

COLUMBIA RIVER TREATY

HEARING
BEFORE THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED THIRTEENTH CONGRESS
FIRST SESSION
TO
CONSIDER THE DRAFT REGIONAL RECOMMENDATION REGARDING THE
COLUMBIA RIVER TREATY

NOVEMBER 7, 2013



Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

87-345 PDF

WASHINGTON : 2014

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

COMMITTEE ON ENERGY AND NATURAL RESOURCES

RON WYDEN, Oregon, *Chairman*

TIM JOHNSON, South Dakota	LISA MURKOWSKI, Alaska
MARY L. LANDRIEU, Louisiana	JOHN BARRASSO, Wyoming
MARIA CANTWELL, Washington	JAMES E. RISCH, Idaho
BERNARD SANDERS, Vermont	MIKE LEE, Utah
DEBBIE STABENOW, Michigan	DEAN HELLER, Nevada
MARK UDALL, Colorado	JEFF FLAKE, Arizona
AL FRANKEN, Minnesota	TIM SCOTT, South Carolina
JOE MANCHIN, III, West Virginia	LAMAR ALEXANDER, Tennessee
BRIAN SCHATZ, Hawaii	ROB PORTMAN, Ohio
MARTIN HEINRICH, New Mexico	JOHN HOEVEN, North Dakota
TAMMY BALDWIN, Wisconsin	

JOSHUA SHEINKMAN, *Staff Director*

SAM E. FOWLER, *Chief Counsel*

KAREN K. BILLUPS, *Republican Staff Director*

PATRICK J. MCCORMICK III, *Republican Chief Counsel*

CONTENTS

STATEMENTS

	Page
Caan, George, Executive Director, Washington Public Utilities Districts Association, Olympia, WA	27
Haller, Gregory, Conservation Director, Pacific Rivers Council	44
Karier, Thomas, Washington State Council Member, Northwest Power and Conservation Council	16
Kem, Brigadier General John, Commander, U.S. Army Corps of Engineers, Northwestern Division, Member, U.S. Entity for the Columbia River Treaty	5
Meira, Kristin, Executive Director, Pacific Northwest Waterways Association (PNWA), Portland, OR	40
Moffett, Joel, Chairman, Columbia River Inter-Tribal Fish Commission	10
Murkowski, Hon. Lisa, U.S. Senator From Alaska	3
Oliver, Stephen, Vice President, Generation Asset Management, Bonneville Power Administration, Coordinator, U.S. Entity for the Columbia River Treaty	8
Semanko, Norm, Executive Director & General Counsel, Idaho Water Users Association, Boise, ID	35
Wyden, Hon. Ron, U.S. Senator From Oregon	1

APPENDIX

Responses to additional questions	55
---	----

COLUMBIA RIVER TREATY

THURSDAY, NOVEMBER 7, 2013

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 9:33 a.m. in room SD-366, Dirksen Senate Office Building, Hon. Ron Wyden, chairman, presiding.

OPENING STATEMENT OF HON. RON WYDEN, U.S. SENATOR FROM OREGON

The CHAIRMAN. The Energy and Natural Resources Committee will come to order.

Today the committee is going to look at the future of the Columbia River Treaty and what it means for the Pacific Northwest and the United States' relationship with Canada.

The Columbia River is the lifeblood of my region, the Pacific Northwest. It's one of our region's most imposing natural features at more than 1,200 miles long. Along the way it provides a massive amount of the Northwest's power supply, habitat and flows for fish, water for irrigation and is a crucial passage for shipping.

The Treaty has served both nations well for decades. But after nearly 50 years it is time to strike a better bargain. The Treaty allows the United States and Canada to unilaterally terminate most of the Treaty provisions after September 16, 2024 provided 10 year notice is given. Consequently, the first opportunity for either country to provide notice of termination is September 2014.

In response Bonneville and the Corps are reviewing the Treaty and plan to deliver a final recommendation to the State Department in December 2013. Options include essentially the status quo, notice of termination, negotiated changes within the current Treaty framework, or a new or amended Treaty.

Much has changed since the early 1960s when the Treaty was negotiated. Three of the 4 Snake River dams had not even been built yet. None of the bedrock environmental laws that protect the quality of life in the Pacific Northwest had yet been enacted. Virtually no one thought of the possibility that our salmon could be endangered. There wasn't even an Endangered Species Act at that time.

The Treaty was drafted based on the outdated assumption that U.S. hydro generation would be operated to maximize power production. That has not been the case for decades. Instead, river operations are often dictated by the need to comply with the Endangered Species Act, the Clean Water Act, and other U.S. statutes.

This change also significantly reduces the actual value of power benefits from Canada, that under the Treaty, the U.S. is required to pay Canada for. These excess payments to Canada come out of the pockets of hard-hit Northwest ratepayers at a cost of hundreds of millions of dollars each and every year.

Another difference is that when the Treaty was negotiated, the American Indian community was simply not at the table. Today, based upon their Treaty rights and other laws, the Columbia Basin tribes are rightfully involved in the deliberations regarding system operations to protect salmon and other natural resources.

Finally, 50 years ago climate change was not on anybody's screen. Now climate change appears to be having fundamental impacts on our hydro system. For example, the snow pack in the Basin that effectively served as water storage for summer months is now diminishing as our average temperature rises. This obviously creates challenges for our region that must be managed.

The fundamental challenge to our region, that our region faces regarding the future of the Treaty, is how do we respond to 50 years of change in a manner that maximizes system benefits including hydropower, flood control, protection of fish and wildlife, water use, navigation and recreation. That is going to be the primary focus of this hearing and our discussions. There will be bipartisan discussions here in the committee.

The Draft Treaty recommendation developed by Bonneville, the Corps, and the tribes, with input from other stakeholders is a good start. However, as the region moves forward, I think there are some essential goals and questions that we need to focus on.

First, any changes to the Treaty should benefit regional ratepayers, not increase their rates. Striking a new power benefit sharing deal with Canada based on the actual benefits to both nations is the way to proceed. Experts in the region calculate that Northwest ratepayers could save hundreds of millions of dollars if the payments to Canada were recalculated based on the power our region actually receives.

Of course, we're going to have a job of convincing the Canadians that it is also in their interest to revisit this issue.

On the topic of ratepayers, the future cost of preserving the current level of flood control benefits, in my view, should not be paid by ratepayers. Instead funding for flood control ought to be in the form of appropriations and that was the case when the Treaty was adopted.

Third, I support addressing what has come to be known as "Ecosystem Function." I think it ought to be addressed as part of the Treaty process. I read the concept to mean actions to benefit the natural resources of the Columbia Basin, particularly our salmon. I believe it's appropriate to address fish and other resources in any agreement to redo the Treaty.

However, the scope and cost of measures to address fish and other resources must be clearly defined and limited. There are no blank checks. The decisions we make to support fish and wildlife must also take into account current salmon recovery efforts under the Endangered Species Act and other laws that cost Bonneville ratepayers roughly \$700 million a year. Whatever is done needs to

be in concert with existing efforts, not be in duplication or in conflict.

Fourth, I believe the threat of climate change is one of the premier challenges of our time. It could have dire effects on Columbia Basin flows. So it's important to have an appropriate amount of flexibility to respond.

At the same time it's important to work to preserve the hydro system itself, in part because of the climate benefits of emission-free hydro power, and this is something Senator Murkowski and I spend a lot of time on; we're really a joint force.

We got that hydro power bill passed early on. Hydro power is responsible for 60 percent of the clean power in this country and making sure that we preserve the climate benefits of emission-free hydro power has been something that is important to this committee. It's been important for a long time. It's especially important on the watch of Senator Murkowski and myself.

Finally, the Treaty matters have to be resolved in the Pacific Northwest. They cannot be subject to top/down micromanagement from Washington, DC.

I'm looking forward to our witnesses. We've got an excellent group today. They're going to shed plenty of light on the various complex issues that I've touched on.

A lot of our witnesses have traveled a long distance to be with us. We appreciate that. I especially appreciate Senator Murkowski, who has got a full morning, being here. We always, whenever we talk about Pacific Northwest matters, like to note that Senator Murkowski went to Willamette University. So we are proud of her roots to the great State of Oregon.

Senator Murkowski whatever comments you'd like to make are appropriate. I look forward to working with you, as we've done on all the other matters for the committee.

STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. Thank you, Mr. Chairman. In addition to my academic roots there in Oregon, I think I should, maybe it's a conflict of interest that my grandparents and great grandparents were actually steamboat captains on the Columbia River at one point in time a long, long, long time ago. So we go back a ways with the Columbia.

The CHAIRMAN. We will take any little strategic advancement.

[Laughter.]

Senator MURKOWSKI. I figured you probably might. I figured you might.

But thank you, Mr. Chairman for convening this oversight hearing on the future of the Columbia River Treaty. I, too, welcome our distinguished witnesses. I look forward to learning of your perspectives on how we proceed with treaty negotiations.

You know, Mr. Chairman, I should note we're sitting here in the Energy Committee. We don't often have the opportunity to kind of delve into these international relations. But the committee seems to be a little bit on a roll of late. Just last month we successfully passed legislation out of the Senate, I might add in the midst of a government shut down, we passed the U.S. Mexico

Transboundary Agreement that will help us move toward greater North American energy security. Then, of course today, we're examining this transboundary water agreement with our neighbors to the North or if you're from Alaska, neighbors to the East, a treaty that's been in place for almost 50 years now.

The Congressional Research Service has observed that the United States and Canada are "joined at the well" when it comes to energy. In this case our countries are very much joined at the Basin, the Columbia River Basin where we share the management of a significant water resource.

After historic flooding in the Northwest back in the 1940s we came together to negotiate how best to coordinate flood risk management and optimize hydro power production. The resulting Columbia River Treaty, ratified back in 1964, called for dam construction and increased reservoir storage in the Basin for our shared benefit. At that time though, negotiators did not consider the regions tribal resources or account for fishery interests. As our Nation now contemplates the continuation of this treaty, perhaps with a new ecosystem function, we must work together to find a balance between those and competing priorities such as the Chairman has mentioned, flood control, navigation, water supply and recreation, all while we maintain flexibility for the Pacific Northwest region.

I do recognize that today's hearing is timely. Beginning in September 2014 either nation can provide a 10-year notice that it intends to unilaterally terminate the Treaty. To that end both the Bonneville Power Administration and the Army Corps of Engineers in their role as the U.S. entity, have been reviewing the Treaty and have produced a draft recommendation with input from many of the stakeholders that are now before us.

The U.S. entity will make its final recommendation to the State Department this December on whether to continue, terminate or amend the Treaty's provisions.

So it's my hope, Mr. Chairman, that with this oversight hearing and the stakeholder testimony that we'll receive later, it will fully inform the U.S. entity's work on the Columbia River Treaty. Ideally we'll find a path forward with our Canadian friends to update and modernize this Treaty so that it can continue to work for the benefit of both of our countries.

Thank you again, Mr. Chairman. I look forward to hearing from our panel this morning.

The CHAIRMAN. Thank you, Senator Murkowski. I appreciate your excellent statement and also noting the Transboundary Agreement. I mean we clearly have interests here in the international arena where energy and international security and foreign relations intersect. The fact that it went through the U.S. Senate 100 to nothing, I hope that will help our colleagues in the other body find a way to move expeditiously on the bill. So I look forward to working with you on these issues and appreciate your statement.

We have with us as witnesses Brigadier General John S. Kem of Portland. We're glad that the Brigadier is here.

Mr. Stephen Oliver, Vice President, Generation Asset Management with Bonneville Power, we welcome you.

Mr. Joel Moffett, Chairman, Columbia River Inter-Tribal Fish Commission, Mr. Moffett, welcome.

Mr. Tom, I hope I'm pronouncing this right, Karier? Karier, great. Council Member, State of Washington with the Power and Conservation Council, Spokane.

Gentlemen, we'll make your prepared statements a part of the record in their entirety. I know that there is always, almost a biological compulsion to just read every single word. But this is going to be a hectic morning. We've got votes. If you can just take 5 minutes or so and summarize your principle concerns, that would be very helpful.

Brigadier General John S. Kem, welcome.

STATEMENT OF BRIGADIER GENERAL JOHN KEM, COMMANDER, U.S. ARMY CORPS OF ENGINEERS, NORTHWESTERN DIVISION, MEMBER, U.S. ENTITY FOR THE COLUMBIA RIVER TREATY

General KEM. Good morning, Mr. Chairman, Senator Murkowski.

As you know I'm the Commander of the Northwestern Division of the Corps of Engineers and a member of the United States entity. The Chair of the U.S. entity is Elliot Mainzer, the BP Acting Administrator and he could not be here today. As you mentioned, Steve Oliver is here with us today instead.

Steve is one of the two co-coordinators along with Mr. Dave Ponganis, who is behind me, who for the last 2 years, 3 years really, has been working the policy and the coordination for this effort. I have to say they've done a great job on a very complex process of collaborating.

Together we are pleased to be before the committee to discuss the draft regional recommendation we provided in September regarding the future of the Treaty after post 2024 and the still ongoing regional review process to inform the final recommendation.

From the outset of the Treaty, the coordinated operations between both countries for the storage and release of water across the international border has been a backbone for the Pacific Northwest in managing flood risk and to support the region's hydro power system. For the past 50 years those coordinated operations for the storage and release of water have been essential in assuring public safety and continuing to facilitate regional development and the regional economy.

As the Chairman mentioned the original treaty language, beginning in September 2014 we enter that window of opportunity for the first time for the United States or even either country to make a decision in that regard. The Department of State asked the United State's entity to develop a consensus regional recommendation to begin the national policy consideration process. It has been a multiyear process with countless engagements, outreach efforts and public comment opportunities.

The message that we have heard the most during the multiyear regional review process is there seems to be a and is very clear, strong, regional interest to modernize the Treaty to bring about a better, more balanced benefit to the region. Like almost any issue there is certainly an eclectic mix of interests and differing viewpoints on how to achieve them.

I would like to emphasize that the U.S. entity is not recommending adoption of some interest views ahead of another interest

group's views or in some way trying to decide exactly how the region should end up. We are seeking a strong, regional consensus. Toward that end, as the Chairman mentioned, in September we released a draft version for public comment attempting to recognize key interests, particularly those interests of a wide array of constituencies.

Since that draft release we have continued to work to refine a final version based on extensive public comments, which numbered literally in the thousands.

For example, over the last 2 weeks we've also done additional work with G to G Engagements meeting with the various Governors. Mr. Mainzer and I have met with the Governors of Idaho, Montana, Oregon and Washington, just in the past 2 weeks.

In addition, we met in government to government consultations with 16 tribes in the last few weeks. Coupled with the feedback from all of our various meetings with key stakeholder groups, involving the power group, interests, irrigation, navigation and ecosystem, it is clear to me that we're getting much closer. The region is certainly coalescing around recommending a modernized framework for the Treaty.

Probably the one area that is still most sensitive rests with the question about the regional recommendation about ecosystem function as a primary purpose. From my perspective, and I want to make it clear this was not done to promote one set of interests over another, or we seek to a disadvantage or negatively impact one interest group, rather we added it to the draft to incorporate the context of how we actually conduct coordinated operations with Canada today. In the end, the Treaty is really about the flow of water across the border and how the two countries want to coordinate that.

The fact is we coordinate with Canada for the storage and release of water for 3 reasons at this moment, period.

We do it for flood control.

We do it for hydro power.

We do it for ecosystem functionality.

