

Bill Bradbury
Chair
Oregon

Henry Lorenzen
Oregon

W. Bill Booth
Idaho

James A. Yost
Idaho



Jennifer Anders
Vice Chair
Montana

Pat Smith
Montana

Tom Karier
Washington

Phil Rockefeller
Washington

Council Meeting Coeur d'Alene, Idaho

September 10-11, 2013

Minutes

Council Chair Bill Bradbury called the meeting to order at 11:20 a.m. on September 10, 2013 and adjourned it at 11:56 a.m. on September 11. All members were present.

1. Presentation on influence of multiple dam passage on survival of juvenile Chinook salmon in the Columbia River estuary and coastal ocean:

David Welch; and Erin Rechisky, Kintama Research Services

David Welch of Kintama Research Services presented the findings of a recent paper titled "Influence of multiple dam passage on survival of juvenile chinook salmon in the Columbia River estuary and coastal ocean." He said the questions their research addressed are: does passage through the Snake River dams result in delayed mortality in the estuary and ocean, and does transportation of fish on barges result in delayed mortality? Welch explained that the scientists at Kintama used a large-scale tracking array and transmitters implanted in smolts, as well as statistical analysis, to compare whether survival of hatchery-reared juvenile Snake River spring chinook is reduced in the estuary and coastal ocean relative to a downstream hatchery-reared population from the Yakima River. He described the study design and the tagging plan, how the studies were done, and the results.

What we found is that there was no evidence of differential survival, and therefore poorer adult returns of Snake River chinook may develop far from the Columbia River, Welch reported. Hydro system mitigation efforts may be ineffective if differential mortality rates develop in the North Pacific Ocean for reasons unrelated to dam passage, he added. One of our key assumptions was that the survival of tagged smolts was representative of untagged smolts, Welch said.

Our conclusions are that post-Bonneville Dam survival in the lower river and estuary was similar for in-river and transported Snake River yearling chinook, he reported. Post-Bonneville Dam survival was similar for Snake River and Columbia River yearling chinook, Welch stated. Passing through more dams does not result in lower survival than is the case for smolts that pass through fewer dams, and transportation in barges does not result in lower survival either, he said.

Decoupling ocean and freshwater survival processes is important because hydro system operations can then be distinguished from poor ocean survival when salmon returns are bad, Welch added.

Are you saying that even though we transport fish so they arrive in the ocean earlier, when they return, they have the same survival as in-river fish? Yost asked. There's a very small difference compared to what was expected, replied Welch. Ocean impacts are very important to understand, he added. So we may want to rethink the idea of moving the fish out earlier, Yost said. If you transport fish and get them to the ocean sooner, and the conditions in the ocean are worse, you aren't doing the fish a favor, Welch stated.

Did you have sufficient numbers of ocean detections to determine survival between the two groups of fish and if there wasn't sufficient data, did you use "professional judgments?" asked Rockefeller. We used standard statistical methodologies used in the region, replied Welch.

Steve Haeseker of the U.S. Fish and Wildlife Service, who is part of the agencies and tribes' Comparative Survival Study (CSS), told the Council the CSS reviewed the methods and assumptions of the Kintama study, and our reviews "preclude our support" for the conclusions of the Kintama paper. He said the Kintama results are "confounded by nonrepresentative tagging," the size of fish released, and differences in timing and release factors, as well as issues with migration assumptions. The findings from Kintama on delayed hydro system mortality for wild or hatchery fish are highly questionable, Haeseker stated.

"It's dueling scientists once again," observed Bill Booth. This is a major difference of opinion, he added. Kintama is saying delayed mortality is not as big of a factor, that barging may not be that effective, and there are differences on spill effects as well, Booth said. The question is: should we move the fish down the river as quickly as possible or not? he added. Booth asked Haeseker what ocean data he has to refute Kintama's research.

We have data derived from PIT-tag studies, and we know how many fish come back, replied Haeseker. The Independent Scientific Review Panel (ISRP) reviewed the Kintama study and recommends additional research, noted staffer Jim Ruff. None of this would hold for steelhead, he added. Steelhead were not studied, and they respond differently to transport than spring chinook, Ruff said.

We don't disagree that Snake River fish have lower productivity, but the question is whether it is due to delayed mortality from the hydro system, said Welch. No one really thought about what survival would be like when we put the fish into the ocean earlier, he added. You may need to rethink the question of getting the fish there faster, Welch told the Council. Don't confound the effects of the ocean and the effects of the hydro system, he advised. You need to disassociate what's an ocean effect and what's the hydro system effect, Welch said.

2. Briefing on Experimental Spill Management by members of the Comparative Survival Study (CSS):

Steven Haeseker, U. S. Fish and Wildlife Service, and Margaret Filardo, Fish Passage Center.

