NORTHWEST POWER AND CONSERVATION COUNCIL
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Administrator Steve Wright told the Council at its Portland meeting that BPA has worked its way out of financial difficulties, but the Endangered Species Act and resource acquisition pose new risks. Steve Klein said Snohomish PUD faces unprecedented growth and is aiming to meet it with conservation and renewables. Oregon Governor Ted Kulongoski expressed frustration with the proposed residential exchange agreement, there was wrangling over the recommendation to drop funds for tagging downstream fish as part of the comparative survival study, and Council staff is gearing up for the Sixth Power Plan. Next meeting: January 15-17 in Vancouver, WA.

IN THIS ISSUE

THE AGENDA

Coins in Coffers Ring, Making Spirits Bright

BPA Administrator Steve Wright told the Council that the state of his agency is good. Referring to the energy crisis of 2000-2001 that put BPA into the red financially, he said BPA is back "in the black" with stable rates. The agency has filed new transmission rates with the Federal Energy Regulatory Commission (FERC), Wright said, and power rates won't be going up in 2008 and are back to levels comparable to the mid-1980s. He also reported that BPA's bond rating is the highest in agency history, that customer and tribal satisfaction reports are generally on the

rise, and that the agency made its Treasury payment in full and on time.

Despite the positive financial picture, Wright said the agency faces cost-management challenges posed by the Endangered Species Act (ESA) and resource acquisition. We are being "very thoughtful" in these areas given the agency's effort to recover financially – now that we've reached financial health, we want to keep costs under control, he added.

Wright said in his early years as Administrator, he was focused on the short term, but over the past year has spent time considering the long-term picture for the agency. I have been traveling in the West and talking to utilities, regulators, and other agencies to gain a greater understanding of the western power market, he said. "It is very much one big market" – we saw that with California during the energy crisis, Wright elaborated.

One thing that is clear, he continued, is that loads are increasing substantially everywhere in the West. Arizona Public Service had double-digit growth last year, Wright pointed out. At the same time, resources are being constrained by renewable portfolio standards (RPS) and limitations on coal-fired generation, he said. We all know when demand goes up and supply goes down, prices increase, Wright stated. And my colleagues around the West don't think those increases are likely to abate, he added.

Wright noted that given the increased concern about climate change, he appreciated the Council's CO_2 study. It set out the problem well, he said. We have a huge challenge ahead with resources, Wright said, noting that bringing on adequate renewables will exacerbate cost and reliability issues.

Wright described several areas where he foresees challenges and opportunities. The first is preserving the "huge value" of the hydro system, he said, pointing out that the price of cost-based power from the federal system is about $30 per megawatt (MW) versus $70 to $90 per MW for new renewables. We need to capture the value of the hydro resource for the Northwest, and that means completing long-term contracts, Wright said. We need strong regional cooperation to resolve remaining difficult issues; my goal is to get contracts done by the end of 2008, he stated. We have the support of this Administration to do that and don't know what will happen with the changes ahead in 2009, Wright said.

Another area, integrating renewables, had a valuable boost from the regional steering committee that developed a wind integration plan, he said. BPA has over 1,000 MW of wind generation on its system now, and we have to deal with the intermittent nature of the resource, Wright acknowledged. No single entity can solve this situation – it takes cooperation and collaboration, he added.

With regard to transmission, BPA has done a lot of building in recent years, principally for reliability, Wright said. "But it's not enough," he stated. If we add MWs of generation to the system, we need new MWs of transmission, Wright said. We are also addressing "the queue problem," and we're contemplating a new product for wind developers, he said.

As for demand-side management, there is more energy efficiency available today because of the increasing cost of energy, and people are more willing to spend money on it, Wright stated. He pointed out that the region's power system is becoming capacity-constrained for the first time ever and that capacity becomes more of a challenge as renewables are added. We need to find ways to use energy efficiency to bolster capacity, Wright indicated.

BiOp Takes New Approach

Salmon recovery is a big issue, and the federal agencies have a new plan, he went on. The plan is not "status quo" – we tossed the approach used in the 2004 Biological Opinion (BiOp) and started over, Wright said. The new plan was developed to avoid extinction – it addresses the dams and solidifies the commitment to more actions in all of the Hs, he added. Contrary to what some have said, "it does not reduce spill," Wright stated. He explained that the proposal has performance standards that commit the federal agencies to certain levels of survival past dams, and under the plan, $400 million will be spent on dam modifications and $200 million on habitat improvements over 10 years. The plan outlines measures on a species-by-species basis that are needed for recovery, according to Wright.