So it makes sense to recommend formalizing those operations within the framework of the Treaty to capture the evolution that's happened since the Treaty was first written in 1964.

In conclusion I think there's a growing regional consensus to recommend modernizing the Treaty and achieve a win/win/win outcome for the Pacific Northwest region of the United States.

I thank you for the opportunity to highlight a few topics. I'll be glad to answer questions at the appropriate time.

[The prepared statement of General Kem and Mr. Oliver follows:]

PREPARED STATEMENT OF BRIGADIER GENERAL JOHN KEM, COMMANDER, U.S. ARMY CORPS OF ENGINEERS, NORTHWESTERN DIVISION, MEMBER, U.S. ENTITY FOR THE COLUMBIA RIVER TREATY, AND STEPHEN OLIVER, VICE PRESIDENT, GENERATION ASSET MANAGEMENT, BONNEVILLE POWER ADMINISTRATION, COORDINATOR, UNITED STATES ENTITY FOR THE COLUMBIA RIVER TREATY

Good morning, Mr. Chairman. I am Brigadier General John Kem, and I serve as Commander of the Northwestern Division of the United States Army Corps of Engineers and the Member of the United States Entity. By Executive Order the Chair of the U.S. Entity is the BPA Acting Administrator, currently Elliot Mainzer, who is not able to be with us today. In his stead Steve Oliver is with me today. Steve

is the BPA Vice President of Generation Asset Management and one of the policy leads for operational implementation of the Treaty.

Together, we are pleased to be before the Committee to discuss the Draft Regional Recommendation regarding the future of the Columbia River Treaty after 2024 and the regional review process underway to inform a final recommendation. We appreciate the interest this Committee is showing toward this matter. We should note that our testimony reflects the status of the process we are coordinating in the region on this matter and does not represent any final Administration recommendations.

The Columbia River Treaty is a successful example of a transboundary water treaty and serves as a model for other international water coordination agreements. Over the years since the Columbia River Treaty entered into force in 1964, it has provided benefits for the Pacific Northwest and both countries. It has enabled us to coordinate streamflows, and thereby helped us manage flood risks and generate hydropower. The U.S. Entity also uses the flexibilities within the Treaty to work with our Canadian counterparts to implement operations designed specifically to benefit the Columbia Basin ecosystem in both countries.

To ensure we can successfully convey the interests of the region, the U.S. Entity, through the regional review process known as the Columbia River Treaty 2014/2024 Review, has engaged throughout the region and is striving to garner support for a regional recommendation.

The message we have most heard during the multi-year regional review process is that it is in the best interest of the region to modernize operations under the Treaty to bring about better and more balanced benefits. As we are developing a regional recommendation, the U.S. Entity has listened closely to the many diverse voices in the region about how to reflect their respective interests in the recommendation.

While many in the region appreciate the benefits that have flowed from the Treaty, there is widespread concern in the U.S. that the method included in the Treaty for calculating Canada's share of the Treaty's power benefits is not equitable. There is interest in providing flood risk reduction for public safety through agreement with Canada on how we can implement continued, mutually agreeable, coordinated flood risk management operations.

There is also a strong desire by many to more formally incorporate ecosystem-based functions into the implementation of the Treaty and to recognize evolving interests in other water management issues in the Columbia River Basin. There is also growing interest in mechanisms that are more adaptive, flexible, and resilient to successfully meet the challenges presented by increased demand for water and the uncertainty of climate change impacts on Columbia River flow volume, timing, and variability in the next several decades.

We believe that through our extensive collaboration efforts we have assisted the region to find a middle ground that attempts to recognize and balance all of these viewpoints and interests in the region. We believe that it is possible to simultaneously:

- Reduce the U.S. obligation, paid by Northwest ratepayers, to return power to Canada that reflects the actual value of coordinated power operations with Canada.
- Define a workable approach to flood risk management that will continue to provide a similar level of flood risk management to protect public safety and the region's economy;
- Contribute to a more comprehensive ecosystem-based function approach throughout the Columbia River Basin watershed by formalizing and providing greater certainty for ecosystem actions already being undertaken so that they complement the existing ecosystem investments in the region; and
- Pursue operational flexibility necessary to respond to climate change, and other future potential changes in system operations while continuing to meet authorized project purposes such as irrigation and navigation.

In essence, the Draft Regional Recommendation seeks to further improve on operations that are already in place, while also making them more adaptable to address current and future needs of the region. Through this approach, we hope to achieve a collective net "win" for the Pacific Northwest on all fronts.

While we believe that regional interests are coalescing around this approach, we understand that there have been some questions, particularly regarding formalizing inclusion of ecosystem based functions, and whether such inclusion will create an additional cost for the U.S. and thus Pacific Northwest ratepayers. The Treaty provides a process for the U.S. and Canadian Entities to coordinate the storage and release of transboundary waters from the Treaty reservoirs for the mutual benefit

of both countries. Initially, power and flood risk management were the basis for this coordination. However, over the past 20 years we also have worked with Canada to mutually agree on storing and releasing water for both Canadian and U.S. ecosystem purposes.

The U.S. Entity's view is that it is appropriate to formalize and gain more certainty for these operations. At the same time, we recognize that over the past 20 years both the Canadian and U.S. management and use of this mutual water resource has become more focused over time on in-stream and out-of-stream uses, while fulfilling our commitments for power production and flood risk management. The U.S. Entity acknowledges the need for continued support for these existing purposes and intends to ensure that the incorporation of ecosystem-based functions would not prevent the region from achieving its objective of rebalancing and reducing U.S. power costs and would retain an acceptable level of flood risk.

Although we believe our draft recommendation will represent a positive balance of regional interests, we recognize that it will still concern certain stakeholders. To address those concerns, we recommend including mechanisms to promote further dialogue and minimize the risk of unintended consequences. These mechanisms include proposing a number of domestic processes through which U.S. interests can address complex issues that are currently beyond the purview of the Treaty.

Throughout the Columbia River Treaty 2014/2024 Review process, the U.S. Entity has consulted extensively with regional sovereigns, stakeholders, and the public. A key component of the review process has been collaboration with the Sovereign Review Team (SRT), which comprises designated representatives from the states of Washington, Oregon, Idaho, and Montana, Federal agencies, and Pacific Northwest Tribal Governments. The Entity also conducted ongoing government-to-government consultation meetings with the Pacific Northwest tribes represented on the SRT, as well as with the Confederated Tribes of the Grande Ronde. In addition, the U.S. Entity has heard from and understands the perspectives of the regional stakeholders through individual meetings, workshop sessions, panel discussions and presentations, and public comment periods. Our goal throughout this process has been to be inclusive and transparent with sovereigns, major river interests, and the general public.

These regional discussions led to the U.S. Entity's release of an initial working draft of a recommendation for regional interests to review in June 2013. The U.S. Entity conducted 14 public listening sessions around the Pacific Northwest to inform and collect public comment on the working draft recommendation. The U.S. Entity also worked closely with regional stakeholders and the SRT to hear viewpoints and obtain specific input concerning the working draft recommendation. On September 20, 2013, the U.S. Entity released the Draft Regional Recommendation for additional review and comment. As described earlier, the Draft Regional Recommendation reflects sovereign, stakeholder, and public input and seeks a collective "win" for the region.

As part of the review of the Draft Regional Recommendation, we held another five public meetings during October throughout the region. We also continue to meet and work with numerous parties interested in the Treaty's operation. The Administration has asked us to deliver the U.S. Entity's recommendation by the end of this year. Accordingly, our goal is to deliver to the U.S. Department of State a final Regional Recommendation that enjoys broad regional support in December 2013. The U.S. Entity recognizes the importance of continuing to engage all interested regional parties as we work toward that goal.

Mr. Chairman, this concludes our prepared remarks. We would be happy to respond to any questions from the Committee.

The CHAIRMAN. General Kem, thank you. It's very helpful. We'll have some questions in a moment.

Mr. Oliver, welcome.

STATEMENT OF STEPHEN OLIVER, VICE PRESIDENT, GENERATION ASSET MANAGEMENT, BONNEVILLE POWER ADMINISTRATION, COORDINATOR, U.S. ENTITY FOR THE COLUMBIA RIVER TREATY

Mr. OLIVER. Thank you, Mr. Chairman, Senator Murkowski. Thank you. I'm Stephen Oliver, Vice President of Generation Asset Management for the Bonneville Power Administration and Co-Coordinator for the Columbia River Treaty.

Over the years the Columbia River Treaty has provided significant benefits for the people of the Pacific Northwest and both Canada and the United States. It has helped provide assured stream flows that support the regions hydro power system. It serves as a crucial background of the Pacific Northwest economy. It has assisted in effectively managing flood risk to insure public safety and facilitate regional development.

Over the past 20 years we have also used operational flexibilities within the Treaty to work with our Canadian counterparts to implement operations designed specifically to benefit the Columbia Basin ecosystem in both countries. These actions include an annual agreement to move one million acre feet of water from winter releases to spring and early summer period. In addition through non-treaty storage agreements we have designed mutually beneficial operations that better support the ecosystem and power production in dry years.

We are now presented with a potential opportunity to do even better.

In 2024, even though the Treaty continues, certain aspects change and this gives us the chance to have a conversation with Canada on how we might want to modify the Treaty operations after 2024 to improve the benefits to the region in a way that reflects today's conditions and values and better prepares us for the future. So that is why we have been working on the Treaty review process to analyze the options for the Treaty post 2024 and collect regional perspectives to assist us in developing a recommendation that with broad regional support will advise the U.S. State Department on potential concepts to consider negotiating with Canada to modernize the Treaty.

We believe that it's possible for power, flood risk management and ecosystem interest to all benefit from a modernized and rebalanced Columbia River Treaty.

Let me expand on these points.

First, the method included in the Treaty for calculating Canada's share of power benefits generated in the U.S. as a result of our coordinated operations under the Treaty is now outdated and no longer equitable resulting in excessive cost to U.S. ratepayers. It was premised on a future where thermal power plants would have been significantly developed in the U.S. to meet low growth. That has not materialized.

The historic record shows that the original Treaty negotiators expected the U.S. Government. Excuse me, U.S. payment of Canadian entitlement in the form of power benefits delivered to Canada from the U.S. Columbia River hydro generators to have been very small by today.

The reality is that the Pacific Northwest utility ratepayers are still burdened by very high continuing payments of power to Canada. This needs to be changed.

Second, while we believe that regional interest are coalescing around the idea of including ecosystem based functions in the operations post 2024 the Treaty as a primary purpose. We understand that there has been some questions regarding this potential change and whether such inclusions would create additional cost to Pacific Northwest ratepayers. It is our perspective that the Treaty fun-

damentally is an agreement to coordinate the storage and release of water from the Treaty reservoirs for the mutual benefit of our countries.

Initially power and flood risk were the only two reasons we did this coordination. However, over the past 20 years we have worked with Canada under the Treaty to mutually agree on storing and releasing water for both Canadian/U.S. ecosystem purposes. The U.S. entity's view is that is appropriate to formalize and gain more certainty for these operations.

However, I want to be clear that while we support the inclusion of ecosystem based operations in the Treaty, the implementation of these functions should not prevent the region from achieving this objective of rebalancing and reducing U.S. power costs and maintaining an acceptable level of flood risk in the Basin.

Third, fundamentally we're dealing with a water management allocation issue. There is no new source of water just the debate about the timing for the storage and release of water that will flow out of the Canadian portion of the system. Although there are parties that will argue for a more dramatic shift and water flows back to a natural or normative hydrograph in support of the ecosystem. We are not supportive of such significant change because we have seen through our analyses that it would result in significant hydro power losses and the higher flood risk for the region.

That being said, we have also seen there are potential ecosystem benefits of gaining assurance of the spring flow augmentation and drier strategies that we have developed to date.

We also could see a benefit in light of potential future climate changes for these types of strategies.

In conclusion, it is possible for flood risk management, power and ecosystem benefits to all gain from a modernized and rebalanced Columbia River Treaty. This win/win/win can result, if we work together, to rebalance and reduce the U.S. power return obligation to Canada, define a rational flood risk management program that maintains an acceptable level of flood risk for the U.S. and incorporate the ecosystem based function operations that have been occurring by mutual agreement under the Treaty.

All these positives can happen while still assuring Canada of a fair and reasonable payment for the value of the coordinated operations of the system that is provided across the Basin.

Thank you for this opportunity to show our perspectives on this important topic.

The CHAIRMAN. Thank you.

Mr. Moffett.

STATEMENT OF JOEL MOFFETT, CHAIRMAN, COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

Mr. MOFFETT. Good morning, Chairman Wyden, Senator Murkowski. My name is Joel Moffett. I'm the Vice Chairman of the Nez Perce Tribe and Chairman of the Columbia River Inter-Tribal Fish Commission.

It's my honor and privilege to provide this testimony on behalf of the 15 tribes of the Columbia River Basin which in itself is a worthy story of consensus and collaboration.

I want to recognize Senator Murkowski of the Senate Indian Affairs Committee. This issue has profound ramifications to tribes as you will see. We look forward to working with your committee as well.

Our tribes began organizing in 2008 in this historic opportunity to modernize the Columbia River Basin, excuse me, how the Columbia River Basin is managed. As a coalition of the 15 tribes we have our own distinct trust and treaty obligations that are negotiated with the United States. We each hold close the sacredness of the river and her resources to our people. We each hold high the place of the salmon and all first foods to our way of life.

Nobody has lived with the consequences of the dams in 50 years of the Columbia River Treaty more than our tribes. Nobody will live with the consequences of the next 50 years more than us.

From these truths the Columbia Basin tribes created the Common Views document in 2010. Through Basin wide partnership and collaboration the tribes seek to manage the Columbia River for today's modern values not the outdated values of the 1960s when the original Columbia River Treaty was signed.

To prepare us for these upcoming Treaty discussions the Columbia Basin Tribal representatives connected several tours and site visits from the mouth of the Columbia River all the way up to the Canadian headwaters. We visited with Canadian residents at the invitation of First Nations in Canada and the Columbia Basin Trust. While the Treaty is often held up as a model of international water management, it is clear that the Treaty's implementation has produced winners and losers on both sides of the border.

We've prevented occasional flooding in the lower Columbia River but this also damaged river health and created permanent floods behind numerous dams in many of the upper reaches. There is no doubt that the Treaty has yielded tragic consequences to many citizens of the Columbia River Basin.

But despite this history the last 3 years have yielded a common consensus understanding. The Columbia River Treaty can and should be modernized. The 15 tribes are nearing support for the draft regional recommendation that was discussed earlier. More work and discussion remains though before full tribal support can be expressed.

We remain confident, however, that there will be a broad consensus among sovereigns and stakeholders when the regional recommendation is delivered to the U.S. Department of State next month.

Among the hallmarks of the draft regional recommendation is the addition of ecosystem function as a primary Treaty purpose, something the 15 tribes have championed. The inclusion of ecosystem function as a primary driver, co-equal to hydro power and flood control, is a key feature that will make the Columbia River Treaty truly a model of international water management. An improved ecosystem should be a shared benefit and obligation with Canada.

Integration—integrated ecosystem function in a modernized treaty should include the following.

One, restoration of fish passage and reintroduction of anadromous fish to historical areas.

Two, modernized flood risk management that enhances spring and summer flows for a more normative river.

Three, updated infrastructure and reconnected flood plans.

Four, stabilization for Upper Basin reservoirs.

A modernized Columbia River Treaty should also allow us to adapt to climate change, as the Chairman mentioned earlier. We need better forecasting techniques for changing precipitation and runoff scenarios.

