in the Northwest and insufficient transmission to move power when wind and hydro are in oversupply, he said.

This is a fascinating topic, said Eden. With the Columbia River Treaty negotiations coming up, there may be an option for some relief from our neighbors to the North, she added.

9. Presentation by NOAA's Northwest Fisheries Science Center on Preliminary 2010 Reach Survival Data:

Dr. Steve Smith, NOAA Fisheries (and possibly a representative from the U. S. Army Corps of Engineers)

Steve Smith of NOAA's Northwest Fisheries Science Center made a detailed presentation on preliminary 2010 reach survival data for juvenile chinook salmon and steelhead. He said his talk would mostly deal with smolts left in the river to migrate and noted that the migration season has just wrapped up.

Smith described PIT-tagging efforts, conditions during the migration season, juvenile travel time, and avian predation. Among the changes in the hydropower system he pointed out are bird wires to prevent predation at John Day Dam, a new spillway guidance wall at The Dalles Dam, and a surface collector at Little Goose Dam.

Estimated survival for Snake River yearling chinook salmon and steelhead through the hydropower system this year was relatively high, compared to recent years, he said. The 2010 estimated hydropower system survival for yearling chinook was almost 55 percent, according to a Council handout. For steelhead, the 2010 estimated system survival was almost 62 percent.

Smith discussed travel times and survival for different species. He said juvenile steelhead survival in the past two years is the highest ever seen, and the contributing factors include

relatively high spill rates and increased migration rates, promoted by additional surface bypass structures.

Overall, Smith stated that management actions have increased the number of in-river migrants and increased the survival of those fish remaining in river, but not necessarily increased the smolt-to-adult survival for the population. While there's data that show fish transported in barges suffer more mortality in the estuary, overall, steelhead have consistently benefited from being transported, he said.

This presentation shows we've made significant system improvements at the facilities in the fish migration corridor, whether the fish are transported or left in the river, said Yost. We've reduced mortality and improved passage through the system, but we need to do more work on controlling predation, he added.

10. Council business:

- **Approval of minutes**

Dukes moved that the Council approve the minutes of the September 21-22, 2010 Council meeting held in Bend, Oregon. Booth seconded, and the motion passed.

- **Council Decision on IEAB member appointments**

Morlan presented a motion to appoint members to the IEAB. The nominees, he said, include current members Daniel Huppert and Roger Mann. New members proposed are JunJie Wu and William Jaeger, both from Oregon State University, and both with "impressive resumes and experience," Morlan told the Council.

Dukes moved that the Council approve the appointments of Daniel Huppert, Roger Mann, JunJie Wu, and William Jaeger to the IEAB for a four-year term. Karier seconded, and the motion passed.

Public Comment

Jay Minthorn of the Confederated Tribes of the Umatilla Indian Reservation, accompanied by Jo Marie Tessman of CRITFC, made a presentation to the Council. He said what he'd heard at the meeting in some cases seemed like a "rehashing" of discussions he'd heard 20 years ago.

We have to bring resident and anadromous fish issues together, Minthorn told the Council. He talked about the need for natural flows and water releases to protect resources like lamprey and salmon. With respect to the Columbia River Treaty negotiations, we all need to come together and speak with one voice on water and natural resource issues, Minthorn said.

He urged the Council to give more consideration to tribal concerns and to have tribes participate more fully in the Council's program. The "three Cs" that should govern our activities are: communicate, consult, and cooperate, Minthorn stated. We have to create a stronger working relationship, he said.

Approved November10, 2010

/s/ Dick Wallace

Vice Chair

_____

x:\jh\ww\minutes\october 10 short version.docx