Haeseker presented the results of the fishery agencies and tribes' CSS analyses related to experimental spill management at the eight federal dams on the Snake and Columbia rivers. He said the study is a collaborative salmon and steelhead life-cycle monitoring program that has been going on since 1998.

The Council's smolt-to-adult (SAR) survival goal is to achieve SARs averaging 4 percent for Snake River chinook salmon and steelhead, Haeseker noted. Some stocks achieve the biological objective, but our study showed a 1 percent SAR survival for Snake River chinook and 1.5 percent for steelhead, he said.

What about Columbia River fish? Bradbury asked. They range from 2 percent to 11 percent, Haeseker replied. He said there has been a decline in Snake River chinook and steelhead associated with the dams.

Some years have higher survival rates than others due to variability of ocean effects and variability in hydro system effects, like water transit time and spill levels, Haeseker said. Survival increases with faster water velocity, increased spill, and when a lower proportion of fish is transported, he stated.

The current Federal Columbia River Power System configuration has little ability to increase water velocity, but there is an opportunity to further manage spill, Haeseker said. We have identified a promising experiment to evaluate improvements to SARs that could be realized by increasing voluntary spill, he added.

Margaret Filardo of the Fish Passage Center said spill is a mitigation measure that can be provided in every flow year and without impact to reservoir elevations. But if there is too much spill, it increases total dissolved gas (TDG) and could increase mortality, she said.

We've had considerable variability of spill between 1995 and 2012, Filardo noted. At a 2013 workshop, we considered how spill could be designed to get greater survival, and we developed estimates of the amount of water that could be spilled at each dam on the lower Snake and Columbia rivers, she explained. We evaluated four spill levels, ranging from what is in the current Biological Opinion (BiOp) to allowing TDG levels up to 125 percent in dam tailraces, Filardo said.

The biological planning tool we developed indicates 125 percent spill level is most likely to achieve SAR objectives and support sustainable fisheries, Haeseker stated. The ongoing CSS analyses could provide a rigorous monitoring framework for the experimental spill management effort, he added. The simulations we have conducted are encouraging in terms of conservation benefits and the likelihood of detecting responses, Haeseker said.

Tom Karier suggested three areas for the scientists to consider. First, I encourage you to evaluate whether using historical data is appropriate given the way the hydro projects have changed, for example, with the installation of spillway weirs, he said. Second in your correlations, you need to focus more on what happens with the higher levels of spill, Karier stated. And third, you should consider what would happen to amphibians and other non-fish species that may be more susceptible to TDG, he said. We don't have an Amphibian Passage Center to check on those animals, Karier added.

Taking spill up to 125 percent hasn't been done before, Filardo said. But it is voluntary, and if you monitor, you can interrupt it if need be, she added.

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

Phil Rockefeller, chair, fish and wildlife committee; Jim Yost, chair, power committee; and Henry Lorenzen, chair, public affairs committee.

Phil Rockefeller reported that the Fish and Wildlife (F&W) Committee discussed the kokanee plan for Lake Roosevelt and came up with a recommendation for the Council to consider. Elizabeth Gaar of NOAA Fisheries briefed us on the status of their recovery planning efforts, and representatives of the Colville Tribes gave an update on the Chief Joseph hatchery, he said. We talked about follow-up actions to be taken in light of the Council's decisions on the Fish Tagging Forum recommendations and about the F&W program amendment process schedule, Rockefeller stated.

Jim Yost reported the Power Committee had an update on the survey of regional utilities' energy efficiency achievements and a presentation on the state of solid-state lighting. We also discussed multifamily housing and energy consumption, he said. The committee talked about the selection of members for the Resource Adequacy Advisory Committee and the Resource Strategies Advisory Committee, Yost added.

Henry Lorenzen reported the Public Affairs Committee's recent proposal for a new Council logo is still under consideration. Jennifer Anders reported on the Congressional staff tour held in Montana in August. She said this year's tour had a record number of participants. The group heard presentations about the Council and the Columbia River Treaty and visited Hungry Horse and Kerr dams, as well as Flathead Electric and the Sekokini Springs Hatchery, Anders noted.

Anders moved that the Council change item no. 13 from an update on the kokanee plan for Lake Roosevelt to a possible decision by the Council with regards to the kokanee plan, and find that no earlier notice was possible before the reposting of this agenda item as a decision last Friday, Sept. 6; and that Council business requires this discussion. Pat Smith seconded, and the motion passed on a roll-call vote.

3. Presentation of the ISRP's Final Report for the Geographic Review:

Greg Ruggerone, ISRP Chair; Erik Merrill, ISRP Coordinator; and Lynn Palensky, program development.

Greg Ruggerone, chair of the ISRP, presented the findings of the ISRP's final report for the geographic review of anadromous fish habitat restoration projects in the Columbia Basin. He explained the review process and criteria the ISRP used. We reviewed 83 proposals and asked for responses from 33 of the sponsors, usually for more information on monitoring and evaluation (M&E), Ruggerone reported.