Council chair Tom Karier asked if BPA is prepared to step in if others' proposals for transmission projects are not successful. "I'm excited about the proposals out there," Wright responded, adding that BPA is not in competition with other developers and is working with them. But if the projects are not built, it makes sense for BPA to consider alternatives, he indicated.

Jim Yost asked about the flexibility remaining in the hydro system to respond to growing demands. "We are reaching the limits of the hydro system – we know that," Wright answered. He pointed out the huge difference in costs of integrating wind generation using hydro versus thermal. "We are getting close to using up the flexibility of the hydro system," Wright reiterated. He added that the region will need to add "flexibility resources," and one of the challenges for the Council's next power plan will be to address capacity needs.

Melinda Eden encouraged BPA's continued leadership on demand-side management, and Wright said he saw huge opportunities for the Council and BPA to work together on energy efficiency. We know it's cheaper to install efficiencies initially than to do them with retrofits, he added.

Bruce Measure pointed out that demand-side and efficiency measures impact residential consumers. He urged BPA to keep in mind that residential customers generally bear the costs of efficiency measures, such as installing new meters.

Karier asked Wright about coordination between the Council's fish and wildlife (F&W) program and the ESA and BiOp requirements. Wright indicated that BPA is in discussions with parties to the BiOp litigation and would like to resolve issues that are now before the court. We will not enter into any agreements without public comment, he said, but acknowledged "this is a difficult issue and not easy to resolve."

With regard to the BiOp litigation, Rhonda Whiting asked for Wright's support for the science panels and review processes the Council has established over the past 25 years. The federal agencies didn't initiate the idea of another science panel, he replied. We think the Independent Scientific Advisory Board (ISAB) is a good place to start, but it won't be our decision, Wright said.

Let It Grow, Let It Grow, Let It Grow

Steve Klein, general manager at Snohomish County PUD, followed up Wright's remarks with further evidence that loads are growing – fast. Snohomish County is adding population faster than King County, with population growth of 44 percent from 1990 to 2006, he reported. The county expects to see 150,000 more people over the next 10 years, resulting in 85,000 new retail customer connections, according to Klein. The growth in load is occurring because of new residents, as well as

increased use within the residential base, he said. On its present trajectory, Snohomish will surpass Seattle as the largest utility in Washington, Klein said.

Snohomish has been very successful with conservation, he continued, and conservation is expected to meet 10 percent of the PUD's load in 2008. The PUD is dependent on BPA for the bulk of its resources, and Klein pointed out that Snohomish is BPA's largest single customer. The portion of the utility's resource portfolio that "keeps me awake at night" is our exposure to the power market to meet five percent of load – "that's more than I'd like," he stated.

"Growth, growth, growth, and more growth" top the list of challenges facing the PUD, Klein said. He also noted that the energy crisis in 2001 resulted in Snohomish's relatively high retail rates and said the utility has delayed making capital investments that must be addressed soon to avoid "a tidal wave" of investment later on.

Snohomish PUD is on a path to a sustainable future, Klein said. In seeking a future power supply, we are geared toward demand-side management, renewables, customer and utility distributed generation projects, SmartGrid, and an organizational culture that values sustainability, as well as energy-smart customers, he explained.

Klein said Snohomish was already on track with conservation, renewables, and sustainability when Washington's RPS was passed, and Initiative 937 "won't make that much difference" in what the utility is planning to do. "Our organizational philosophy is to capture *all* cost-effective conservation," and we are trying to develop renewables "in our own backyard," he explained, adding that there are a lot of opportunities in a service territory that ranges from Puget Sound to the Cascade Mountains.

Klein noted the PUD's 6.3 MW energy-efficiency goal for 2008, with a "stretch goal" of 7 MW. There is a large opportunity with conservation voltage reduction or CVR, one of the means Snohomish plans to use to capture savings, he said.

Recapping conservation highlights at the PUD, Klein said Snohomish has achieved over 90 average MW (aMW) of conservation to date, and its investment is triple that of the regional and national average for conservation. The PUD has won awards for energy efficiency and has an exceptionally high saturation with compact fluorescent light bulbs (CFLs), he said. CFL use in the PUD's service district is up 20 percent over neighboring utilities, and Klein said that is a result, in part, of focusing effort on smaller drugstore and hardware retailers – where many people buy light bulbs – and not on "big box" retailers alone.