I believe that I can speak for all the sovereigns when I say that we have been seriously challenged to develop a broad regional consensus. We have definitely worked hard toward that consensus. We're not quite there yet, but are proud of the progress we have made to date and are confident we can get the job done.

Without broad refill consensus, however, we run the risk of uncertainty. In the months ahead the tribes will be working right up until the regional recommendations delivery. During this time we anticipate close communication with your offices and all members of the Northwest Congressional Delegation.

We appreciate your committee's oversight hearing at this time and how it will inform the Northwest Congressional Delegation and all of Congress before the regional recommendation is submitted to the U.S. Department of State.

[The prepared statement of Mr. Moffett follows:]

PREPARED STATEMENT OF JOEL MOFFETT, CHAIRMAN, COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

Good morning Mr. Chairman. I am Joel Moffett, a citizen of the Nez Perce Tribe and an elected member of the Nez Perce Tribal Executive Committee. I am testifying before you today in my capacity as the Chairman of the Columbia River Inter-Tribal Fish Commission and on behalf of the 15 tribes in the Coalition of Columbia Basin Tribes. These 15 Columbia Basin Tribes have natural resource management authorities and responsibilities affected by the implementation of the Columbia River Treaty. There are 5 other tribes with interests in the basin that may be affected by the Columbia River Treaty; the U.S. Entity is consulting with them individually.

HIGH LEVEL POLICY CONSENSUS BASED RECOMMENDATION, NO TRIBAL ALTERNATIVE

At the outset, I want to highlight the fact that the Columbia Basin Tribes are working with the U.S. Entity and the other regional sovereigns to finalize a high level, consensus based regional policy recommendation on the future of the Columbia River Treaty. This high level policy recommendation will be submitted to the U.S. Department of State by December 13, 2013. There is no technical analysis or recommendation to accompany this high level policy recommendation. Notwithstanding what may have been conveyed to you by others, the Columbia Basin Tribes do not have their own alternative technical recommendation or draft technical proposal for river and reservoir operations under the Treaty.

NEED TO CONTINUE COLLABORATION OF REGIONAL SOVEREIGNS

Over the course of the last three years, the Columbia Basin Tribes have collaborated with the U.S. Entity and the other regional sovereigns to complete three iterations of modeling and analysis of a wide variety of river and reservoir operations. This expansive modeling and analysis was completed so that the region would have a common understanding of the various results and potential impacts from modified operations. While the goal had been to fully integrate this wealth of knowledge into a technical document that would support the regional recommendation, that final step was not taken at the request of the State Department. Yet, the region's work is not complete—the regional sovereigns will need to continue their technical and policy collaboration in order to support the next phase—the State Department's consideration of the high level policy recommendation developed by the region.

KEY ELEMENTS OF A REGIONAL RECOMMENDATION

I do want to summarize what the Columbia Basin Tribes see as critical elements of the draft regional recommendation:

- modernize the Columbia River Treaty by integrating ecosystem-based function as a third primary purpose of the Treaty, equal to the Treaty's obligations for the two countries to coordinate hydropower generation and flood risk management; Testimony of Joel Moffett November 7, 2013, page 3 of 7
- enhance spring and summer flows while stabilizing reservoir operations;
- pursue the restoration of fish passage to historical locations, I am including the tribes' issue paper on this subject as part of this testimony;
- pursue an assessment with Canada of potential alternatives for post-2024 operations to meet flood risk management objectives, including the possibility of using planned or assured Canadian Storage, consistent with ecosystem function, completing an infrastructure assessment and updating reservoir management through a domestic process as necessary to accomplish this objective; and,
- rebalance the Canadian Entitlement.

It will also be important that sufficient flexibility be built into the modernized Treaty so that operations can adapt to the impacts of climate change and other factors. We believe that all of the regional sovereigns are coalescing around these broad policy goals and we look forward to working with the U.S. Department of State to advance these goals through discussions with Canada, the province of British Columbia and the First Nations.

BACKGROUND ON THE TREATY

As you know, the Columbia River Treaty was signed and ratified by the United States in 1961 and, after the adoption of a protocol, was ratified by Canada and implemented by the two countries in 1964. Under the Treaty, Canada agreed to build three storage dams and coordinate the operation of these new storage facilities with the U.S. hydroelectric power supply system in order to optimize hydroelectric power production and to provide coordinated flood control benefits.

The U.S. Entity will tell you that the Treaty is a model of international cooperation for the management of a transboundary river system—and for the limited purposes of optimizing hydropower generation and providing coordinated flood risk management, it is—but the Treaty is not currently designed to provide for ecosystem-based functions. I do want to point out that the Treaty increased the impacts of hydropower to communities by moving the flood upriver, these impacts began before the Treaty with the earlier constriction of dams on the mainstem in the United States that affected the cultural and natural resources of the Columbia Basin Tribes, First Nations and other communities all the way up to the Basin headwaters in Montana, Idaho and British Columbia.

NO PRIOR AND INFORMED CONSENT OF TRIBES AND FIRST NATIONS

In developing this coordinated system operation under the Treaty with Canada, the U.S. did not consult with the Columbia Basin Tribes nor consider the effect of the Treaty on our cultural and natural resources, yet the Treaty has had far reaching impacts on our cultural and natural resources that continue to this day. Not only were the Columbia Basin tribes not consulted during the Treaty's negotiation, the tribes have also been excluded from its governance and implementation. The Treaty does not include considerations of critical tribal cultural resources. The coordinated power and flood control system created under the Treaty degraded rivers, First Foods, natural resources, and tribal customs and identities. The coordinated flood risk management plan, while providing substantial protections for Portland and Vancouver, permanently moved the floods upriver through the creation and maintenance of large storage reservoirs. The Treaty currently limits what can be accomplished with Treaty and non-Treaty water agreements to address these issues and meet tribal resource priorities.

COLUMBIA RIVER TREATY 2014/2024 REVIEW AND THE SOVEREIGN PARTICIPATION PROCESS

When the U.S. Entity initiated the Columbia River Treaty 2014/2024 Review, the tribes recognized the opportunity to work with the U.S. Entity to correct past mistakes and improve upon the Treaty. The Columbia Basin Tribes began meeting in January 2008 to identify their common issues and concerns with the Treaty and its implementation, while also meeting with the U.S. Entity to develop a better understanding of the Treaty's implementation. By February 2010, the tribes' several

meetings and workshops on the Treaty led to the development of the “Columbia Basin Tribes’ Common Views on the Future of the Columbia River Treaty”—known as the tribes’ Common Views document*. I have included a copy of this document with my testimony. I have also provided you with a map** of the Basin that shows you the location of the fifteen tribes, as well as that of the First Nations in Canada that have asserted interests affected by the Treaty’s implementation in Canada.

DEVELOPING THE SOVEREIGN PARTICIPATION PROCESS FOR THE TREATY REVIEW

The Columbia Basin Tribes met with the U.S. Entity in July 2010 to discuss their issues and concerns with the Treaty and how best they could collaborate with the U.S. Entity to address these issues through the Treaty Review. At that meeting, the U.S. Entity agreed to work with the Columbia Basin Tribes, other federal agencies and the states to establish the Sovereign Participation Process for the Treaty Review. The Sovereign Participation Process is three-tiered: the first tier is government-to-government, where decisions are made regarding policy issues; the second tier is the Sovereign Review Team, where the regional sovereigns coordinate, discuss policy issues and provide guidance to the Sovereign Technical Team; and finally, the Sovereign Technical Team, which conducts the technical modeling and analysis.

The Sovereign Participation Process also provided for expert policy and technical input from stakeholders, including presentations from expert panels on power, water supply and irrigation. Building upon the bilateral Phase I Report released by the U.S. and Canadian Entities in August 2009, the sovereigns completed three more iterations of modeling and analysis. As each of the three iterations of modeling and analysis was completed over the last three years, the U.S. Entity, with the support of the other sovereigns, took the lead on reporting out the results to stakeholders through a series of public meetings or “listening sessions” held across the basin. These listening sessions provided cities, counties and other public representatives and stakeholders to ask questions and provide feedback.

ADDITIONAL DETAIL ON ECOSYSTEM FUNCTION

During the course of the discussions at government-to-government and Sovereign Review Team meetings, tribal representatives and staff were often asked what they meant by “ecosystem-based function.” Tribal leaders explained that since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the life blood of the Columbia Basin Tribes. They went on to explain that Columbia Basin Tribes view the ecosystem of the Columbia Basin watershed as its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its’ length and breadth. We hold that clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic concept of ecosystem-based function and life itself.

The Tribes believe that a modernized Treaty needs to address the Columbia Basin using a watershed approach that integrates ecosystem-based function, hydropower, and flood risk management on both sides of the border. The eleven years of technical studies that led to the negotiation of the Treaty focused on hydropower and flood risk management, the region now has the opportunity during the next phase of the Treaty Review to expand the scope of bilateral technical studies to encompass ecosystem as a third purpose.

This was not done in the past and we are now dealing with a CRT that has not addressed the needs and rights of the peoples of the Columbia Basin whose cultural and natural resources have been affected by the Treaty’s implementation. The Columbia Basin Tribes provided the U.S. Entity, other regional sovereigns and the Sovereign Review Team with a definition of ecosystem-based function. While this definition has been adopted by the tribal caucus for use in the Treaty Review process, it has not been adopted by the U.S. Entity. I have appended the definition to my testimony for your information and to provide context for future conversations about the Treaty moving forward.

A restored, resilient and healthy watershed under a modernized Treaty will include ecosystem-based function as described by this definition. Again, this definition has not been adopted as part of the Treaty Review, nor has it been implicitly adopted by the U.S. Entity by the inclusion of ecosystem-based function in the draft regional recommendation, it has been put forward by the Columbia Basin Tribes as an aspirational definition for the Basin and to provide a context for further regional discussions.

* Document has been retained in committee files.

** Map has been retained in committee files.

CLOSING

Mr. Chairman, over the next month, the Columbia Basin Tribes will work with the U.S. Entity, other regional sovereigns and stakeholders to resolve the remaining differences in the draft recommendation before it is submitted to the U.S. State Department. The Columbia Basin Tribes would be happy to answer any additional questions you might have about the tribes' views on the progress of the regional consensus based recommendation now, or in the future. We look forward to completing this phase of the Treaty Review with the U.S. Entity and then working with them and the other regional sovereigns as the State Department considers the regional recommendation.

DEFINITION OF ECOSYSTEM-BASED FUNCTION ADOPTED BY THE COALITION OF
COLUMBIA BASIN TRIBES IN JUNE 2013

Since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the life blood of the Columbia Basin tribes. Columbia Basin Tribes view ecosystem-based function of the Columbia Basin watershed as its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its' length and breadth. Clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic ecosystem-based function and life itself. A restored, resilient and healthy watershed will include ecosystem-based function such as:

- Increased spring and summer flows resulting in a more natural hydrograph;
- Higher and more stable headwater reservoir levels;
- Restoring and maintaining fish passage to historical habitats.
- Higher river flows during dry years;
- Lower late summer water temperature;
- Reconnected floodplains throughout the river including a reconnected lower river estuary ecosystem as well as reduced salt water intrusion during summer and fall;
- Columbia River plume and near shore ocean enhanced through higher spring and summer flows and lessened duration of hypoxia; and,
- An adaptive and flexible suite of river operations responsive to a great variety of changing environmental conditions, such as climate change.

Improved ecosystem-based function in the Columbia Basin Watershed is expected to result in at least:

- Increased recognition, protection and preservation of tribal first foods and cultural/sacred sites and activities. First foods includes water, salmon, other fish, wildlife, berries, roots, and other native medicinal plants.
- An estuary with an enhanced food web and increased juvenile fish survival;
- Increases in juvenile and adult salmon survival;
- Decreased mainstem travel time for migrating juvenile salmon;
- Increased resident fish productivity that provides stable, resilient populations;
- Increased wildlife productivity that provides stable, resilient populations; and,
- Salmon and other juvenile and adult fish passage to historical habitats in the Upper Columbia and Snake River basins, and into other currently blocked parts of the Columbia River Basin.

COLUMBIA BASIN TRIBES¹

COMMON VIEWS ON THE FUTURE OF THE COLUMBIA RIVER TREATY

February 25, 2010

The present Columbia River power and flood control system operations are negatively affecting tribal rights and cultural interests throughout the Columbia Basin. The Columbia River Treaty is foundational to these operations.

¹The Burns Paiute Tribe, the Coeur d'Alene Tribe, the Confederated Salish and Kootenai Tribes of the Flathead Nation, the Confederated Tribes of the Colville Reservation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Cowitz Indian Tribe, the Kalispel Tribe of Indians, the Kootenai Tribe of Idaho, the Nez Perce Tribe, the Fort McDermitt Paiute Shoshone Tribe, the Shoshone-Bannock Tribes of the Fort Hall Reservation, the Shoshone Paiute Tribes of the Duck Valley Indian Reservation, and the Spokane Tribe of Indians, with support from the Columbia River Inter-Tribal Fish Commission,

Continued

The Columbia River Treaty——

- Was negotiated and continues to be implemented without regard to the tribes' unique legal and political relationship with the federal government.
- Is narrowly designed for the benefit of power and flood control.
- Does not include ecological considerations for critical tribal natural resources.
- Does not include considerations of critical tribal cultural resources.
- Created a power and flood control system that degraded rivers, First Foods, natural resources, and tribal customs and identities.
- Significantly affects tribal economies.
- Excludes tribal participation in its governance and implementation.
- Limits what can be accomplished with non-Treaty agreements to meet tribal resource priorities.

The Columbia River Treaty is under review by the U.S. and Canadian governments for reconsideration in 2014. Reconsideration of the Treaty provides an opportunity for the tribes to seek benefits not realized in 50 years of Treaty implementation.

The Columbia Basin tribes' interests must be represented in the implementation and reconsideration of the Columbia River Treaty. The Columbia River must be managed for multiple purposes, including——

- Respect for the sovereignty of each tribal government—each tribe has a voice in governance and implementation of the Columbia River Treaty.
- Tribal cultural and natural resources must be included in river management to protect and promote ecological processes—healthy and useable fish, wildlife, and plant communities.
- Integrate the tribes' expertise of cultural and natural resources in river management.
- Equitable benefits to each Tribe in priority to other sovereign parties in Columbia River management.
- Respecting and preserving the benefits of settlement agreements with tribes.
- Recognize tribal flood control benefits.
- Protecting tribal reserved rights to current and future beneficial uses, in a manner consistent with ecosystem-based management.

In order to realize these principles, the tribes' collective voices must be included in the implementation and reconsideration of the Columbia River Treaty.

The CHAIRMAN. Thank you. I'm sure our witnesses have seen that there is great Northwest interest in this matter with Senator Risch and Senator Cantwell having joined us.

Dr. Karier, you have been next in line. Please proceed right as you have Senator Cantwell here, who, of course, knows more about Northwest energy issues than really anybody else.

We welcome you and please proceed.

STATEMENT OF THOMAS KARIER, WASHINGTON STATE COUNCIL MEMBER, NORTHWEST POWER AND CONSERVATION COUNCIL

Mr. KARIER. Thank you, Mr. Chairman and thank you members of the committee.

My name is Tom Karier. I'm one of the two Washington State members of the Northwest Power and Conservation Council. I represent the State of Washington on the review of the Columbia River Treaty.