Of the 83 proposals, 24 percent met scientific review criteria, 66 met the criteria with qualifications, 5 percent did not meet criteria, and 5 percent were not amenable to scientific review, he noted. We also provided 15 programmatic comments, Ruggerone said. He explained more about the top three of those, which are: implement research, monitoring, and evaluation at a regional scale; develop a strategic framework for restoration to guide actions across the landscape; and learn from productive coordination and partnerships.

Ruggerone said the report offers a retrospective overview of habitat improvements in the basin, which include work to improve complexity in 206 miles of streams, 2,053 miles of habitat made available, and 247 fish screens installed or addressed. But there are still questions about what have we gained and how much more is needed to achieve robust salmon populations, he said.

A strategic restoration framework is needed for full salmon recovery, and there needs to be improved coordination and collaboration among habitat restoration groups and projects, Ruggerone advised. Progress is being made toward the BiOp's habitat goals to avoid jeopardy, but progress to full recovery is uncertain, he added. It is important to maintain M&E to confirm progress and inform adaptive management, Ruggerone told the Council.

We are spending tens of millions of dollars on M&E now, said Karier. Are we still falling short? he asked. There are good programs in place, such as the Integrated Status and Effectiveness Monitoring Program, but we need to continue them over time, Ruggerone replied.

Staffer Lynn Palensky pointed out that staff has been developing recommendations for the 83 geographic review proposals, as well as for programmatic issues. Comment on the ISRP report is open until September 20, and staff recommendations will be presented to the F&W Committee in October, she said.

4. Presentation on what we know and don't know about salmon habitat restoration:

Dr. Phil Roni, Research Biologist/Watershed Program Manager Northwest Fisheries Science Center, NOAA Fisheries; and Jason Sweet, Bonneville Power Administration. (NL)

Dr. Phil Roni of NOAA Fisheries gave a presentation on the effectiveness of common habitat restoration techniques, noting that habitat restoration for fish began in the late 1800s in the eastern United States and Europe. Billions of dollars have been spent across the U.S. for river restoration, and thousands of projects have been implemented, he noted. Despite all this work,

there is still considerable debate about physical and biological responses to habitat restoration, how much restoration is needed, and where it is most effective, Roni said.

We recently did a review of studies on this subject and found there are a lot of different restoration techniques, he stated. One common technique is removing barriers to fish passage, but there are not many studies of this, Roni said. Most studies deal with dam removal, and few have looked at culvert removal, he noted. Very little biological monitoring has been done, and some studies show culvert removals did not meet passage success criteria, Roni reported. We need better monitoring of culverts, and we need to know more about fish response, he added.

How can replacing a culvert fail? Karier asked. There can be reasons like flows being too shallow, or if culverts are not maintained, they can plug up, replied Roni.

Another technique is floodplain restoration, which can include such actions as reconnecting side channels and re-meandering a stream that has been straightened, he said. We have good data for coho response, but we need to know more about the response of chinook and steelhead, Roni stated.

A third technique is riparian planting, and we need to know more about its effects on stream habitat and long-term responses, he added. A lot of studies have been done about grazing, but we need to know more about fish and instream response, Roni said.

Instream habitat improvement is the technique we have done the longest, but it is one of the more debated techniques, he stated. There are lots of studies, and fish response varies among species, regions, and watersheds, Roni reported. Most studies showed a positive response from fish if you put structures in a stream, he added.

We know that with instream habitat, success depends on design, addressing water quality, sediment, and other processes, and on the intensity and amount of restoration, Roni continued. We still need to know more about the response of chinook and interior steelhead, the response in larger rivers, and the watershed-scale response to instream structures, he said.

Overall, most of the habitat restoration techniques show promising results, but effectiveness depends on addressing underlying problems and processes, the intensity and amount of restoration, and it varies by region and program, Roni stated. We still need biological monitoring for many techniques, species, and regions, but the good news is that data for many of these techniques can be collected rather quickly, he added. That is because of the large number of projects there are, the ability to leverage other monitoring programs, and the fact that several long-term intensively monitored watershed studies are under way, Roni said.

If there were a culvert removal in the Lemhi, you couldn't tell me if it would be successful in improving fish populations? Yost asked. Whether it would recover fish depends on whether that is the thing that is holding that population back, replied Roni.

If a number of limiting factors are at work, should you analyze all the threats on a stream and address them concurrently? Rockefeller asked. Having a detailed analysis of limiting factors is important, and in a low-flow year, it maybe be one issue, and in a high-flow year, another, Roni replied.

Jason Sweet from BPA made a presentation on the agency's programmatic approach to action effectiveness monitoring of tributary habitat improvement. He said this work has three components: improving current action effectiveness monitoring by actions such as standardizing techniques; sampling a subset of previously completed F&W projects; and sampling a subset of proposed projects.