Snohomish has four existing renewable projects, two are on the horizon, and in a recent solicitation for renewables, the PUD had 10 or 11 responses, all but one of which was for wind generation, Klein said. He described the PUD's involvement with developing tidal resources and said the PUD's work with the University of Washington and the Electric Power Research Institute has created excitement around tidal energy. Klein said there is significant geothermal potential in the Northwest, and new research and knowledge has rekindled interest that was lost in the resource when early explorations did not prove out.

Solar photovoltaic power also holds promise, with one of the leading solar manufacturers "putting final touches on a facility in our backyard" at Arlington, Washington, he reported. The big challenge is to help consumers figure out "how do you get solar on your roof," and the PUD is working with others to come up with a package that can be easily installed, Klein said.

The region needs a thoughtful strategy on building codes and appliance standards to further efficiency, he went on. Snohomish PUD is fully committed to conservation and renewables at a time it faces unprecedented growth, Klein said. "We are committed to proving you can make it," and the PUD will be an excellent example to see if "best intentions" can be fulfilled in today's complex regulatory, legislative, economic, legal, and political environment, he added.

Wind generation is posing big challenges in terms of cost escalation, availability, and integration, yet the region and nation seem to be singularly focused on this resource, Klein pointed out. "It's easier said than done to find integration services" to get wind into a utility's portfolio, and we need more diversity of resources, he said.

What is the conservation potential for industries? Karier asked. Some companies have already installed measures, but to get at more complex areas of efficiency, a utility has to have the expertise to help customers and educate them – "it takes a bit of marketing," Klein responded.

Walking in an Issues Wonderland

Staffer Terry Morlan briefed the Council on the schedule and issues for a Sixth Power Plan. Under the Northwest Power Act, a review of the power plan is required every five years, so with the last plan adopted in December 2004, the review for a new plan is due by December 2009, he explained.

In addition to the legal requirement, there are other reasons for reviewing the plan at this time, Morlan said, not the least of which is the escalation in resource costs, like natural gas. Climate change, state RPS, and renewable resource access and integration are big items at the moment, he said. The region's newly adopted resource adequacy standards for energy and capacity also need to be incorporated into the power plan, Morlan added.

He laid out a tentative schedule as follows: preliminary work (describing major issues and preparing computer models) to take place through the first quarter of 2008; analysis beginning early in 2008 and extending through the year; drafting plan components in the third quarter of 2008; and a final plan in the fourth quarter of 2009. Public comment and involvement would begin in the second quarter of 2008 and extend into 2009.

The staff is ready to put out a paper on major issues to be addressed in the plan, Morlan continued. Besides the issues such as climate change regulations, resource choices, and appropriate measures of avoided costs, he said planning to meet hourly and daily load – system capacity – needs to be a visible part of the plan. Transmission constraints and the impact they have on resource choices continues to be an issue, and integrating the power plan with the F&W program is also an area to be addressed, Morlan explained.

The Council agreed the issue paper should be released.

All I Want for Christmas is Some LNG

Oregon Governor Ted Kulongoski outflanked anti-LNG protestors on the street to appear before the Council and serve up his views on the region's energy and F&W business. Kulongoski, who has served in all three branches of Oregon's government, said his state's Council members do "an admirable job of representing the views of my Administration." It was the vision of Congress in writing the Northwest Power Act that we strive for consensus, but consensus

cannot come "at the expense of healthy debate on issues," he said.

Kulongoski said the Council is unique – there is no other organization like it and no other has the same mission of balancing power with F&W. And the Council looks at all species of fish – anadromous and others – and does not pit one species against another, he added.

With regard to the Willamette River watershed, Kulongoski said he is gratified that the Act includes wildlife mitigation. The people of Oregon feel strongly that the hydroelectric dams must be mitigated, he said. It is "a source of frustration" that Oregon has not been able to work out an adequate program with BPA, Kulongoski stated, and he said BPA needs to "return to the negotiating table" on the issue.

The four Northwest governors share a common goal with regard to the BiOp for the Federal Columbia River Power System (FCRPS), he said: we want the litigation to end, we want certainty about how the system will operate, and we want enough resources to make sure the measures occur. To resolve this, we need the full cooperation of the Council, Kulongoski added.