In 1964 the Beatles made their first trip to America, gasoline cost 30 cents a gallon and the United States and Canada inaugurated a treaty to share the benefits of the Columbia River. 50 years later the first two are a distant memory, but the Columbia River

Upper Columbia United Tribes, and the Upper Snake River Tribes tribal organizations have been working together to consider the effects and alternatives related to the Columbia River Treaty.

Treaty continues to govern the operations of several dams in Canada.

The Columbia River Treaty was a monumental achievement. Two countries cooperated to build 3 dams and operate those on one of the world's greatest river systems. Increased hydro power generation attributed to the down river generation, helped to stimulate economic growth throughout the region valued in billions of dollars. While flood risk in the lower river was not eliminated it was greatly reduced.

But the original Treaty recognized that an agreement to build and operate dams could not last forever and allowed for changes after 60 years. The world has changed since 1964 and so must the Treaty. We no longer need an agreement to build dams as we did in the 1960s. We need an agreement to operate the dams that respond to today's needs.

Discussion in the Northwest has identified what a modernized treaty can provide for the region. Washington State shares the same vision that the Chairman so succulently described in the beginning and which was added to by my colleagues.

In Washington State we need relief from the costly entitlement payments to Canada valued at \$250 million to \$350 million per year.

We need an agreement to protect citizens above and below the border from flood risk.

We need to factor in fish survival, the ecosystem, cultural resources and water supply when we modify the timing of flows across the border.

All of these areas can and must be addressed. We are working on a fair and balanced regional recommendation to the State Department that fully reflects these opportunities.

Washington State has a major stake in the success of this effort. The actual power benefits to the United States are estimated to be only one-tenth of the current entitlement payment to Canada. We're concerned because our ratepayers pay approximately 70 percent of that entitlement. 27.5 percent paid by the public utility districts in 3 counties in our State plus our State's share of the Bonneville Power Administration cost.

We have an immense financial and social investment in recovering fragile populations of salmon and steelhead. We would like to see treaty operations support and reinforce those investments.

Our cities and counties are at risk of flooding. We need to know that the U.S. and Canada are cooperating to ensure their safety.

We also rely on the river for irrigated agriculture that produces food for the world and navigation to move our production to markets.

Every year millions of tourists visit the Columbia River and Lake Roosevelt for recreation bringing economic benefits to local communities.

As we work to finalize our recommendations to the State Department we need to ensure that the interest of all sovereigns and all stakeholders are fairly represented. Once we find that balance, however, we expect the State Department to help the Northwest secure these benefits in the national interest even if this means deferring to U.S. entities accountable to Northwest sovereigns and

stakeholders in the actual negotiations. Our State and Governor stand ready to help in that process.

Finally, in order to preserve and expand the benefits of the Treaty we should do our best to maintain the collaborative spirit with our Canadian partners that have served both countries so well for so many years. We envision a future in which the citizens of both countries will look back at 2024 as the dawn of a modernized treaty, one that secures economic and environmental benefits for both countries for many decades.

Thank you, Mr. Chairman and members of the committee for the opportunity to testify on this important Northwest issue.

[The prepared statement of Mr. Karier follows:]

PREPARED STATEMENT OF THOMAS KARIER, WASHINGTON STATE COUNCIL MEMBER,
NORTHWEST POWER AND CONSERVATION COUNCIL

Thank you, Mr. Chairman. My name is Tom Karier and I am one of the two Washington state Council members who serve on the Northwest Power and Conservation Council. I also represent the State of Washington on the Sovereign Review Team, which was created to assist the U. S. Entity in reviewing and developing options for an informed recommendation to the State Department on whether it is in the best interest of the U.S. to continue, terminate, or seek to amend the Columbia River Treaty.

The Northwest Power and Conservation Council is an interstate compact comprising the states of Idaho, Montana, Oregon and Washington. The Council was authorized by Congress in the Northwest Power Act of 1980, P.L. 96-501. The Council's mission is to ensure the Pacific Northwest an adequate, efficient, economical, and reliable power supply while also protecting, mitigating, and enhancing fish and wildlife populations that are affected by the Columbia River Basin's hydroelectric system.

Mr. Chairman and members of the Committee, in 1964, the Beatles made their first trip to America, gasoline cost 30 cents a gallon, and the United States and Canada inaugurated a treaty to share the benefits from the Columbia River. Fifty years later, the first two are a distant memory, but the same Columbia River Treaty continues to govern the operations of several dams in Canada.

The Columbia River Treaty was a monumental achievement. Two countries cooperated to build and operate three major hydropower dams on one of the world's greatest river systems. Increased hydropower generation attributable to the Canadian dams paid for the construction of the projects and stimulated economic growth throughout the region valued in the billions of dollars. While flood risk in the lower river was not eliminated, it was greatly reduced.

But the original Treaty recognized that an agreement to build and operate dams could not last forever and allowed for changes after 60 years. The world has changed since 1964 and so must the Treaty. We no longer need an agreement to build dams, as we did in the 1960s; we need an agreement to operate dams that responds to today's needs.

Discussion in the Northwest has identified what a modernized treaty can provide for the region. We need relief from costly entitlement payments to Canada valued at \$250 million to \$350 million per year. We need an agreement to protect citizens above and below the border from flood risk. We need to factor in fish survival, the ecosystem, cultural resources, and water supply when we modify the timing of flows across the border. All of these areas can and must be addressed, and we are working on a fair and balanced regional recommendation to the State Department that fully reflects these opportunities.

Washington state has a major stake in the success of this effort. The actual power benefits to the United States are estimated to be only about one-tenth of the current entitlement payment to Canada. We are concerned because our ratepayers pay approximately 70 percent of the entitlement, including the 27.5 percent paid by public utility districts in three counties and our state's share of Bonneville Power Administration costs. We have an immense financial and social investment in recovering fragile populations of salmon and steelhead, and we would like to see treaty operations support and reinforce those investments. Our cities and counties are at risk of flooding, and we need to know that the United States and Canada are cooperating to ensure their safety. We also rely on the river for irrigated agriculture that produces food for the world and for navigation to move our production to markets.

Every year, millions of tourists visit the Columbia River and Lake Roosevelt for recreation, bringing economic benefits to local communities.

As we work to finalize our recommendations to the State Department, we need to ensure that the interests of all sovereigns and stakeholders are fairly represented. Once we find that balance, we expect the State Department to help the Northwest secure these benefits in the national interest, even if this means deferring to U.S. entities accountable to Northwest sovereigns and stakeholders in the actual negotiations. Our state and Governor stand ready to help in that process.

Finally, in order to preserve and expand the benefits of the treaty, we should do our best to maintain the collaborative spirit with our Canadian partners that has served both countries so well for so many years. We envision a future in which the citizens of both countries will look back at 2024 as the dawn of a modernized treaty, one that secured economic and environmental benefits for both countries for many decades.

Thank you, Mr. Chairman and members of the Committee, for the opportunity to testify on this important Pacific Northwest issue.

The views expressed in this statement are those of the Council members from the State of Washington and do not represent the Council as a whole.

The CHAIRMAN. Doctor, thank you.

Let me start and pose this question for you, Mr. Oliver, if I could. I think you heard me say that my view is Northwest ratepayers are paying more for electricity than they ought to due to the excessive size of payments Bonneville and others make to Canada. That's my assessment of where we are today.

Can you give us your assessment of how excessive the payment is? So get us into the numbers.

Mr. OLIVER. Sure. Sorry.

Yes, Mr. Chairman. I—our assessment has been that if you look at the value of the coordinated operations with Canada under the Columbia River Treaty and you just look specifically at the value of energy created with and without those dams and the coordination of that operation that we're presently paying about 90 percent more than we should be.

But that doesn't take into all the other—

The CHAIRMAN. What does that translate to in terms of dollars?

Mr. OLIVER. In terms of dollars, if you looked at both the energy and capacity value of the system, the coordinated operations, we feel, is valued probably in the \$25 to \$35 million per year range. Right now we're paying back close to \$250 to \$350 million worth of power and capacity annually.

So it's a significant increase. It's probably a couple hundred million dollar range that we're paying in excess. But that doesn't take into account all. There are other values of coordination. That was a very straight forward look at capacity and energy. There's also value of firming, the assured flows on the system for both flood risk.

The CHAIRMAN. Your take is Northwest ratepayers are paying \$200 million. You said a couple hundred million dollars more than they ought to.

Mr. OLIVER. Considering that one factor, there's other values of coordination. But I would say, you know, this is not, we haven't, you know, finished, you know, every analysis here that could be done in terms of the value of coordination. I would say it's substantial. Even if you look at other values of coordination for flood risk management purposes and the firming of power on our system, that it is likely a substantial overpayment that's being made right now.

I also want to be fair that, you know, when you look across the payments that have been made under the 50 years under the Treaty for flood risk management and power, that from the early portions of this agreement to the later portions. Probably the equity in those payments have flowed back and forth across the border. At this point I think Canada is gaining some substantial payments for power coordination that really need to be looked at further.

The CHAIRMAN. One of the big challenges on treaties is to be able to put these issues in something resembling English to people, to the region and Senators and others. Can you get back to me within a week and give us a number?

Mr. OLIVER. Sure.

The CHAIRMAN. So let's go on to the reasons why, again, if you can give it to us in language that we can explain to folks why this is the case.

My understanding is that the heart of the problem is that baked into this formula are a bunch of assumptions that really aren't relevant anymore. Is that the case?

Mr. OLIVER. Fundamentally what the formula does is it takes a look at the system in 1961 in the U.S. downstream and looks at what the value of having the treaty dams which regulate and release water on an assured basis for power production purposes verses without that storage. Over time a formula was developed. There were direct payments made by the U.S. for development of the dams in Canada through flood risk management payments.

As well as the U.S. purchased the first 30 years of downstream benefits on a payment. Direct payment was made by parties in the U.S. for that at that time.

Then when the formula re, sort of kicked back in after the 30-year purchase of that and we began calculating downstream benefits and the Canadian share which is called Canadian Time or one half of those downstream benefits. The formula looked at an expectation of what would happen with low growth in the U.S. and how that would be met. The original treaty negotiators, in the simplest terms from my point of view, expected the U.S. to develop thermal plants to meet low growth that would happen in the U.S. Under the formula if thermal plants were developed and hydroelectric generation in the U.S. could displace those thermal plants, non firm hydroelectric generation than the U.S. could displace the thermal plants.

It was considered to be firm and removed from the formula and did not have to be returned to Canada.

The CHAIRMAN. My time is up. I want to get one other question in.

In the response you give us with respect to the amount that you think constitutes the excessive payment that Northwest ratepayers are making, if you could also flush out why these assumptions that go into the formula, that are sort of baked into the formula, are causing the problem, I'd like that within a week.

Can you get that to us?

Mr. OLIVER. Yes, Mr. Chairman.

The CHAIRMAN. Very good.

One question for you, if I might, Dr. Karier.

So obviously we're going to make the case that Northwest ratepayers are making these excessive, you know, payments. What's in an arrangement for Canada in trying to come together with us on this Treaty?

In other words, this is something we feel strongly about. What's doable here? What's in Canada's interest in terms of how we try to strike this bargain and make them more willing to address the concern that Northwest ratepayers are going to have?

Mr. KARIER. Thank you, Senator.

Right now I think Canada believes they have a very good deal with the Treaty. So, I think, we have to recognize that that because of the archaic formula and the payments they're doing very well.

I think we need to start the conversation with a close look at what are the future benefits and future costs of the Treaty. Really it's a broad look at it. We need to look at power, when we work together, what's the net benefit to both countries, how do we split that net benefit?

We're no longer talking about comparing it to a world with no dams in Canada. We're now comparing what is our cooperation at to not cooperating with the dams there? So it's a different type of calculation.

There's also some benefits to the U.S. of coordinating with Canada on flood risk. We may need to consider purchasing assured flood storage in Canada. If we purchase that benefit we need to figure out what that's worth to pay Canada for.

So I think in an ecosystem it's similar. We identify the benefits and the cost and the payments. It may not look exactly like the payments that are made today. But it should be a fair allocation where they're fairly compensated for what——

The CHAIRMAN. Very good.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman.

Just let me ask a follow up question there to you, Doctor.

You've mentioned that you think Canada has got a pretty good deal here. What's the working relationship with Canada right now in terms of the treaty review? Have they been participating in any of the U.S. treaty review studies?

Mr. KARIER. So there was an initial study that the entity participated in jointly with Canada, their counterparts at BC Hydro. So there was cooperation initially there.

The sovereign review team, which has been meeting in the Northwest for the last 3 years with tribal, State and Federal entities, has been closed to Canadian participation. But at every public meeting that I've been to in the State of Washington, there's been somebody from Canada representing them in those forums.

I think Canada, historically, has been one of the best partners of the United States. I expect that to continue through this process of relooking at the treaty.

Senator MURKOWSKI. Thank you.

I want to make sure that I understand this ecosystem function that has been called for in the draft recommendation as a third primary purpose. I guess I'll direct this to you, General Kem.

How do you actually define ecosystem function? I think it was you, Mr. Oliver, that mentioned a concern about, OK, so who's going to bear the cost here?

Can you, kind of, walk me through better understanding of what we're talking about here with ecosystem function? Will there be things like, if you have allowed for compliance under the Endangered Species Act, are there available credits for that?

How does this work?

General KEM. Senator, I'll start it and then I'll let Steve take over.

Senator MURKOWSKI. OK.

General KEM. Because he has a little more additional details on it.

The ecosystem function, essentially, at this point over the last 20 years, both Canada and the United States have, as we sit down each year continuously working on what the flow regime is going to be for the year based on all the different things, has modified over time. We have released water differently based on the need for fish. That's not just the United States. There's two species in Canada that need certain flows. So Canada has an interest in doing that.

So collectively, and Steve can give you more numerical details, but about a million acre feet of water in a typical year is adjusted and modified. So between the two countries, we sit down and figure out what that should be and then what the impact on the financial re-numeration back and forth on that. That's really essentially how it's been working.

But that's been done under the auspices of the treaty. It fits, but it doesn't fit very well.

Senator MURKOWSKI. So we have been, we've actually been implementing this in practice, we just haven't given it either a specific name, ecosystem function, or a specific mission or purpose within the treaty itself?

General KEM. So what I would say what we've done is—ad hoc is the wrong term. But as we sit down for the annual flows based on mutual agreement between the two countries, they've mutually agreed to operate slightly differently. But what is always privy to that year is can you come to an agreement.

That's why it makes sense to make it so it's more predictable and planned.

Senator MURKOWSKI. Mr. Oliver, can you comment to that?

Mr. OLIVER. Yes. We have, for the past 20 years, I think since 1996 type of time period, been reaching annual agreements for flow migration with our Canadian counterparts to move a million acre feet of winter paragraphs over into spring and early summer for the purpose of providing flows for trout and white fish spawning below Keenleyside Dam in Canada and also to help juvenile out migration for some anads in the U.S.

We've also, through non-treaty agreements, reached an agreement on how to manage dry year strategies where in very low water years Canada will produce some additional water into the system for the U.S. to help, not only ecosystem, but power production in the U.S. under dry year conditions.

We also have agreements out of Libby Dam to operate on what's a variable flow. It's a bar queue operation which helps Kinney River White Sturgeon which is also an endangered species.

So there are several things that we do together with Canada by mutual agreement that have been happening for the past 20 years as our understanding of ecosystem issues has evolved and we've been able to implement those.

Senator MURKOWSKI. So if we provide for changes in the treaty itself that specifically address ecosystem function as a purpose do you think we get a better lock down in terms of who does bear the cost how we do provide for acknowledgement of assisting with endangered species?