For full barrier removal, 30 projects will be sampled, and reconnaissance is occurring now, Sweet reported. Field surveys will take place in 2014 and 2015, and we assume this will tell us how fish respond to these kinds of projects, he stated. No monitoring for new full barrier projects is planned, Sweet noted. We plan to sample 30 channel reconnection projects, he said.

BPA is contacting project sponsors to gather additional information on the projects and confirm whether the sponsor or a third party will perform the initial monitoring, Sweet stated. We plan to present a multi-year work plan that addresses the questions which Dr. Roni has posed to the Council, for review this December, he noted. For each category of habitat restoration, the intent is to have an estimate of how effective those types of projects are in restoring fish, Sweet said.

We should make sure some of this work gets published, stated Karier. He said the effectiveness of water acquisition programs seems to be missing from this work. Not much has been published on that, noted Roni. It is being used more and more in the West, and it needs more detailed monitoring, he stated. It does appear on BPA's case studies list, Sweet noted.

We spend 50 to 60 percent of our budget on research, monitoring, and evaluation, and I'm determined to cut that back, said Booth. I'd like your advice on how we can do a more programmatic approach to monitoring these low-risk, low-tech restoration projects, like culverts and putting tree stumps in streams, he said. We propose to sample a small number of culvert projects across the basin in the next two years, and then be done, said Roni. We will do the same with wood placement projects, he added. We too would rather see more money being spent on on-the-ground projects, Roni said. Our intent is to identify what few projects do need monitoring, and then be able to devote more resources to projects on the ground, added Sweet.

5. Presentation by executives from North Idaho electric cooperatives:

Eric Anderson, Idaho State Representative; Steve Boorman, Bonners Ferry Electric Department city administrator; Jake Eimers, Idaho County Light and Power cooperative Association, Inc. manager; Dave Hagen, general manager, Clearwater Power; Doug Elliot, Kootenai Electric Cooperative, Inc.; and Annie Terracciano, general manager, Northern Lights, Inc.

Annie Terracciano of Northern Lights Electric Co-op kicked off a presentation by four North Idaho electric co-ops by pointing out that Northern Lights, based in Sagle, Idaho, has 18,000 members and is the state's second largest co-op. We serve northern Idaho and western Montana and are 65 percent residential, she said. We own and operate a dam that provides 10 percent of our power, and we buy the rest from BPA, Terracciano stated.

One of the main points I want to make about conservation is that "one size fits all" doesn't work for rural Idaho, she said. Our message to the Council is: give us more flexibility and less complexity in BPA conservation programs, Terracciano added.

She offered the example of commercial lighting programs. They have worked well for us, but BPA regulations require the use of a “lighting calculator,” a program so complex it crashes our computers, Terracciano said. We have to hire someone from Seattle or Portland to run the program, she stated, adding that Northern Lights has only one staff person assigned to conservation.

Reporting requirements are another problem, Terracciano said. In the last two years, they have increased tenfold, and small co-ops have to hire someone just to report to BPA, she noted. We are asking you to make reporting easier for us, Terracciano told the Council.

Doug Elliott of Kootenai Electric Co-op said Kootenai, based in Hayden, serves over 25,000 businesses and families and is the state’s largest electric co-op. We own and operate 2,000 miles of transmission lines, have a 93 MW peak load, and buy all our power from BPA, he stated. We developed a 3.2 MW landfill gas project with Kootenai County, and we sell that power to offset our power supply costs, Elliott added. We invest \$1 million in conservation annually, he reported.

Our clean and economical federal hydro system is “the envy of the world,” Elliott stated. It is important to recognize the fish and wildlife protection accomplishments we have achieved, he said.

Elliott recommended the Seventh Power Plan give deference to the Biological Opinion (BiOp) and said the region should not depend on public power to fund measures that are not connected to the power system. He expressed concern that the next power plan could give deference to more expensive resources than hydro and said the cost of those additional resources would be “borne by our ratepayers.”

Achieving Conservation Nirvana

Steve Boorman of the City of Bonners Ferry said his utility serves about 2,500 customers and their load is split in thirds among residential, commercial, and industrial customers. We own and operate the Moyie hydro project, he noted.

“Conservation nirvana” to us would be programs that are simple to administer and flexible, Boorman stated. Small utilities face risks like fires and storms, and we are used to those, but on the horizon, the big threat we face is “the increasing regulatory burden,” he said.

The costs of load growth for small utilities are of concern, Boorman added. He also mentioned distributed energy, noting that as more distributed generation like solar rooftops are added, “our historical rate structures will be challenged.”

We care deeply about the future of the Columbia River Treaty, Boorman told the Council. The Treaty was signed in 1964 and has worked well for 49 years, he said. We hope the renegotiation won’t “throw out the baby with the bathwater,” Boorman added.