As soon as the Council updates its F&W program, it will turn to the power plan, he continued. The focus of the plan, with conservation on equal footing with other resources, shows insight, Kulongoski said. Conservation and renewables are the key to the future, he said, adding that is a reason he has pushed for a renewable energy standard that calls for Oregon to have 25 percent renewable power by 2025. "I want Oregon to lead the nation" in this area, Kulongoski said.

The Council's Sixth Power Plan will also address global warming and carbon sequestration, he said. Kulongoski urged the Council to support the Western governors' initiative on those issues.

He expressed frustration with the residential exchange and the way it divides the benefits from the FCRPS. Some Oregon families are not getting "their fair share" of benefits from the hydro system, Kulongoski said. The Act provided a compromise on the exchange, and even if the Act is flawed, "we as Northwesterners can create fairness," he opined. The court threw out the previous residential exchange settlement, and I had two principles for the subsequent negotiation, Kulongoski said: future exchange credits should be at the average received by the IOUs since the Act passed, and the new agreement should have an inflation factor.

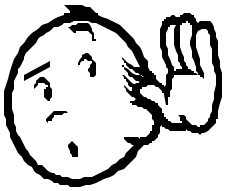
The latest agreement meets neither of those principles and "is unacceptable," he said. I ask you to join me in calling on BPA to rethink its proposal, Kulongoski told the Council. The agreement should have some mechanism to escalate the benefits, he stated.

In response to a comment on the LNG protesters, Kulongoski said, "I believe energy security is national security." This country must develop an independent energy policy and not rely on our ability "to control oil deposits in the Middle East," he stated. I've pushed Oregon aggressively on developing independence and on alternative and renewable energy resources, including conservation, which is "the cornerstone," Kulongoski said.

I know where we are today, and I know how long it will take to develop alternative energy supplies – it won't happen in five or 10 years, and it may be 30 to 50 years, he went on. So how do we build the bridge between today and that future? Kulongoski asked.

I hear people say we can't have nukes, coal, or LNG, and no oil rigs off the coast or drilling in ANWR, he said, and I have to ask, so what is the bridge? "If you want to free us from our involvement in the Middle East, you have an obligation to help build that bridge," Kulongoski stated.

"We need to have that debate, and we have to tell people there are difficult choices," he said. I don't worry about people disagreeing with me – we have to have the debate, Kulongoski added. But "don't tell me that *everything* is off the table" to meet our future needs, he wrapped up.



Spill's the Same (Volume), Are You Listening?

NOAA Fisheries released its draft 2008 BiOp at the end of October, and we have conducted a preliminary analysis of the effects on the power system, according to staffer Jim Ruff. NOAA Fisheries and the federal action agencies translated the BiOp into data for the power system, and Council staff ran that data through its computer models, staffer John Fazio explained. Our assessment is based on how the federal agencies translated the data, he clarified.

One of the major changes from the 2004 BiOp is that the 2008 draft includes new summer operations for Libby and Hungry Horse, Ruff said. The increased summer outflows from the projects go away under the 2008 BiOp, and the decline is steadier as they taper off in August, he said. Ruff pointed out that outflows at McNary in some months change little from the 2004 to 2008 BiOp. The changes from July to September are due to the operation at Libby and Hungry Horse, and the June increase is from changes at Grand Coulee, he pointed out.

With regard to outflows from the Snake, there is very little difference from 2004 to 2008, with a slight bump in the spring and a slight decrease in the summer, Ruff continued. The change in spring outflows at Lower Granite reflects the shift in releases from the Upper Snake, he said.

Spill levels in the draft 2008 BiOp are almost identical to the court-ordered spill, but the duration is shorter, Ruff said. Summer spill is truncated when there are fewer than 1,000 fish per day in the river, and in the draft 2008 BiOp, the spill would end in early August, he said. There is no longer zero spill at McNary in the 2008 draft compared to 2004, and spring spill increases at Bonneville, Ruff added.

Two of the biggest changes from 2004 to 2008 are the performance standard of 96 percent survival versus 93 percent, and the proposal that spill is subject to change if the survival targets are not met, he continued. The results of our analysis shows that the duration of spring spill is slightly shorter in the Snake compared to the 2004 and 2006 operations, Ruff said. Spring spill starts later and ends a little earlier under the draft 2008 regime, and transport is maximized in most years, he said. There is a big change at Ice Harbor, where there will be testing for alternative spill operations and less spill volume overall, Ruff explained.