Mr. OLIVER. Yes. I think that it is a very appropriate part of the long term dialog. If we can formalize and gain certainty for these operations that we've been doing on a bilateral basis. I think it is appropriate part of or an addition to the treaty because in fact we do coordinate the storage and release of water for ecosystem purposes as well as power and flood risk now with Canada. It's just not a formal part of the—or one of the primary purposes that was enunciated under the original treaty.

Senator MURKOWSKI. OK. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. In order of arrival, Senator Risch.

Senator RISCH. Thank you, Mr. Chairman.

I guess whoever is appropriate to comment on this. Probably I'll start with you, Mr. Oliver.

But my take on this is similar to what the Chairman indicated. That is it's no secret that the Canadians have the upper hand in this right now to the tune of, by your estimate, \$200 million. I understand that's probably a moving target and a very rough estimate.

But as I've reviewed the Treaty and how in the process and everything else, I think that this is going to be a really heavy lift to get the Canadians to try to do something about this. I mean, if I was sitting on the other side of the border, I'd look at this and say, guys look, here's the treaty. You know, where's my check?

That's compounded by the fact that, you know, \$200 million, a lot of money as we sit here and talk about it. But the fact is if you're an outsider looking at this, they know how cavalier that the Federal Government is about money. I mean, \$200 million is less than 10 percent of what we borrow in 1 day to pay our bills.

I mean, if you're an outsider looking at it in that function, you're going to say that's nothing. However to us, that's a huge deal. Give us our \$200 million.

How are we going to get them off that? That's my practical take on it. It seems to me that it's going to be a heavy lift.

Mr. OLIVER. I think it's a very good question. I would say, first of all, we have an extremely good working relationship with our Canadian counterparts. We have resolved issues throughout the first 50 years of this important international water management agreement. We share studies and we understand the system operations very well together.

So I think that certainly the Canadian perspective is that the coordination of this system provides a lot of benefits to the U.S. for

ecosystem, flood risk and power. Unfortunately the way the payment is made today is all by the Northwest Power ratepayers. So it's really all in the form of a power compensation. That component is far too high at this point.

The first 60 years we made a onetime payment for flood risk management. Now in 2024 the flood risk management terms and conditions change under the treaty. At that point we'll begin paying Canada when we need to call upon them for additional support for flood risk in the U.S. on an as needed basis. We would also now add compensation from the U.S. for that purpose.

So and if we do additional things for ecosystem function it is worth, I think, the U.S. looking at the total package of compensation to Canada and talking to Canada about what part should be by Northwest ratepayers, which part should be by the U.S. taxpayers and other interests.

So to some extent the Canadian compensation might be reduced from power, but filled in a bit by flood risk management payment for example or other types of compensation in terms of benefits that they mutually achieve for the Basin's ecosystem.

So I think we need to take a look at the full picture. Perhaps the total package for Canada still remains relatively robust and equitable as we look down the road.

Senator RISCH. I appreciate that. I, first of all, I agree with you. I mean, we have no better friends in the world really than the Canadians. We can all feel good and warm and fuzzy about that. I have no doubt they do too when they sit down at the table.

But money does strange things to people. When we talk about the benefits, I guarantee you when they sit down at the table they're going to have a list of benefits and attributing dollars to each one of them that they're going to say we got this all wrong. You guys owe us more than \$200 million.

So in any event I wish you well as we go forward. I wish us all well as we go forward. This is going to be a long process, Mr. Chairman.

Thank you very much.

The CHAIRMAN. Well stated. The whole point of having you quickly get us those numbers, Mr. Oliver, which is what I asked for in my questioning, is to get right at the very appropriate issues that Senator Risch has brought up.

This is not going to be for the faint hearted, this kind of discussion. We do enjoy our relations with Canada. But certainly as people begin to state their positions in treaties, there are going to be strong views expressed here. So get us those numbers within a week because that's going to be the key to getting at exactly the issues that Senator Risch just talked about.

Senator Cantwell.

Senator CANTWELL. Thank you, Mr. Chairman. Thank you for holding this important hearing.

It's great to be here with my Pacific Northwest colleagues. To me, I'm remembering many, many debates when I was in our State legislature about PNWER which was the economic partnership of five States and three provinces working together on many things. So I'm definitely one who believes that we think as a region, and

that there is an opportunity for us, as a region, to solve this problem.

So I appreciate everybody's attention to detail. I would just mention I felt this summer as I traveled in our State of Washington and throughout the region visiting some Native American issues on behalf of my colleague from Montana, you know, everywhere across the Pacific Northwest the tribes, farmers, businesses, everyone is very concerned about this treaty and what happens next. So it is of utmost importance.

I join my colleagues in saying that, yes, we need to have a, you know, returning our fair share is an important part of this treaty. The fact that, you know, flood control is an important issue. But this amount of, whatever it is, \$200 million, \$250 million, is something that we feel the impact of.

I have a question about that. But I wanted to point out that the draft recommendation does have a quote that says, "Inclusion of the ecosystem based function in the treaty and implementation of these functions should not prevent the region from achieving its objective of reducing U.S. power cost." So I just want to point that out.

It's an important goal. We can do both and still see a reduction here.

I did want to, I guess, if I could get parochial for a minute about Washington. That is that the added congestion from the delivery of entitlements threaten the reliability of power to one of our most populated parts, you know, of the State, Seattle, Puget Sound. That is because that is how we deliver that payment back.

So I wanted to ask either General Kem, Mr. Oliver, or Dr. Karier, do you think the Canadians will be willing to provide flexibility in how the entitlement gets delivered? Whether the U.S. entity is fully committed to exploring solutions to these transmission impacts?

Mr. OLIVER. So I should probably take that.

Yes, we completely understand that the delivery of the payment as made in physical capacity in energy and the Bonneville Power Administration reserves in the order of probably 14 hundred megawatts of capacity in our transmission lines which is allocated largely to the Western portion of our transmission system. It's been a concern to the utilities in the area of the Puget Sound in terms of that transmission obligation.

That agreement for that delivery of energy goes through 2024 as well. So it's something that we have made clear that we want to talk about as part of a future discussion with Canada about and by necessity because it does end in 2024, we need to and talk about what is the mutually best means for return of that entitlement post 2024.

Right now there's a very large capacity component in the order of 12 to 14 hundred megawatts of capacity and an energy component which is probably in the order of about 400 average megawatts of energy. Therefore it would be possible to look at if there were reductions in the obligation or even if there were not significant reductions in the obligation looking at making that return perhaps less peaky in nature.

So if it were flatter, you would need to reserve perhaps less transmission. So it's something that we can engage in conversations about as well. We completely understand the concerns about the congested transmission paths from time to time in the Puget Sound area. That will be certainly on our screen as we move forward in having this conversations to make sure that that issue is a part of the conversation.

Senator CANTWELL. But you agree that it's important given that we share, I think, something like 70 percent of the Canadian entitlement, that Washington State does?

Mr. OLIVER. Yes. It is important.

Senator CANTWELL. OK.

Mr. OLIVER. That, you know, that we look at assuring that there's firm assured transmission paths for utility and firm loads in the State of Washington as well as for the return of this delivery.

Senator CANTWELL. OK.

Anybody else want to add to that particular point?

Dr. Karier.

Mr. KARIER. The transmission will be a key part of that. The, you know, one of the issues for Washington State is also about water supply. We haven't mentioned much about that.

The States of Washington and Oregon are both willing to compensate Canada for water storage that can enhance our water supply in the central parts of our states. That's something that's not currently part of the treaty. It's another revenue source for the Canadians along with any power entitlement or flood risk payments. That is included in those recommendations as well.

Senator CANTWELL. How would that work?

Mr. KARIER. It would be somewhat of a commercial agreement with the Canadians to hold additional water for spring and summer irrigation periods and to let that water out, kind of, as needed for out of stream purposes. We would, the States of Washington and Oregon would compensate them for that, for those water flows.

Both states have policies that whenever we enhance water flows for out of stream use we also add some fraction of water to increase in stream flows to benefit fish as well. So it's kind of a win/win type of arrangement. That's another element that we would add into this negotiation.

Senator CANTWELL. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Cantwell.

Gentlemen, we're going to excuse you at this time. We're going to have votes here before long in the Senate.

Mr. Oliver, obviously getting those numbers from you within a week is absolutely key. I mean these, as Senator Risch has touched on, are going to be issues where the parties feel strongly about. We want to maximize on a bipartisan basis, the influence of this committee and the Senators, particularly those from the Pacific Northwest.

So we'll look forward to getting those in a week. We'd like the numbers in terms of what is the excessive amount that Northwest ratepayers are paying. Then have you detail this matter of the assumptions that are baked into the formula because that is going to

be key to positioning the Pacific Northwest as strongly as we can in the discussions that are going to happen.

Gentlemen, thank you. We'll excuse you at this time.

Our next panel.

Mr. George Cann, Executive Director of Washington Public Utility Districts in Olympia.

Mr. Norm Semanko, Executive Director and General Counsel of the Idaho Water Users in Boise.

Ms. Kristin Meira, Executive Director of the Pacific Northwest Waterways Association in Portland.

Mr. Gregory Haller, Conservation Director of Pacific Rivers Council.

If you 4 will come forward.

Alright.

As I tried valiantly with the last panel I know it's the temptation to just read every single word that is in that statement. But because things are going to be hectic, extra points for anyone who can summarize. We're going to make your prepared remarks a part of the record in their entirety. Why don't you proceed?

Let's start with you, Mr. Caan.

STATEMENT OF GEORGE CAAN, EXECUTIVE DIRECTOR, WASHINGTON PUBLIC UTILITY DISTRICTS ASSOCIATION, OLYMPIA, WA

Mr. CAAN. Thank you, Mr. Chairman. I'll try to behave and give my summary very quickly.

The CHAIRMAN. Great.

Mr. CAAN. So Chairman Wyden, members of the committee, good morning. My name is George Caan. I'm the Executive Director of the Washington Public Utilities District Association. I am here representing the Columbia River Treaty Power Group, a collection of over 80 members representing 6.4 million electric consumers in the Northwest.

We appreciate the opportunity to talk to your committee and to raise these critical issues. I want to thank you for your opening statements which I believe effectively framed this issue for the committee and for the rest of us.

I have 3 items that I would like to discuss with you today.

The Canadian entitlement.

Ecosystem measures.

The process going forward.

The Canadian entitlement needs to be rebalanced. As Dr. Karier mentioned, I represent the Public Utilities Districts, the 3 Douglas, Grant and Chelan along the Columbia River that pay 27 and one half percent of the Canadian entitlement. The balance of my membership relies on BPA, who pays for the rest.

Over the next 10 years it is expected that \$2.5 to \$3.5 billion will be spent on the Canadian entitlement. For every dollar that we send north, we receive about ten cents worth of value. This amount comes from our consumers.

The treaty is the only vehicle we have available to rebalance this entitlement. We look forward to a laser like focus on making this issue a high priority for the benefit of our consumers and Mr. Chairman, your constituents.

Ecosystem. We have a commitment in the Northwest to ecosystem measures that is illustrated by the \$13 billion we've already spent in the Federal Columbia River Power System biological opinions. In addition to that we have habitat conservation plans, Columbia Basin fish accords and FERC license agreements that all add to this effort.

These investments are proof our constituents desire to address ecosystem issues.

The proposed recommendation includes trans-boundary ecosystem measures. We think that they should be addressed since most of the measures, domestic ecosystem matters are domestic issues these trans-boundary ecosystems should be addressed with the following considerations.

First, they should acknowledge and account for the existing investments already made and will continue to be made in the Northwest.

These measures should, these trans-boundary ecosystem measures, should be based on sound science.

They should be measureable.

They should be achievable.

These trans-boundary ecosystem measures should also ensure that there's not any detriment to the Federal hydropower system in terms of its reliability, resiliency and flexibility.

Further, these trans-boundary ecosystem measures should not add any risk to the flood control regime designed to protect our communities.

Finally, any new additions to ecosystem issues should receive congressional authorization and Congressional appropriation through your committee.

Finally, the process going forward.

We appreciate very much the Corps and the BPA, Bonneville Power Administration, for turning what started out as a fairly opaque process into a much more transparent process that engaged the power group and other stakeholders to come up with a better recommendation but still not where we want to see the recommendation.

We want to publicly thank them for their efforts.

Further, we look forward to after the recommendation is made and the State Department decides what to do, that we have a meaningful role in providing information and data and analysis so we can help the United States be in a great position, a better position, to help influence the negotiations on behalf of the power group and other stakeholders.

We look forward to that meaningful participation.

We appreciate the opportunity to take before the committee to represent our views.

We appreciate the leadership this committee has taken to help us.

We are looking forward to helping to shape the future of the Columbia River Treaty.

Thank you again for this opportunity. I stand ready to answer any questions that you might have when we're done.

Thank you.

[The prepared statement of Mr. Caan follows:]

PREPARED STATEMENT OF GEORGE CAAN, EXECUTIVE DIRECTOR, WASHINGTON
PUBLIC UTILITIES DISTRICTS ASSOCIATION, OLYMPIA, WA

Thank you for the opportunity to present this testimony to the Committee on behalf of the Columbia River Power Group (Power Group). My name is George Caan and I serve as the Executive Director of the Washington Public Utility District Association.

I am providing this written testimony today in addition to my oral remarks that I will make during the hearing.

The Power Group, formed in 2011, consists of over 80 electric utilities, industry associations and other entities that depend on power produced by the Columbia River hydropower generating plants. Together, we represent at least 6.4 million electric customers in the four Northwest states that are directly impacted by the Columbia River Treaty. WPUDA is an active member of the Power Group. A list of the Power Group membership is provided at the end of my testimony.

The Power Group appreciates the Committee's interest in the future of the Columbia River Treaty and the Draft Recommendation to the Department of State that the U.S. Entity released for public comment on September 20 ("Draft Recommendation"). As the Committee is aware, the U.S. Entity is currently working to produce a final recommendation to the Department of State sometime in the next few months; the final recommendation will serve as a basis for possible negotiations with Canada to improve and modernize the Treaty.

We especially appreciate the Committee's interest in the Power Group's views on the Draft Recommendation and our views on how the U.S. Entity can improve that recommendation. On October 25 the Power Group submitted comments on the Draft Recommendation. My testimony follows the points made in those Power Group comments. The Power Group has been working with the U.S. Entity on improving the Draft Recommendation. Going forward, it is vital that Power Group members, along with Tribes and other regional stakeholders, continue to be involved in discussions on the future of the Treaty. This hearing is a key step in ensuring that involvement.

The Power Group has two primary concerns with the Draft Recommendation:

1. The U.S. Entity, in its attempt to craft a regional recommendation to the State Department, has failed to focus on and properly prioritize the fundamental need to reestablish an equitable distribution of power benefits between the U.S. and Canada. Unlike other resource priorities identified in the Draft Recommendation, this paramount issue—the amount of the Canadian Entitlement payment (together with determination of cross-border flood risk management cooperation post-2024)—can be resolved only between the U.S. and Canada.

2. To the extent the U.S. Entity recommends to the State Department that a renegotiated Treaty should formally adopt ecosystem functions as a "third primary purpose" of the Treaty, that recommendation must recognize and fully account for efforts already being undertaken under existing federal and state programs to protect fish and wildlife resources in the Columbia River and its tributaries. This means that any effort to expand the Treaty to include ecosystem function must not interfere with or adversely affect these ongoing programs, as they are publicly developed programs that have resulted in billions of dollars already invested by Northwest electric customers, and hundreds of millions of dollars in fish and wildlife measures each year. In addition, the Draft Recommendation should clearly assert that domestic ecosystem issues—such as fish passage at Grand Coulee and Chief Joseph dams—are outside the scope of any renegotiated Treaty.