In our comments on the Treaty, we said there should be no changes that would increase flood risk, and that power production and capacity should not be diminished, he explained. We also said any additional benefits resulting from the treaty should be paid for by the beneficiaries of those benefits, not other parties, Boorman noted. And we said the U.S. Entity has done an exceptional job, and that structure should not be changed, he concluded.

Dave Hagen of Clearwater Power Company said Clearwater serves 11 counties in three states and just over 10,000 accounts. We have 2,862 miles of line and an average of 3.64 accounts per mile of line, he noted. Our peak load is 45 MW, and we buy all our power from BPA, Hagen said. We have an agreement with PNGC Power to manage our Tier 1 power and to manage our Tier 2 power, “if we ever get there,” he added.

Hagen summed up some local challenges Clearwater and other co-ops face. We are trying to recover from the recession, and we see retracted load growth, he said, adding that Clearwater has fewer accounts than it did two years ago, so there are fewer customers to pay the utility’s fixed costs.

We have an aging infrastructure, while at the same time we are seeing rising costs, Hagen said, pointing out that BPA’s new rates will go into effect October 1, which will cause the co-op to raise its rates 10 percent. We are caught on the double-edged sword of rising costs and declining loads and customers, he stated.

Other issues of concern include the future of the South Idaho Exchange agreement, and BPA’s segmentation of transmission assets, Hagen noted. Segmentation is the process BPA uses to divide transmission assets into different buckets and to determine the rates it charges customers, he explained. There’s a proposal to change the threshold, which could result in a cost shift to our ratepayers, Hagen said.

For the Seventh Power Plan, “I second what the others have said about conservation,” he stated. There are a number of issues on BPA’s plate, and a lot of strain being put on BPA and its leadership at present, and we hope that will be resolved soon, Hagen concluded.

Where are you seeing your gains in conservation in rural areas? Bill Booth asked. For us, commercial lighting is the biggest bang for the buck, followed by duct sealing, replied Terracciano. We have done CFLs and are now doing home energy audits, she said. But the person who really needs the help lives in a manufactured home down a rural road, and they don’t have the money for conservation measures, Terracciano explained. BPA might give \$1,600 for a \$5,000 fix, but where does the rest of the money come from? she added.

We are 70 to 80 percent residential, said Elliott. It takes a lot of physical effort to gain a unit of conservation savings for us, compared to what happens with big utilities, he stated. The market transformation that occurs in downtown Seattle hasn’t happened where we are, added Hagen. Some of our people still use dial-up internet, for example, he noted. We don’t have the vendors and we need more flexible programs, Hagen stated.

Pat Smith asked about load growth in the Idaho Panhandle. We have had declining loads since 2008, Terracciano said. We signed up for Tier 2 power, but we aren't using it, she noted. We have no load growth now, Terracciano said.

We will add an additional 500 customers this year, but we don't see kWh growth because we are undercutting that with conservation, said Elliott. We have an increasing cost structure and a stagnating rate structure, he added.

We need to follow up on all these issues, especially the complexity of the BPA programs, said Tom Karier. We have heard a lot about rate structure from utilities across the region, he noted. Most utilities' base rates do not cover their fixed costs, said Boorman. We will have to increase our base rates over time, and it will be painful, he added.

Idaho State Representative Eric Anderson, a director of Northern Lights Co-op, made two final comments. He said the current focus on preventing invasive mussels from entering the region would not have come about without the work done by Idaho's power sector. Finally, Anderson told the Council that "Bill Drummond is a friend of Idaho public power," and "we hope his integrity is restored soon."

6. Briefing on renewable resource requirements to meet RPS needs 2015-2035:

Gillian Charles, Energy Policy Analyst.

Postponed.

7. Report on California Power Markets Symposium:

Charlie Black, director, power division.

Black reported that about 130 people participated at the California Power Markets Symposium held September 5. It was the fourth in a series of symposia being held on key energy issues to promote discussion in preparation for the Seventh Power Plan, he noted.

We had panels on: California's greenhouse gas (GHG) cap-and-trade program, the state's 33 percent renewable portfolio standard (RPS), renewable resource development and integration, power market structure and impacts, and the implications for electricity trade between California and the Northwest, Black said. We also discussed the announced retirement of existing nuclear projects, he added.

One question that engaged the participants was whether the broad policy objectives in the RPS, the GHG cap-and-trade program, and local emissions controls mean that power resource development is not being driven by market forces, but instead by policy objectives, Black said.

Another striking development is the explosion of solar photovoltaic projects in California, and how that is changing operational needs, he told the Council. The state's 33 percent RPS is really more like 40 percent when you include solar rooftops, Black said.

When they can't ramp down all the solar in the daytime, they expect to have some big oversupply events and negative prices, potentially on a daily basis, and they will be interested in selling surplus power to the Northwest, he stated. "They are doing a grand experiment down there," Black observed.