According to Fazio, summer draft would increase at Grand Coulee by 20 feet in drought years under the 2008 proposal, and there would be a small amount of additional draft in non-drought years. Coulee might be lower by the end of August, but otherwise the 2004 and 2008 outcomes are similar, he explained. Elevations at Libby and Hungry Horse would remain higher over the summer with the 2008 operation, with summer elevations at Dworshak and Brownlee the same, Fazio said.

The 2008 BiOp would result in monthly average changes in generation because "we are moving water around," he continued. And when you change the operation, you change the price of power, Fazio added.

Larry Cassidy asked if the presence of removable spillway weirs (RSWs) is accounted for in the changes in generation.

Ruff said they were built into the calculation. We get 90 aMW less energy annually, which is likely due to increased spill – the additional spill offsets the savings we experience from the RSWs, he explained.

The 2008 BiOp would cost the region more money in most years, and it could cost as much as $100 million in some years, Fazio said. All of the spill operations are at federal projects, and most of the costs accrue as a result of those operations, he explained.

Joan Dukes asked if staff compared the 2008 draft to the most recent 2007 system operations. Fazio said he had not, noting that "we don't have the data for that analysis." With regard to spill, the volume in the 2008 draft is very similar to 2006-2007, but the duration is different, he stated. You'd expect the cost of the 2007 operation to be slightly greater than 2008 because of that change in duration, Fazio said. That's mainly because of the changes to spill in August, Ruff clarified.

The 2008 draft BiOp reduces spill "when there aren't fish in the system to take advantage of it," Yost pointed out. "We're finally waking up" to putting an end to spill when there are no fish there to benefit, he commented.

Come They Told Me, A Plan to Amend

Staffers Patty O'Toole and Lynn Palensky presented an update on the F&W program amendment process. One of the issues we need to resolve is the framework for monitoring and evaluation (M&E), O'Toole said. She noted the issue was highlighted in the call for amendments and that staff has circulated a paper on the topic. It's not a formal policy, but rather a set of staff-generated ideas to get the discussion going, O'Toole clarified.

Palensky reported that staff has reworked questions posed in the summary of the Science Policy Exchange based on Council members' suggestions. The questions will get people thinking about several areas of the program, she said. The Council raised no objections to posting information related to both topics on its website.

Have Yourself a Merry Littler CSS

Ruff went over the background of a comparative survival study (CSS) that was initiated in 1996 to estimate survival rates in different life stages for chinook and steelhead. There were four objectives in the study, he reported: develop a long-term index of transport and in-river smolt-to-adult ratios (SARs); develop a long-term index of survival rates from Snake River hatchery releases; begin a time series of SARs for hypothesis testing and comparison to the Council's hydro goal; and develop a comparison of overall SARs for upriver and downriver chinook hatchery and wild stocks.

Ruff said the CSS project sponsors tag smolts from various Snake River basin hatcheries and traps, and Carson hatchery in Washington. The PIT-tag data has various uses, including planning and implementing fish management activities, evaluating the effectiveness of hatchery programs, and determining estimates for harvest, he reported. The project has been reviewed by science panels 10 times over the past 11 years – it is one of the most reviewed projects in the program, Ruff stated.

In 2007, the project sponsors prepared a 10-year retrospective report, which was subsequently reviewed by the ISAB, and the Independent Scientific Review Panel (ISRP), he continued. The ISRP found the first three

objectives of the project "met scientific criteria," but the fourth did not, Ruff reported. The ISAB and ISRP agreed the upriver/downriver comparative analysis should be discontinued, he said. The reviewers found it was impossible to sort out the factors, and the conclusions were problematic for that reason, Ruff explained.

Staff recommends BPA provide funding for the CSS in FY 2008 and FY 2009 at an annual level between $800,000 and $900,000, he said. This level would allow the project to continue tagging hatchery and wild Snake River chinook and steelhead, but the funding would not be used to tag downriver stocks, consistent with the independent reviewers' recommendation to eliminate the fourth CSS objective, Ruff explained. He provided tables showing the numbers of fish that would be tagged under the recommended funding, as well as the downriver stocks that would no longer be covered.

Measure moved to amend the motion offered by Dukes to recommend funding the CSS. We should make clear the fourth biological objective would be eliminated, and downriver fish would no longer be marked as part of the study, he said. Bill Booth seconded the motion, which passed six to two, with Dukes and Eden voting no.