For these reasons, the Power Group wants the Committee to know that we believe more work needs to be done to reach a regional recommendation.

REBALANCING OF THE CANADIAN ENTITLEMENT IS THE PARAMOUNT ISSUE TO ADDRESS
IN ANY TREATY NEGOTIATIONS WITH CANADA

The primary objective of engaging in any Treaty negotiations with Canada must be intensely focused on correcting the current inequity of the U.S. obligation under the Canadian Entitlement. Any regional consensus on a recommendation to the State Department hinges on this being the paramount issue in any Treaty negotiations. The Power Group believes that among the U.S. Entity, Sovereign Review Team, and other stakeholders there is consensus on the need to rebalance the Canadian Entitlement. Reducing the financial burden to Northwest electric customers, caused by a Canadian Entitlement vastly out of sync with current conditions, and returning the use of clean, renewable hydroelectricity to the Northwest, is clearly in the best interest of the United States.

Unfortunately, the Draft Recommendation seems to lose sight of this fundamental point by appearing to position ecosystem function as the leading issue to pursue in Treaty negotiations. From its opening paragraph in the introduction through the end of the document, ecosystem function is consistently and prominently listed before other Treaty purposes.¹ Most of the “General Principles” touch upon ecosystem function, with little discussion of other Treaty purposes.² The specific recommendations for ecosystem function are far more numerous and expansive than any other proposed Treaty purpose.³ Even where the Draft Recommendation sets forth proposals for other Treaty purposes, in some instances those recommendations appear to apply only to the extent they do not infringe upon the inclusion of ecosystem function proposals.⁴

The Power Group believes that the Draft Recommendation’s approach elevates a resource issue that is inherently domestic in nature (and addressed thoroughly under well-established federal and state statutory programs, some of which are under this Committees’ jurisdiction⁵) at the expense of the cornerstone issue—the Canadian Entitlement—that can be addressed only through negotiations between the U.S. and Canada via the Treaty. While the Canadian Entitlement is the financial lynchpin of the Treaty, the U.S. obligation under the Entitlement far exceeds the actual power benefit received. The U.S. Entity has estimated that the U.S.’s obligation under the Entitlement costs Northwest electric customers between \$250 and \$350 million in annual power benefits transferred by the U.S. to Canada,⁶ even though the U.S. Entity itself has estimated that one-half of the downstream power benefits received by the U.S. would be about one-tenth of the exported electricity (valued at \$25 to \$30 million annually).

This disparity is wholly unacceptable. At this stage of developing a regional recommendation to the State Department, the U.S. Entity—instead of exerting significant resources on domestic ecosystem issues—should be focused on analyzing the problems in the current methodology for calculating the Canadian Entitlement, identifying possible solutions for correcting these problems, and developing a recommendation for addressing these matters with Canada at the earliest possible time. By 2024, 60 years will have passed since the Treaty was ratified. The U.S. has a duty on behalf of its citizens, and Northwest electric customers in particular, to rebalance the Canadian Entitlement in a manner that ensures that the U.S. obligation under the Treaty is commensurate with the power benefits actually received.

Thus, any regional recommendation must prioritize rebalancing the Canadian Entitlement to reflect the actual power benefits of ongoing coordinated operation. This priority must appear on page 1 and throughout the U.S. Entity’s final recommendation to the State Department.

Correcting the Canadian Entitlement also is consistent with the Administration’s clean energy policy objectives. From that perspective, it is counterproductive to export between \$2 and \$3 billion in clean, renewable, domestically produced energy over the next decade. Moreover, if left unchanged, this situation will continue after

¹ See, e.g., Draft Recommendation at 2 (“[T]he region’s goal is for the United States and Canada to develop a modernized framework for the Treaty that ensures a more resilient and healthy ecosystem-based function throughout the Columbia River Basin while maintaining an acceptable level of flood risk and assuring reliable and economic hydropower benefits.” (footnote omitted)); id. at 3 (“Treaty provisions should enable the greatest possible shared benefits in the United States and Canada from the coordinated operation of Treaty reservoirs for ecosystem, hydropower, and flood risk management, as well as water supply, recreation” (General Principle 1)).

² Id. at 3-4.

³ Id. at 4-5.

⁴ See, e.g., id. at 6 (providing that storage and release allocations for water supply “should be made through a future domestic process and be consistent with water rights, including tribal reserved water rights and ecosystem-based function”); id. (“A modernized Treaty should consider impacts from climate change to all elements above, and create new terms in the post-2024 Treaty to allow the adaptive management of coordinated Treaty operations to better mitigate any impacts associated with climate change.”).

⁵ Projects and activities are subject to the substantive and procedural requirements of numerous federal and state programs such as the National Environmental Policy Act, Clean Water Act, Clean Air Act, Endangered Species Act, Federal Power Act, Fish and Wildlife Coordination Act, Magnuson-Stevens Fishery Conservation and Management Act, Pacific Northwest Electric Power Planning and Conservation Act, Coastal Zone Management Act, Federal Land Policy and Management Act, National Forest Management Act, state water quality standards, state water rights, and numerous other requirements.

Letter to Stephen Oliver, Bonneville Power Administration, and David Ponganis, U.S. Army Corps of Engineers, from The Columbia River Treaty Power Group at 6 (Aug. 16, 2013) [hereinafter, Power Group Comment].

⁶ See Iteration #2 Alternatives & Components: General Summary of Results at 33 (Apr. 10, 2013).

2024. By 2025, the current calculations for determining the Canadian Entitlement will require providing Canada approximately 450 MW average megawatts of energy and 1,300 MW of capacity each year. Correcting that inequity should be the highest priority of the State Department when pursuing any Treaty negotiations with Canada. Each year after 2024 in which the Canadian Entitlement remains unchanged is a significant loss of resources and value for the U.S.

Article VII of the Treaty defines downstream power benefits as the “difference in hydroelectric power capable of being generated in the U.S. with and without the use of Canadian storage.”⁷ Going forward post-2024, this is the wrong baseline. The appropriate level of value returning to Canada after the initial 60-year agreement must be based on the benefits of ongoing coordinated operations between the U.S. and Canada—not on a comparison of conditions pre-and-post dam construction. The Power Group supports a Canadian Entitlement that does not exceed one-half of the actual incremental power benefit achieved through a coordinated U.S./Canada operation as compared to non-coordinated operation.

As the 60th anniversary of the Treaty draws closer, the U.S. and Canada face an ideal opportunity to reevaluate the approach and methodologies utilized to determine downstream power benefits (and thus, the Canadian Entitlement). The current approach for determining downstream power benefits is based on the following question: What are the downstream power benefits resulting from the construction of the Canadian storage projects compared to the operation of a U.S. power system, as it stood prior to 1965, without the upstream Canadian storage dams? This question, however, is outdated and irrelevant when determining the Canadian Entitlement methodology that should apply on a going-forward basis. As the Canadian storage is now in place, and will continue to operate into the future, the fundamental approach to Canadian Entitlement determination should be redirected towards clearly determining the downstream power benefits resulting from a post-2024 Treaty assured operation (as opposed to the uncoordinated operation of each country’s hydro-power system). Moreover, the important experience gained and the lessons learned over the last five decades related to shortcomings and problems with the methodologies currently employed in the Canadian Entitlement determination should be strongly considered and used to ensure a more equitable, flexible, and robust downstream power benefit determination process exists going forward.

History has shown that no matter how sincere the effort to appropriately calculate the Canadian Entitlement might have been, a static formula based upon extrapolations of then-current conditions into the future was not an optimal approach to ensuring fair and equitable outcomes. The original methodology was not developed to capture the actual realized downstream power benefits created by the Treaty provisions so much as it was a compromise method that—based upon then-current expectations about the future—might have been expected to result in a fair “price” for each country relative to the benefits each was expected to receive. During original Treaty negotiations, there clearly was an expectation by both countries that the Canadian Entitlement would end well before 2024. The current methodology was a choice, based upon expert judgment in the early 1960s, that it would be a reasonable approximation to the actual power benefits created by Canadian storage based upon certain expectations as to how the future would unfold. However, the future unfolded much differently than expected.

Factors such as significantly lower than expected regional electric load growth, greatly expanded opportunities to market non-firm hydropower outside the region, a much wider slate of power supply resource types available for consideration than existed at the time of Treaty signing, and changing societal preferences regarding environmental and cultural issues have greatly affected the reasonableness of the current methods as an approximation of the actual downstream power benefits resulting from the original Treaty provisions, and thus the accuracy of the calculated Canadian Entitlement. The result was the severe imbalance in benefits received relative to costs paid by U.S. power consumers.

For these reasons, the Power Group believes that the U.S. Entity’s final recommendation to the State Department must clearly call out these methodological deficiencies and delineate a path to rectify them. The primary objective for the State Department in any Treaty negotiation should be to ensure that after 2024, the U.S. should pay Canada only one-half of the actual downstream power benefits of ongoing coordinated operations.

⁷ Article VII(1).

ECOSYSTEM FUNCTION REMAINS UNCLEAR

The Power Group appreciates the U.S. Entity's acknowledgement in the Draft Recommendation that any expansion of the Treaty to include ecosystem function must "formalize, provide certainty, and build on the many ecosystem actions already undertaken through annual or seasonal mutual agreements between the countries."⁸ The Power Group is concerned, however, that the ecosystem function recommendation, including programs under this Committee's jurisdiction, is vague and offers little certainty and structure. Without additional details, adding a sweeping and broad third primary purpose of the Treaty would lead to conflicting obligations and priorities. Further, the Draft Recommendation provides no explanation as to how an expanded Treaty would fit in with the numerous environmental programs currently in place within the Federal Columbia River Power System (FCRPS) and at the generating projects of Power Group members. These uncertainties could diminish, or threaten altogether, ecological benefits achieved after years of detailed studies, tireless investigations and negotiations, and at times, litigation. The uncertainties associated with ecosystem function, as presented in the Draft Recommendation, create significant risk to environmental resources and electric customers in the Northwest.

Members of the Power Group are proud of their environmental stewardship and the progress that their significant efforts have made in protecting and managing fish and wildlife resources. This is why, in our prior comment letter, we urged the U.S. Entity to "account for the significant ecosystem stewardship actions taken to date."⁹ By asking for this recognition, Power Group members were not merely seeking acknowledgement of our successful environmental programs, though it is important for stakeholders to have a robust understanding of the investments already undertaken. Rather, we are expressing concern that proposals to inject ecosystem functions at the Treaty level could have unintended consequences for existing, publicly developed programs in the U.S. that represent significant investments for electric customers. Treaty-mandated changes in flow regimes, fish passage operations, or similar requirements could conflict or interfere with ongoing programs in the Columbia River Basin and harm the very resources Treaty-imposed ecosystem functions seek to protect.

While the Draft Recommendation acknowledges the "[s]ignificant efforts to address ecosystem concerns" and that "the region, principally through its electric utility ratepayers, has invested hundreds of millions of dollars annually to achieve ecosystem improvements throughout the Basin,"¹⁰ the Draft Recommendation does not actually account for these ongoing programs. Instead, the Draft Recommendation only expresses a desire to "expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty"¹¹—without any accompanying analysis as to how this is to be achieved.

Thus, any final recommendation to the State Department related to ecosystem function, including those under this Committee's jurisdiction, should carefully account for all ongoing efforts in the Basin, to ensure that the recommendation does not inadvertently conflict with, undermine, or disrupt these efforts—particularly those that were developed in close consultation and negotiations with the public, many members of the Sovereign Review Team, other federal and state resource agencies and Tribes, and environmental advocacy groups. Such ongoing programs include, for example:

- The FCRPS Biological Opinion;
- Requirements of Federal Energy Regulatory Commission licenses, Habitat Conservation Plans, and other permitted activities of Power Group Members; and
- The Columbia Basin Fish Accords.

An important role for the U.S. Entity, as the technical expert on river operations, is to provide sideboards for this Treaty discussion by describing the operational constraints of the existing Columbia River system and its tributaries, their complexity, and the current constraints relating to flood control and flow augmentation. In addition, in order for this region to have a fuller understanding of the cost and benefit of ecosystem proposals, the U.S. Entity should provide insight into the costs, and the funding sources, for contemplated ecosystem proposals.

In this regard, the Power Group appreciates the U.S. Entity's recognition of the importance of the hydropower system to electric customers in General Principle 8

⁸Draft Recommendation at 3.

⁹Power Group Comment at 7.

¹⁰Draft Recommendation at 1.

¹¹Id. at 2.

of the Draft Recommendation.¹² We strongly support the statement that any modification to the Treaty should not prevent the region from achieving its objective of reducing U.S. power costs. In fact, General Principle 8 should specifically state: “The U.S. should rebalance the Canadian Entitlement and thereby reduce power costs. Any other modifications should not undermine that overall effect.” Even more important is the ability to use the clean, renewable hydroelectricity in the United States to meet customer needs, and assist with integrating other renewable resources, rather than sending an over-allocation of energy and capacity to Canada. Our electric customers and the Northwest economy are sensitive to energy prices, and residential electric customers and businesses have seen substantial rate increases over the past several years. The Northwest economy relies on the multiple uses of the Columbia River to support the vibrant mix of technology, trade and agriculture that contributes to this region’s quality of life.

With regard to the second sentence in General Principle 8, however, the use of the word “funding” seems inappropriate if it is suggesting that savings from a rebalanced Canadian Entitlement could be used to purchase ecosystem measures. The currency of the Canadian Entitlement is megawatts of hydropower energy and hydropower capacity. The Bonneville Power Administration may lack statutory authority to “spend” the value of any rebalanced Canadian Entitlement payments on new ecosystem issues. The Power Group recommends that the sentence be restructured to ensure the reference to “funding” applies only to “other sources,” such as federal appropriations.

COMMENTS ON SPECIFIC ECOSYSTEM FUNCTION ISSUES

The Power Group offered the following comments to the U.S. Entity in response to several specific ecosystem functions discussed in the Draft Recommendation:

- **Cross-Border Flows:** The Power Group believes that cross-border flows with Canada may be an appropriate topic for international discussions—specifically, the quantity and timing of flows across the border. Such discussions, however, would need to include sideboards. Changes in flows for ecosystem-based functions, for example, would need to be based on documented, scientifically proven analysis. Moreover, the effects of changes in flow on ongoing ecosystem projects and programs must be fully understood in order to prevent unintended negative impacts. The Power Group remains concerned that a shift in flows from winter to spring will reduce the amount of useable hydroelectric energy and capacity, potentially impact grid reliability, inhibit the system’s ability to integrate renewable generation and accelerate the need for fossil-fuel capacity, and contribute to high levels of total dissolved gas in the river during the spring migration period.

It is also important for the U.S. Entity to differentiate between cross-border flows and any other proposed flow augmentation that would rely solely on changes to U.S. project operations. Any discussion of flow augmentation that is not directly tied to cross-border flow discussions must be considered a domestic issue, and addressed in an appropriate domestic forum.