California utilities and the California Independent System Operator have realized that their peak demand is going to be when people get home at night, between 6 and 8 pm, he said. They have identified demand response and conservation as key resources to deal with that, Black added. The Northwest is also working on making demand response more of a dispatchable resource, and we may do some joint research with California, he said.

There will be a lot of solar generation available during the day when the Northwest might need it, but California is also considering mandating utilities to develop storage, which could absorb the excess solar, Karier noted. "So stay tuned" -- a lot of that power could be available to us, or not, he added.

Smith said he heard at the symposium that California is second only to the European Union in its cap-and-trade program. And everyone is fairly confident that California will go up to a 50 percent RPS, he noted.

8. Fish and Wildlife Program Amendment Process:

Patty O'Toole, program implementation manager; Peter Paquet, manager, wildlife and resident fish; and Laura Robinson, program implementation and liaison specialist.

– Artificial production

Staffer Patty O'Toole introduced a discussion of artificial production of fish as it relates to the upcoming F&W program amendment process. She explained what the current F&W program says about artificial production, including planning assumptions and program strategies. Staffer John Shurts discussed how the artificial production programs relate to what's in the Northwest Power Act, and how and why the Council's three-step process for hatchery funding was developed.

O'Toole provided some facts about artificial production in the basin, noting that about 143 million salmon and steelhead are produced and released annually from hatcheries in the basin, with about 90 million released above Bonneville Dam. Smith asked about hatcheries not funded under the Council's program. Most of those predate the Act, replied Shurts. There may be separate funding sources, but over the years, things have gotten intertwined, and it has become quite complicated, O'Toole added.

She said hatcheries provide mitigation for the loss of habitat quantity and quality resulting from the construction and operation of dams and other development activities, and that within the basin, approximately 50 percent of the habitat that was available historically to anadromous fish is no longer accessible.

Shurts described the history and evolution of policy and laws affecting artificial production over the years. He noted there have been many hatchery reform efforts and studies since the mid-1990s, with the most recent being the work of the Hatchery Scientific Review Group (HSRG).

HSRG has produced a set of policy recommendations and is working on a revised set of metrics for assessing the relationship of natural spawners to hatchery contribution, Shurts said. Paul Kline of the Idaho Department of Fish and Game said the HSRG is preparing a white paper, which should be out in draft by the end of the year.

The Council's F&W program's principles are consistent with the HSRG, but we haven't faced the issue of how much of the HSRG's recommendations should be incorporated into our program yet, Shurts said.

The Council has to give deference to agencies and tribes under the Act, Lorenzen said. What if our science panels come up with something different from what agencies and tribes recommend? he asked. If we deviate from agencies and tribes' recommendations, we have to provide a strong legal explanation, Shurts replied. But "buckle up," because this could be a key issue in the amendment process, he said.

A lot of attention has been given to individual hatchery programs, but you need to think about artificial production across the basin and how it can be evaluated at the basinwide level, Shurts told the Council.

Lorenzen asked about the possibility that so many smolts are released it overwhelms carrying capacity. To what extent are existing hatcheries designed to release smolts to mimic what would happen in a natural system? Are we putting too many hatchery fish out? he inquired.

That will be an incredibly hot issue in our discussions, staffer Tony Grover said. There will be reluctance towards anything that decreases harvest, he added.

It's not a simple situation, and a lot of this is hard-wired in statute and policy, Kline stated. We are not matching the natural template, and we have created problems for ourselves, he said. Harvest in the state of Idaho is a very big deal and taken very seriously, Kline added. All the reforms the Council has invested in over the past 25 years are critical and should be captured in the amendment process, he said. We are getting better at producing metrics, and the F&W program could be more specific about them, Kline added.

Our science panels have identified opportunities to improve artificial production programs, said Karier. The amendment process will be a good opportunity for the Council to work with the region and discuss these issues and solve some problems, he added.

This is an extraordinarily complicated picture you have painted today, said Rockefeller. Is it the Council's responsibility to be the integrating entity, or are there others responsible for doing that? Who's in the best position to integrate? he asked. That's the heart of the question, replied Grover. At a minimum, the Council offers a big tent where everyone can come together, he stated. We are not alone in having responsibility, but the Council has been good at providing leadership, said Shurts.

Our program as it exists is pretty good, but the big thing we haven't done is incorporate HSRG metrics, and that will be a major decision, said Booth. We are doing it with our three-step process, but the question is: do we try to force these metrics on the region or could we? he said.

Karier asked staff, along with their recommendations, to highlight some key questions, such as: what percentage of our abundance numbers should be natural origin, and are there too many hatchery fish ending up on the spawning grounds?

There are significant issues here, and particularly so now that the HSRG has finished its work, said Bradbury. A larger question is: if we make our projects subject to the HSRG, what about other projects that are not, since they are all in the same river, he stated.