Dukes pointed out that a letter from several fish managers urged that the downriver fish continue to be marked as part of the CSS. Marking these fish is important, and without that, I'll vote no on the motion, she stated. Eden cautioned that the Council would be ignoring the managers' scientific recommendations if they voted to eliminate the lower river PIT-tags from the CSS funding, and she too would vote no.

Karier pointed out that the Carson hatchery fish were already marked for the year, and Cassidy said there is nothing to prevent others from pursuing the funds to mark the fish in the future. It would just not be part of the CSS, he stated. The Budget Oversight Group process is open as an avenue to get these fish marked, Karier agreed.

The managers said in their letter that marking is important to the first three elements of the CSS – this is an important piece for Oregon, Dukes stated. "I don't have a lot of faith in the success of a future request," she added.

The funding motion passed six to two, with Dukes and Eden voting no.

Deck the Oceans with Acoustic Trackers

Dr. George Jackson, a senior scientist with the Pacific Ocean Shelf Tracking Project (POST), brought the Council up to date on the progress of a project to install tracking arrays in the ocean to record the movement of marine animals fitted with acoustic tags. "POST can replace the guesswork with valid measurements," he stated.

Jackson pointed out that POST is an international program, and major funding comes from the United States, with BPA a valued partner. Washington Council member Cassidy serves on the POST management board, he added. POST "is the flagship project" for a global ocean tracking network, Jackson said.

POST installations, which are lines of acoustic receivers, now extend up the Pacific coastline beyond Vancouver Island to Alaska, and there are arrays in the Columbia River, he said. The technology is constantly improving, and we now have receivers that can transmit data to a laptop on a vessel in the ocean, Jackson explained. POST data allows tracking by time and location – we know, for example, that sockeye and steelhead salmon migrate quickly and that coho migrate much slower, he said.

”We’re getting a good picture of the ocean,” and we are building up a survival database, Jackson stated. The data shows that salmonid survival down the rivers is very good, but once fish get into the ocean, survival is very low, he said. Salmon are doing well in the fresh water, but ocean survival is the problem, Jackson reiterated.

POST can “seamlessly” track salmon from fresh to salt water and track migrating salmon on dammed and undammed rivers, he said. Jackson pointed out that data shows there appears to be no influence from the presence of dams on migrating fish. Results have shown survival in the Columbia exceeds that in the undammed Frasier, he indicated.

With POST, we can also test the result of various flow regimes and how flow rates affect survival – POST can answer critical questions in a watershed, Jackson said. In addition, we may be able to use POST data to pinpoint areas of high mortality in the ocean, and POST data also has value in determining the effects of climate change in the marine environment, he added. “Science shows it’s an ocean survival issue” with salmon and that removing dams may do no good, Jackson said. The evidence is that there is something going on in the ocean, and “fresh water changes go only so far if the problem is in the ocean,” he elaborated.

Jackson described the future of the ocean tracking research and efforts to miniaturize the technology. He explained plans to tag salmon sharks to gather information about where they tend to go, what stocks they feed on, and who they meet along the way.

Booth asked about the receiving arrays in the Columbia River. Jackson said there are seven or eight lines of receivers in the river that operate continuously. About 1,000 fish a year are tagged through the POST program, he said. We’ve demonstrated that it works, and there is the potential to get answers to hard questions, Jackson stated. You don’t need to tag a lot of fish to get good data, he added.

We Wish You a Stronger Gene Pool

Dr. Michael Blouin of the Department of Zoology at Oregon State University reported on research conducted to address the fitness of hatchery versus wild steelhead. Wild and hatchery fish rear in radically different environments, and things happen to make the hatchery fish less adaptable in the wild, he explained.

Blouin described a research project with Hood River steelhead that addresses whether the differences between hatchery and wild fish pose a problem for supplementation programs, in which fish are pulled from the wild and bred with hatchery fish to boost populations. DNA samples gathered since 1991 from two populations of Hood River steelhead give researchers a tool to compare the fitness of hatchery and wild fish in terms of reproductive success and number of offspring that make it back to spawn, he said.

The research shows “what was suspected,” Blouin reported: old multi-generational hatchery stocks did not reproduce as well as wild stocks. Over the years, hatchery stocks proved significantly less fit than wild fish, he said.

In terms of what the results say about supplementation, Blouin pointed out that there is obviously a short-term demographic boost to populations. But the long-term question is whether supplementation will lead to a self-sustaining wild population, he said.