- **Non-Treaty Storage Agreements and Ecosystem Actions:** There may be advantages to both countries to bringing existing, non-Treaty actions (such as the non-Treaty storage agreements) into the Treaty discussions, with a goal of better integrating both Treaty and Non-Treaty storage agreements that govern river operations. The Power Group notes, however, that bringing ecosystem issues into the Treaty may trigger a more formal review and approval process.
- **Fish Passage at Grand Coulee and Chief Joseph Dams:** The construction and operation of fish passage facilities in the U.S. is a domestic issue, and should be addressed, if warranted, through current domestic laws and regulations. On this point, the Province of British Columbia’s recent Draft BC Recommendation states the following Principle: “Salmon migration into the Columbia River in Canada was eliminated by the Grand Coulee Dam in 1938 (26 years prior to Treaty ratification), and as such is not a Treaty issue. British Columbia’s perspective is that restoration of fish passage and habitat, if feasible, should be the responsibility of each country regarding their respective infrastructure.”¹³

In addition, because the study of fish passage into Canada would be subject to Congressional appropriations and authorizations, the Power Group believes it is inappropriate even to include a reconnaissance study in the Draft Recommendation. The Power Group has reservations about being able to satisfy our goal of reducing

¹²Id. at 4.

¹³British Columbia, Columbia River Treaty Review Draft BC Recommendation, Principle 11.

U.S. power system costs to our customers if fish passage at Grand Coulee and Chief Joseph is included in the recommendations.

OTHER CHANGES TO THE DRAFT RECOMMENDATION ARE WARRANTED

In addition to the Canadian Entitlement and ecosystem function issues described above, the Power Group believes the following changes should be incorporated into the final recommendation to the State Department:

- Flood Risk Management: Public safety should continue to be a high priority, and for this reason the Power Group believes that a modernized framework for the Treaty should maintain flood risk management similar to current levels. In addition, funding for flood risk management should be consistent with national flood risk policy of federal funding with applicable local beneficiaries sharing those costs as appropriate.
- Delivery of the Canadian Entitlement: The Power Group is also concerned about transmission issues associated with the return of the Canadian Entitlement, an issue that also must be addressed in any renegotiated Treaty. As a result of the U.S. Entity's decision not to build the Oliver-Chief Joseph transmission line, the Canadian Entitlement energy has been returned to Canada via transmission lines running through the heavily-populated Puget Sound area. In recent decades, this has created transmission congestion events and threatened service reliability. The Power Group agrees with the Draft Recommendation¹⁴ that the U.S. should seek a least-cost transmission strategy with Canada for any power returned to Canada after 2024, including reconsidering the flexibility of the return.
- Climate Change: Climate change is a recurring theme throughout the Draft Recommendation, which calls for "new terms in the post-2024 Treaty to allow the adaptive management of coordinated Treaty operations to better mitigate any impacts associated with climate change."¹⁵ The Power Group recommends that any climate change "adaptive management" or "mitigation" activities respond to a demonstrable adverse effect upon ecosystem resources or hydropower production attributable to climate conditions, such as a long-term change in flow patterns from baseline conditions, that can be supported with the best available scientific information.
- Irrigation and Water Supply: Any changes in flow regime under a renegotiated Treaty should not adversely affect existing water rights established pursuant to federal or state law. Any future decisions under the Treaty related to water supply must include those holding existing water rights.
- Navigation: In addition to hydropower operations, navigation also would be affected by increased spring flows and lower fall and winter flows. These changes could affect operational restrictions and dredging required in the lower Columbia River due to increased sediment distributions. To ensure that navigation concerns are fully analyzed and considered, more detailed study of the proposed shift in flow timing would be necessary.
- Domestic Matters to be Addressed Post-2013: The Power Group should be represented in any Domestic Advisory Forum created by the State Department. Our electric customers are responsible for paying the value of the Canadian Entitlement to Canada, and they will be directly impacted each year by a compounding lost opportunity if the Canadian Entitlement is not rebalanced.
- Additional Areas of Discussion for U.S. and Canada: The working draft recommendation issued June 27, 2013 stated: "If unable to achieve agreement in principle on key aspects by summer 2014, we recommend evaluating other options to create a modernized post-2024 Treaty, such as starting from a clean slate."¹⁶ This statement is excluded from the current Draft Recommendation. The Power Group strongly believes this language should be reinserted in the final recommendation to the State Department. The Treaty expressly recognizes the possibility of termination following the initial 60-year term, and the Power Group believes that the State Department should evaluate all available options to protect the interests of the U.S. when engaging with Canada on these important matters.

¹⁴ Draft Recommendation at 5.

¹⁵ Id. at 6.

¹⁶ Working Draft Recommendation at 6.

CONCLUSION

The Draft Recommendation must place the Canadian Entitlement “front-and-center” as the primary international issue that can only be addressed through the Treaty. Further, the Draft Recommendation remains inappropriately vague in terms of proposed ecosystem function, inviting uncertainty about the effects on hydropower operations and existing environmental programs.

The Power Group also believes that a regional consensus that seeks to rebalance the Canadian Entitlement and provides real return in value to the U.S. electric system is in the best interest of all citizens of the U.S., and particularly Northwest electric customers. At this time, the Power Group supports concluding the Sovereign Review Team process.

Again, we appreciate the Committee’s interest in this important issue. I look forward to answering any questions that Committee members may have either in oral testimony or in follow-up written form.

Columbia River Treaty Power Group Members

Alcoa Inc. • Avista • Benton PUD • Benton Rural Electric Association • Blachly-Lane Electric Cooperative • Canby Utility Board • Central Electric Cooperative, Inc. • Centralia City Light • Central Lincoln PUD • Chelan County PUD • City of Bonners Ferry • City of Cheney • Clark Public Utilities • Clatskanie People’s Utility • Clearwater Power Company • Columbia River PUD • Columbia Rural Electric • Consumers Power Inc. • Coos-Curry Electric Cooperative • Cowlitz PUD • Douglas County PUD • Douglas Electric Cooperative • Emerald PUD • Eugene Water and Electric Board • Fall River Rural Electric Cooperative • Ferry County PUD • Flathead Electric Cooperative • Franklin PUD • Glacier Electric Cooperative • Grand Coulee Project Hydroelectric Authority • Grant County PUD • Grays Harbor PUD • Harney Electric Cooperative • Idaho Consumer-Owned Utilities Association • Idaho County Light & Power Cooperative • Idaho Falls Power • Idaho Power • Inland Power and Light Company • Kootenai Electric Cooperative • Lewis County PUD • Lane Electric Cooperative • Lincoln Electric Cooperative • Lost River Electric • Lower Valley Energy • Mason County PUD #1 • Mason County PUD #3 • McMinnville Water and Light • Midstate Electric • Missoula Electric Cooperative • Monmouth Power & Light • Nevada Rural Electric Association • Northern Lights, Inc. • Northern Wasco County PUD • Northwest Requirements Utilities • Okanogan County Electric Cooperative • Okanogan County PUD • Orcas Power & Light Cooperative • Oregon Municipal Electric Utilities Association • Oregon Rural Electric Cooperative Association • Pacific County PUD#2 • PacifiCorp • Pacific Northwest Utilities Conference Committee • Pacific Northwest Waterways Association • Pend Oreille County PUD #1 • Peninsula Light Company • PNGC Power • Portland General Electric • Public Generating Pool • Public Power Council • Puget Sound Energy • Raft River Electric Cooperative • Ravalli County Electric Cooperative • Richland Energy Services • Salem Electric • Salmon River Electric • Seattle City Light • Snohomish County PUD • Springfield Utility Board • Tacoma Power • Tillamook PUD • Umatilla Electric Cooperative • United Electric Co-op, Inc. • Vigilante Electric Cooperative • Washington Public Utility Districts Association • Washington Rural Electric Cooperative Association • Wells Rural Electric • Western Montana Generating & Transmission Cooperative • West Oregon Electric Cooperative

The CHAIRMAN. Thank you. Very good.
Mr. Semanko.

**STATEMENT OF NORM SEMANKO, EXECUTIVE DIRECTOR &
GENERAL COUNSEL, IDAHO WATER USERS ASSOCIATION,
BOISE, ID**

Mr. SEMANKO. Mr. Chairman, committee members, Senator Risch, appreciate the opportunity to be with you today to talk about the Columbia River Treaty.

It took a while for us to, kind of, wrap our minds around what this thing was and whether we should care about it and why we should care about it. But we’re there now. We certainly appreciate the opportunity to be involved in the regional process, to provide input through this comment process and also, frankly, through the State of Idaho, Jim Yost, who is our Power Conservation Council

member sitting at the table on the Bureau of Reclamation, who is also involved at that table.

We're not there. But we appreciate having them there and having that opportunity to talk with them.

We also work closely with our sister organizations, the Oregon Water Resource Congress and the Washington State Water Resource Association. Their Executive Directors have asked me to share their comments with you. I've submitted that for the record along with my written statement. I hope that you'll have time to take a look at that.

I want to touch on just a few points.

First of all, ecosystem based function.

The obvious lack, in our view, of any regional consensus and I think as you review all the comments that have been submitted to the U.S. entity, you'll see this. Regarding the inclusion of ecosystem based function as a third primary purpose, and that's important, of the treaty suggests strongly that flood control and power production should remain the primary purposes of the treaty. At the same time, it's appropriate to recognize ecosystem based function as one of the "important elements of a modernized treaty" or additional purposes in the Columbia River Basin.

However, and this is the important part, because unintended consequences are what we're worried about. Ecosystem based function should not receive greater recognition or stature under the treaty than or adversely impact the other long standing authorized purposes in the Basin including irrigation, water supply, recreation and navigation.

Already this morning we've heard a difference of views from the government panel about what including ecosystem based function is. Is it a co-equal, primary purpose that's equal to the other two and in fact needs to be listed first in the treaty recommendation or is it to get it on the radar screen where it has not been, as the Chairman astutely mentioned at the beginning of this hearing? Those are two completely different things.

As we've already heard here today the United States has been able to cooperate with Canada to provide robust ecosystem based function benefits under the treaty without formally elevating the purpose above the other authorized purposes in the Basin. If it becomes a primary purpose what more needs to be added?

As a matter of Federal law under an approved treaty, if this does go through that process, or whether it's through protocols or exchanges and notes, what standing and what unintended consequences have we now created? That's a very important point.

While ecosystem based functioning is a recognized purpose and other environmental laws need to be complied with the treaty, should not be used as an independent mechanism to provide for additional environmental regulations or requirements. Such an end run would be inappropriate and unfair to those in the Basin who are impacted by and pay the costs of those efforts.

I want to mention, just for a minute, flood risk management. This hasn't been discussed much this morning. The Canadian entity has taken the position that beginning in 2024 all U.S. storage projects in the Basin must be utilized for system wide flood control to demonstrate effective use before Canadian reservoirs can be

called upon. The U.S. entity has provided a white paper identifying storage that would be available in 8 projects where that storage is currently available for system wide flood control. It appropriately recognizes the limitations of authorizations on other projects. The projects that we rely upon for irrigation, for storage above Brownlee Reservoir in Idaho are authorized primarily for irrigation. They're not part of the system wide flood control.

We think the U.S. has a right on this. We know the Canadians have a different position and look forward to that discussion occurring.

Finally, with regard to irrigation.

While it's appropriate to recognize the generic term of water supply as an authorized purpose in the Basin. Irrigation, which is more than just supplying water, it's growing crops to feed the Nation and the world and to provide fiber as well. It needs to be recognized specifically.

Irrigation for crop production and other purposes has a long history throughout the Basin. Certainly with the Columbia River Basin projects started about the time the treaty was entered into, supported by Federal laws and water storage projects.

In addition the final recommendation and I think that it will now, should include additional detail to make clear that allocation of any additional water coming from Canada is a matter of State law, not Federal or international law. Congress has always deferred to the states on allocation and management of water. That should continue.

I appreciate the opportunity to be here and look forward to answering any questions that you may have.

[The prepared statement of Mr. Semanko follows:]

PREPARED STATEMENT OF NORM SEMANKO, EXECUTIVE DIRECTOR & GENERAL COUNSEL, IDAHO WATER USERS ASSOCIATION, BOISE, ID

INTRODUCTION

Chairman Wyden and members of the Committee, my name is Norm Semanko. I am the Executive Director and General Counsel for the Idaho Water Users Association (IWUA). I appreciate the opportunity to submit this testimony on behalf of IWUA regarding the Draft Regional Recommendation for the Columbia River Treaty.

IWUA is a non-profit corporation representing more than 300 irrigation districts, canal companies, water districts, ground water districts, public and municipal water providers, hydroelectric companies, aquaculture facilities, agribusinesses, professional firms and individuals, dedicated to the wise and efficient use of our water resources. Our members deliver irrigation water to more than two and a half million acres. Many of our members also deliver water for municipal and domestic uses throughout the State.

IWUA is affiliated with the National Water Resources Association, of which I am a Past President and currently serve as Federal Affairs Committee Chairman. I am also a past member of the Western States Water Council, which advises the Western Governors' Association on water-related matters, and a member of the Advisory Committee for the Family Farm Alliance, a grass-roots organization representing farmers and ranchers that receive water from Bureau of Reclamation projects in the West.

IWUA works closely with its sister organizations in the States of Oregon and Washington—the Oregon Water Resources Congress and the Washington State Water Resources Association—on Columbia Basin issues, including the Columbia River Treaty review. They have authorized me to submit a copy of their recent comments on the Draft Regional Recommendation with my written statement. I request that those comments be included in the official hearing record, along with the com-

ments submitted by Idaho Water Users, which I have also submitted with my written statement.

TREATY REVIEW PROCESS

IWUA appreciates the efforts of the U.S. Entity—the Bonneville Power Administration and the U.S. Army Corps of Engineers—to provide an opportunity for review and comment on the Draft Regional Recommendation, as well as the Working Draft earlier this year. We also appreciate the role that the U.S. Bureau of Reclamation has played in this process, as well as the State of Idaho. It has been important for water users to have those voices at the table in the Sovereign Review Team process.

IWUA has attended and participated in listening sessions, open houses, webinars, and hearings on the Columbia River Treaty review in Spokane, Grand Coulee Dam, Pasco, Portland and Boise. We have submitted comments throughout the process, including general comments on the Working Draft and very specific comments and suggested language changes for the Draft Regional Recommendation. Those specific language changes are included in the additional materials that I have submitted for the record. Last week, we met with the U.S. Entity in Boise to discuss our comments on the Draft Regional Recommendation.

IWUA urges the U.S. Entity and Department of State to continue the dialogue with Columbia River Basin stakeholders, including IWUA, as the process moves forward.

IDAHO WATER USERS COMMENTS

IWUA submitted joint comments on the Draft Regional Recommendation with the Committee of Nine, which is the official advisory committee for Water District 1, the largest water district in Idaho. A copy of these comments has been submitted for the record with my written statement. I will provide you with a brief overview of our concerns and suggestions below, grouped by topic.

Idaho, as part of the arid-West, has always faced water supply challenges. In the past, we have worked with the Bureau of Reclamation to build great irrigation water storage and delivery projects including the Minidoka and Palisades Projects of eastern Idaho, the Boise Project on the Boise and Payette Rivers in the southwest part of the State, the Owyhee Project, which we share with eastern Oregon, and the Lewiston Orchards and Rathdrum Prairie Projects in North Idaho, along with several others. This has allowed our part of the world to be irrigated and bloom, providing food and fiber for the nation, and also providing water for ranches and domestic users throughout the State. It is critical that these supplies be protected as part of the Columbia River Treaty review process.

Regional Goals for the Columbia River Treaty

The purpose of the Columbia River Treaty is to reduce impacts from flooding and to increase power production. The U.S. has proposed “modernizing” the Treaty to include ecosystem-based function as a third primary purpose of the Treaty, while recognizing other additional elements such as future water supply, recreation and navigation needs. Irrigation is another important, authorized purpose, which should be expressly recognized in the final Regional Recommendation to the U.S. Department of State.