– **Schedule**

Staffer Laura Robinson noted that the period to submit program amendment recommendations ends September 17. Staff will provide summaries of the recommendations to the F&W Committee meeting in October and November, she said.

9. Policy Discussion with the Spokane Tribe of Indians:

Matt Wynne, Spokane Tribal Council member; and BJ Kieffer, Natural Resources Director, Spokane Tribe.

This item was dropped.

10. Briefing on identification of issues for coordinating power and transmission planning:

Ben Kujala, senior analyst; and John Fazio, senior power systems analyst.

Staffer Charlie Black explained how transmission planning has evolved in recent years in response to major outages, reliability concerns, and Federal Energy Regulatory Commission (FERC) requirements. As a result, there is more need to coordinate and communicate with entities like the Western Electricity Coordinating Council (WECC) to make sure what is happening in the Northwest is accurately represented, he said.

WECC is starting to do power system adequacy assessments, and it appears those are not as well informed about the Northwest hydro system as they should be, Black noted. Staffer Ben Kujala described how the Council works with transmission planning organizations and noted the Council is a WECC member and has participated on its committees.

There are opportunities coming up for us to work with WECC on a number of initiatives, such as its long-term reliability assessment, he noted. We want to work with other entities in the Northwest to get the data WECC will need for that assessment, Kujala said. He explained recent interactions with ColumbiaGrid and the Northern Tier Transmission Group, adding that staff wants to make sure our information is coordinated with theirs “so that we reach similar conclusions.”

The Council’s most recent resource adequacy assessment concluded that the Loss of Load Hours and Expected Unserved Energy for the Northwest are greater than zero in 2014, Black noted. But WECC’s most recent long-term reliability assessment that was submitted to the North American Electric Reliability Corporation showed zero problem of a load loss, he said. “That’s an overly rosy scenario,” and it is important for us to be clear with them about the outlook for our system, Black stated.

In addition, WECC has a proposal to shield some information that was previously considered public information, and that concerns us, he said. Black suggested the Council write WECC a letter expressing its concern about limiting access to public information. Why do they want this confidentiality? Smith asked. The reasons involve security of the power system and commercially proprietary information, replied Black. But a blanket policy of shielding all categories of information is a blunt approach, he added.

I support writing the letter, said Karier. The problem with holding the information confidential is that everything the Council does is available to the public, he stated. And the fact we say adequacy is not completely assured, and WECC says that is not true, is troubling, Karier added. We need to drill down and find out why that is happening, he said.

I don't have a problem with looking at a draft letter, but security and proprietary information are legitimate concerns, and we need to make it clear we don't think that information needs to be disclosed, said Jim Yost. In our Sixth Power Plan, we did not focus enough on transmission, he noted. It has become more important to do that, and provide the staffing, Yost stated. He added that he would like to have a briefing on what's being discussed or proposed on transmission cost allocation.

11. Briefing on the Independent Economic Analysis Board (IEAB) Annual Report:

Roger Mann, Chair, IEAB.

Dr. Roger Mann briefed the Council on the Independent Economic Analysis Board's (IEAB) 2013 Annual Report. This year, the IEAB spent almost all of its time on two items, he said. One was preparing the report, Cost-Effectiveness of Fish Tagging Technologies and Programs in the Columbia River Basin, which explored fundamental issues with respect to fish tagging economics, Mann noted. This was the first attempt to set up a framework for addressing this complex issue, and we hope to do more on this in the future, he said. The second item was preparing the report, Invasive Mussels Update: Economic Risk of Zebra and Quagga Mussels in the Columbia River Basin, Mann stated.

He described the IEAB's research ideas for the coming year. They include: additional work on fish tagging in order to be able to draw real policy conclusions on the cost-effectiveness of different tagging technologies, and an economic comparison of habitat restoration versus protection, aimed at finding out when one approach might be more cost-effective than another, Mann said. Two other ideas are investigating how alternative discounting methods might be applied to the benefits of F&W investments, and exploring how the size of monitoring investments might be based on expected benefits, risks, uncertainty, and the potential for adaptive change, he added.

Finally, the IEAB might be used to brief the Council on the guidelines federal agencies are developing related to the valuation of ecosystem services and how those could be applicable to the F&W program, Mann stated.

Karier said he would like the IEAB to gather more information on fish tagging and in particular, information related to the harvest of endangered fish and the targets set for that. Booth said he would like to have more information on risk, uncertainty, and monitoring costs that could be used during the F&W amendment process.

12. Briefing on the updated IEAB Invasive Mussel Report:

Roger Mann.

Mann presented the findings of the IEAB's report titled, Invasive Mussels Update: Economic Risk of Zebra and Quagga Mussels in the Columbia River Basin. This work updated information we provided in a 2010 report, he noted.