Research indicates that the effects from hatcheries “are even more extreme than thought,” Blouin said. The results show that

a fish with one hatchery and one wild parent is 50 percent less fit than a fish with two wild parents, he reported. The data indicate that supplementation is probably okay for the short term, but it is not a permanent solution, Blouin said. The next step in the research is to look into the mechanisms of decline in hatchery fish, he added.

Santa Claus is Coming With Funds

In introducing a request for $1.3 million to fund the work of the Hatchery Scientific Review Group (HSRG), staffer Peter Paquet said the group is trying to take the available science and apply it to managing operations in hatcheries. The review addresses changes that need to be made to have hatcheries operate according to the science as we know it today, he explained.

Attorney Jim Waldo said hatchery programs deserve to be looked at carefully, and the HSRG involves 14 scientists with a cross-section of expertise. The review makes use of the All-H Analyzer (AHA) model as a tool to integrate hatcheries, harvest, hydropower, and habitat in formulating ways to meet conservation goals, according to a letter Waldo sent the Council about funding to continue the HSRG's work.

At the Council meeting, Waldo explained that the HSRG was initially funded by NOAA Fisheries, but those funds are now in limbo, and it's unclear when things will be resolved. With funding, we are on schedule to complete our project by October 2008, he said. We have made a request through the Council's F&W program for $1.3 million to finish the work, Waldo stated.

Eden asked why ratepayers should pay for the HSRG when Congress had appropriated funds for this purpose. Waldo said the project has been funded annually, and this was to be the third and last year. There are efforts being made in Congress to address funding, but it won't be resolved in a timely way, he said. Waldo pointed out that the remainder of the work is in geographic areas above Bonneville Dam that were significantly affected by development of the hydro system. What ratepayers will get is a system to incorporate scientific knowledge into hatchery operations, and it will be information that can be used in project funding reviews, he indicated. The review is a way to incorporate the best available information into your decisions, Waldo stated.

Eden asked for BPA's view of the request, and Greg Delwiche of BPA said he approved of it. With the shift of the effort to upstream areas, it will be addressing hatcheries that were built to mitigate for the hydro system, he said.

Dukes said she understood the report would be used to lobby for Mitchell Act funds. It's a struggle to balance the science and politics, and "I don't know if the outcome always leans to science," she said.

Whiting said she thought the end result would be an educational tool for decisions on future hatchery spending. There is support for the request because it gives us good information about what is and isn't working with hatcheries, she said. Staffer John Shurts advised that the expenditure is fully within the legal authority and context of the Northwest Power Act and the Council's F&W program.

The Council voted unanimously to recommend that BPA fund the $1.3 million HSRG request.

END NOTES

Aiding the Unsupplemented. The Council recommended that BPA fund a project to assess salmonids in the Asotin Creek Watershed, with $25,345 in FY 2008 and $213,437 in FY 2009. The project monitors an ESA-listed unsupplemented steelhead population, according to staffer Mark Fritsch. Cassidy said he strongly supported the project. Asotin is a completely wild stream, and after the presentation on supplementation yesterday, it's clear we need to keep this project, he said.

News Flash: CBB Gets Dollars. Fritsch reported that Bill Crampton, publisher of the *Columbia Basin Bulletin* (CBB), plans to explore selling subscriptions and should know by mid-2008 whether it's a viable option for funding the newsletter. Measure said CBB is an important source of information for organizations outside Portland, and the presence of CBB stringers in places like Kalispell helps encourage local news coverage of F&W-related activities. He suggested postponing the discussion or putting a placeholder in for funding until the sponsor has time to survey readers on their willingness to buy subscriptions. Eden agreed that CBB is an important public affairs project that promotes public involvement. The Council voted to provide $25,000 for CBB in 2008 while the publisher conducts a reader survey and seeks an alternative funding source.

Data Dos and Don'ts. The Council released a paper for public comment on the best practices for reporting location and time-related data. Staff explained the paper recommends standardized collection methods that will make data more useful. Once standards are adopted, the Council will ask BPA to specify in its contracts for F&W projects that these are the protocols to be used for data collection.

Council 2008 Calendar

January 15-17	Vancouver, WA
February 12-14	Portland, OR
March 11-13	Boise, ID
April 15-17	Whitefish, MT
May 13-15	Walla Walla, WA
June 10-12	Spokane, WA
July 15-17	Montana
August 12-14	Spokane, WA
September 16-18	Astoria, OR
October 15-16	Missoula, MT
November 18-20	Coeur d'Alene, ID
December 9-11	Portland, OR