The report contains no major new information about economic damage potential, Mann said. We think potential damages could run \$100 million or more annually, he stated. Is that for the hydro system? Rockefeller asked. Most of those costs relate to ecosystem damages, replied Mann.

He said the report found that since 2010, a number of events have led to increasing concern about the probability of zebra or quagga mussels becoming established in the basin. States are finding more boats with mussels, Mann noted. The potential economic and ecological impacts of invasive mussels in the basin are becoming more widely recognized, he added.

The outlook for prevention to be successful has improved, and some states and British Columbia have passed new legislation aimed at preventing the introduction of aquatic invasive species, Mann reported. Prevention at the state level could be improved by better enforcement, expanded inspections, and applied research, he said. Changes to the federal Lacey Act could improve prevention, Mann stated, pointing out the law doesn't list quagga mussels as an injurious species.

Legislation was introduced in the House of Representatives to include quagga mussels, but the bill hasn't moved, he noted. Maybe we should try to pull together a group of stakeholders that stand to lose the most from an infestation, such as hydropower interests, irrigators, boat owners, and municipal water users, and ask them to use their political clout to get the Lacey Act changed, Karier suggested. We are working toward that, said Ruff.

This is a huge problem, and I'd like to work with you to figure something out, Bradbury stated. It's a big concern to Montana, said Smith. Let's try to get more pro-active on this and be more aggressive, he recommended.

13. Council decision on Lake Roosevelt Kokanee Comprehensive Management Plan:

Stacy Horton, Washington state staff. (This item tentatively changed from an update to a Council decision on Friday, September 6, 2013, pending a motion confirming the change at the Council meeting.)

Staffer Stacy Horton presented a funding request for the Kokanee Plan for Lake Roosevelt. She discussed the background of the program, previous reviews by the ISRP, and how the program's co-managers are working to address issues raised by the ISRP, for example, by investigating the use of triploid kokanee.

Anders moved that the Council recommend to BPA the continuation of the kokanee production element of the Lake Roosevelt program activities at a budget level not to exceed \$200,000 per year for direct kokanee production costs, under the following conditions: that the project sponsors implement the project modifications described at this meeting by the Spokane Tribe and Washington Dept. of Fish and Wildlife representatives, including the use of triploid kokanee and other updates to the hatchery kokanee plan, with the project sponsors submitting a description of the modified project by the end of October of this year; and that the project sponsors submit annual status updates to the Council by December 31 of each year, starting in 2015; and that continued funding beyond 2016 is dependent on demonstration to the Council, with ISRP review, of measurable success as outlined in the creel objective, which is 5 percent of the annual triploid release. Rockefeller seconded the motion.

There have been problems with the program that this motion tries to work out, said Bradbury. The motion reflects hands-on input from the F&W Committee, and we approved it unanimously, stated Rockefeller. We think this is a realistic approach with accountability, and we appreciate the managers' flexibility, he said. I also urge its passage, said Karier. The managers have been very creative with these proposals, he added. The Council approved the motion.

14. Council Business

- **Approval of minutes**

Anders moved that the Council approve the minutes of the August 6-7, 2013 Council meeting held in Bend. Lorenzen seconded, and the motion passed.

- **Council decision on FY 2014 contract with Jeff King**

Black presented a proposal to contract with former staffer Jeff King for services in FY 2014. Anders moved that the Council approve a contract with Jeff King for services in FY 2014 relating to research and analytical support for the Power Division, for a total not-to-exceed cost of \$75,000, beginning October 1, 2013 and ending September 30, 2014. Booth seconded, and the motion passed.

- **Council decision to release Draft Annual Report to Congress for public comment**

Staffer John Harrison said the Council's draft Annual Report to Congress for FY 2013, titled The State of the Columbia River Basin, is ready to be released for public comment. Anders moved that the Council approve release of the draft Annual Report to Congress for a 90-day public comment period. Karier seconded, and the motion passed.

- **Annual public disclosure of Council Members' earned outside income**

Shurts said Council members are required once a year to disclose income earned outside their positions on the Council during the previous year. Booth reported income from being the outside director of an Idaho bank, and Lorenzen reported income from rents and from law clients, Shurts noted. We discussed his work with clients and determined there are no conflicts with his role on the Council, Shurts said.

- **Council decision on membership for the Resource Adequacy Advisory Committee**

Black told the Council that most of the members for the Resource Adequacy Advisory Committee have been identified and have agreed to participate. Placeholder positions will be filled with people who will be identified by their sponsoring organizations, he added.

Anders moved that the Council approve the Resource Adequacy Advisory Committee co-chairs' recommendations for participants to serve on the technical and steering committees, with the understanding that placeholders will be filled with persons identified by their sponsoring organizations. Smith seconded, and the motion passed.

Approved October 9, 2013

/s/ Jennifer Anders

Vice-Chair

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