The obvious lack of any regional consensus regarding the inclusion of ecosystem-based function as a third primary purpose of the Treaty suggests strongly that flood control and power production should remain the primary purposes of the Treaty. At the same time, it is appropriate to recognize ecosystem-based function as one of the “important elements of a modernized Treaty”, or additional purposes authorized in the Columbia River Basin, as evidenced by the ongoing implementation of the Endangered Species Act and other environmental laws. However, ecosystem-based function should not receive greater recognition or stature under the Treaty than, or adversely impact, the other long-authorized purposes in the basin, including irrigation, water supply, recreation and navigation.

As noted in the Draft Regional Recommendation, the United States has been able to cooperate with Canada to provide ecosystem-based function benefits under the current Treaty without formally elevating this purpose above the other authorized purposes in the basin. We see no need to make the dramatic change proposed in the Draft Regional Recommendation and elevate ecosystem-based function above all of the other authorized purposes in the basin. There is certainly no regional consensus on that point.

Ecosystem-based Function

While ecosystem-based function is a recognized purpose in the Columbia River Basin, pursuant to implementation of the Endangered Species Act and other envi-

ronmental laws, the Treaty should not be used as an independent mechanism to provide for additional environmental regulations or requirements. Flow augmentation and other forms of ecosystem-based function are currently provided for pursuant to very specific and rigorous adherence to environmental and conservation laws, including extensive federal court litigation. The Treaty should not frustrate or contradict those efforts, but it also should not be used to expand current requirements. Such an “end-run” would be inappropriate and unfair to those in the basin who are impacted by and pay the costs of those efforts.

The Treaty should not place any additional burdens on U.S. water and storage projects. U.S. environmental laws, including the Endangered Species Act, have been implemented extensively in the Columbia River Basin as the result of numerous listing of salmon and other species. Various biological opinions issued by the National Marine Fisheries Service have placed considerable constraints on federal water project operations, including spill and flow augmentation. Agreements have been entered into between various parties in the region, including States, Tribes and those who operate or benefits directly from the federal water projects. The Treaty should not be used as a vehicle to place additional restrictions or limitations on these U.S. projects., including any proposed reintroduction of listed species.

In particular, Idaho Water Users, the Nez Perce Tribe, the State of Idaho and the federal government are all parties to the historic Nez Perce Water Rights Agreement of 2004, also referred to as the Snake River Water Rights Settlement Agreement. The Agreement was approved by Congress in 2004, as well as the State of Idaho and the Nez Perce Tribe during 2005. The Agreement, which has since been the basis for the proposed actions of the federal agencies in the Upper Snake River Basin above Brownlee Reservoir, provides the amount and method for obtaining water for flow augmentation from federal water storage projects in the area.

The Agreement has specifically been approved by Congress and must be adhered to by the United States. There is no basis for adding to, changing or adversely impacting the Agreement as part of the Treaty or the review process. Any modification of Upper Snake River operations may jeopardize the delicate balance struck between the parties in 2004, as part of a 30-year agreement, which includes an option to renew for an additional 30 years. We urge the U.S. Entity to affirmatively recognize the Agreement and its provisions in the final Regional Recommendation to the U.S. Department of State.

Flood Risk Management

The Canadian Entity has taken the position that, beginning in 2024, all U.S. storage projects in the Columbia River Basin must be utilized for system-wide flood control to demonstrate “effective use”, before Canadian reservoirs can be “called upon” to provide flood control space.

The U.S. Entity previously prepared a white paper, identifying storage that would be available for system-wide flood control in the event of a “called upon” scenario post-2024. As part of this analysis, appropriate consideration was given to the Congressionally authorized purposes of the respective storage projects.

In particular, storage projects in the Upper Snake River Basin above Brownlee Reservoir are not authorized for system-wide flood control. They are authorized almost exclusively for irrigation, with some hydroelectric, local flood control and other considerations included in the various Congressional authorizations, as documented in the U.S. Entity’s white paper.

The U.S. Entity is correct to limit system-wide flood control activities to those eight identified projects within the Columbia River Basin that are specifically authorized for such purposes. On this point, we believe there is a strong regional consensus. This limitation should be expressly recognized and included in the U.S. Entity’s final recommendation to the Department of State.

Irrigation, Water Supply and State Water Law

While it is appropriate to recognize Water Supply as an authorized purpose in the basin, irrigation should be specifically included, as well. Irrigation for crop production and other purposes has a long history throughout the basin, supported by federal laws and water storage projects.

In addition, the final recommendation should include additional detail to make clear that water allocation is a matter of state, not federal or international, law. The federal government has a long and purposeful history of deferring to the states on water allocation and management. This should be specifically recognized and adhered to in the final recommendation.

CONCLUSION

The water user community in Idaho is committed to seeing this process through to the end. The potential consequences are too important to leave to chance. We urge the U.S. Entity and the U.S. Department of State to incorporate our suggestions into their future work on the Treaty.

Chairman Wyden and members of the Committee, thank you once again for the opportunity to provide this testimony regarding the Draft Regional Recommendation for the Columbia River Treaty.

The CHAIRMAN. Thank you very much.
Ms. Meira.

STATEMENT OF KRISTIN MEIRA, EXECUTIVE DIRECTOR, PACIFIC NORTHWEST WATERWAYS ASSOCIATION (PNWA), PORTLAND, OR

Ms. MEIRA. Thank you, Mr. Chairman, Senator Cantwell, Senator Risch. I'm Kristin Meira. I'm the Executive Director of the Pacific Northwest Waterways Association. I appreciate the opportunity to provide the navigation perspective on the Columbia River Treaty.

As you know our Nation's economy relies on a safe, efficient and cost effective, multimodal transportation system that includes road, rail, air and water. The Columbia/Snake River system is a critical piece of the Nation's water infrastructure portfolio.

We're an export heavy system. We play a very important role in balancing the Nation's trade deficit. We're the top export gateway in the country for wheat. We're No. 2 in the country for soy, No. 1 on the West Coast for wood exports and mineral bulks, major import and export gateway for autos. This is a significant navigation infrastructure asset.

We had over 42 million tons in international trade move through the waterway in 2010 valued at over \$20 billion and a very conservative estimate of the number of jobs that are reliant just on the deep draft, lower Columbia River channel are 40 thousand. That's an old figure that should be updated.

We feel that this significant navigation infrastructure asset should be considered when any changes are proposed for how we manage water flow on the Columbia/Snake River system. We've had substantial infrastructure investments in the deep draft, lower Columbia River.

You're well aware of the channel deepening project that we completed in the fall of 2010 that was a \$200 million project.

We just had \$60 million in new lock gates be installed on our inland system.

We've had repairs to the jetties. We have more on the horizon.

This is a system where the entire region has pulled together and voted that this is an important transportation gateway.

Navigation stakeholders are most concerned with the assumption in the draft recommendation that existing spring and summer flows should be augmented through an expansion of existing treaty or present treaty agreements. Increased flows equal increased shoaling which equals increased dredging costs.

The draft recommendation further suggests that these increased flows would be accompanied by lower flows in the fall and winter. This provides even less water over which to navigate these increased shoals.

The most recent example we have of the impact of high flows occurred in spring and summer of 2011. Within 6 months of the completion of the Columbia River channel deepening project these high flows resulted in severe shoaling that could not be adequately addressed by the Corps existing funding and their existing dredging program. As of last month a consistently maintained 43 foot, lower Columbia River channel had still not been provided and restored.

We're very concerned about the availability of funding to address similar shoaling events which may result from any changes to current river operations and current flows.

We're also very concerned about potential impacts to add other navigation infrastructure. We have an extensive pile dike system that helps to guide the Federal navigation channel and guide the sediments. It's already in serious disrepair.

We're also very concerned about any potential weakening of the base of the Columbia River jetties at the mouth of our system. They've essentially been described as a cork in the bottle. If we have an event at one of those Columbia River jetties, that closes the entire system and the gates, all of the investments that we've made over the years.

Higher flows that occur more frequently would also hinder the efficiency and the safety of barging. High flows reduce the number of barges that the towboats can safely handle in swift currents. This impacts how our wheat flows and how our other shipments move on the system.

High flows also impact whether our Columbia River pilots are able to safely move deep draft vessels on the lower Columbia River and bring them in to anchor.

All of this system needs to work together. We need to have the flows that the navigation system has been built upon in past decades.

I want to conclude by noting that we've met several times with the U.S. Army Corps of Engineers. We sincerely appreciate their dedication and the professionalism of both the Corps and BPA, who've been tasked in coordinating this significant regional effort.

I will note though that navigation, of course, has not been part of the sovereign review team. We would encourage greater stakeholder participation in the future to ensure that we're capturing all these potential impacts to any proposed changes that the region considers.

I'll finish by noting that we strongly support a vibrant river system that includes all the benefits we enjoy including to our fish. We look forward to being a part of the conversation going forward.

[The prepared statement of Ms. Meira follows:]

PREPARED STATEMENT OF KRISTIN MEIRA, EXECUTIVE DIRECTOR, PACIFIC
NORTHWEST WATERWAYS ASSOCIATION (PNWA), PORTLAND, OR

Mr. Chairman, Members of the Committee,

Good morning. My name is Kristin Meira and I am the Executive Director of the Pacific Northwest Waterways Association, or PNWA. PNWA is a non-profit trade association that advocates for federal policies and funding in support of regional economic development. Our membership includes over 130 public ports, navigation, transportation, trade, tourism, agriculture, forest products, energy and local government interests in Oregon, Washington, Idaho and northern California.

I appreciate the opportunity to provide the perspective of the navigation community in the Northwest as it relates to the Columbia River Treaty.

BACKGROUND ON THE COLUMBIA SNAKE RIVER SYSTEM

Our nation's economy relies on a safe, efficient and cost-effective multi-modal transportation system. That system includes road, rail, air and water.

The Columbia Snake River System is a critical piece of the nation's water portfolio, providing benefits not just to the Pacific Northwest, but far into the heartland of our country. We are an export heavy system, and play an important role in balancing the nation's trade deficit. The Columbia River is the nation's number one gateway for the export of wheat and barley, and when you consider the movement of soy and other grains, our river system is the third largest grain export gateway in the world. We also lead the West Coast on wood exports and mineral bulk exports.

The Columbia Snake River System is essentially a river highway. It includes our 105-mile deep draft Columbia River channel from Astoria to Portland, Oregon. From there, a 360-mile inland barging channel stretches from Portland, Oregon to Lewiston, Idaho, with a series of eight locks along the way. These are the highest lift locks in the United States, and are among the highest in the world, with the John Day lock topping out at 110 feet. There are also three large jetties at the Mouth of the Columbia, hundreds of pile dikes, and many other critical pieces of federal and port-owned infrastructure which ensure safe navigation and the free flow of trade.

Over 42 million tons of international trade moved on this waterway in 2010, valued at over \$20 billion. A conservative estimate of the jobs directly tied to the deep draft navigation channel finds that 40,000 individuals rely on this waterway for their livelihood. This economic benefit is expected to increase in the future, supporting even more jobs as additional companies make use of the river system.

This waterway is a significant federal navigation infrastructure asset, and any potential changes which may impact its efficiency should be evaluated thoroughly. Substantial federal investments have been made in both the deep draft Lower Columbia River as well as the inland barging channel and locks. The most recent examples include the \$200M Columbia River channel deepening project, \$60M for three new downstream lock gates on the inland system, and significant Columbia River jetty repairs. A major rehabilitation of the Columbia River jetties is on the horizon, along with additional lock investments and ongoing annual maintenance dredging on the Lower Columbia and at the Mouth of the Columbia.

COLUMBIA RIVER TREATY CONCERNS

Despite the national significance of navigation on the Columbia Snake River System, the current Draft Regional Recommendation contains only two sentences devoted to this authorized purpose. The navigation community has repeatedly urged the Entity to recognize the connected nature of flood risk management, flows for ecosystem benefit, and the ability to provide the federally authorized navigation channel and river conditions which will allow for safe and reliable navigation.

Of particular concern is Section One in the "Domestic Matters to be Addressed Post-2013" section, which highlights the purported agreement by the Sovereign Review Team that "greater ecosystem flows" are desirable and should be examined. The note that "if a process is initiated, it will be a comprehensive approach, subject to public input, that addresses all opportunities to manage high flow events, including floodplain management, Columbia Basin reservoir operations, and strategic improvements to existing levees and the need for additional levees" leaves out any mention of impacts to navigation, and potential mitigation measures. This is a major oversight, and must be corrected.

Navigation stakeholders are most concerned with the assumption in the Draft Recommendation that existing spring and summer flows should be augmented through an expansion of present Treaty agreements. These augmented flows will increase shoaling which will, in turn, increase dredging costs. The document further posits that these increased flows would be accompanied by lower flows in the fall and winter. This will provide even less water over which to navigate these increased shoals. Navigation stakeholders have repeatedly expressed their concern with higher flows in the spring and summer, and lower flows in the fall and winter. Their concerns focus on both increased commercial handicap and decreased operational safety.

The "ecosystem flows" referred to throughout the Draft Recommendation are accompanied by no scientific explanation or reference. These suggested "ecosystem flows" may have significant impacts on navigation and navigation structures on the Columbia Snake River System. Navigation stakeholders have had the opportunity to meet with U.S. Army Corps of Engineers staff and contractors to provide feedback, and to urge a more comprehensive evaluation of the potential impacts to navigation.

gation. We strongly encourage the U.S. Entity and Sovereign Review Team to take into further consideration the following concerns.

POTENTIAL IMPACTS TO FEDERAL NAVIGATION PROJECTS

When evaluating the costs and benefits to the federal government for any changes to current river operations, our membership strongly encourages the U.S. Entity to fully capture the potential costs to existing federal navigation programs. Of particular concern is the increased sedimentation that will inevitably occur on the Columbia Snake River System with an increase in spring and summer flows. The most recent example of the impact of high flows was experienced by the region in 2011. Within six months of the Columbia River channel deepening completion in November 2010, high river flows in 2011 resulted in severe shoaling that could not be adequately addressed by the level of funding provided to the Corps of Engineers' federal dredging program. As of October 2013, a consistently maintained 43' channel has still not been restored. We are concerned about the availability of funding to address similar shoaling events which may result from changes to river operations.

Stakeholders have additional concerns regarding potential impacts to other federal navigation infrastructure. The Columbia River pile dike system which helps guide the federal navigation channel and the movement of sediment is already in serious disrepair. This system would likely be undermined by higher flows that occur with greater frequency. Our membership is also very concerned about any potential weakening of the base of the Columbia River jetties, the rubble-mound structures that protect the entrance to the system from powerful Pacific storms. A seven-year, \$257 million jetty rehab project will hopefully begin in 2014. Any impact to the jetty structures below the waterline would be devastating and costly to the ports and communities along the 465-mile Columbia/Snake river channel, and to a critical national transportation infrastructure investment.

ABILITY TO SAFELY AND EFFICIENTLY NAVIGATE

The ability of Northwest businesses to compete in international markets relies on timely and cost-effective transportation of goods on the river. Higher flows that occur more frequently will also hinder safe navigation, as well as the efficiency of barging in the federal navigation channel. High flows reduce the number of barges that can be safely handled by a towboat in swift currents, including around the dams where spill operations may be in effect. Higher flows for longer periods of time will undermine the ability of barge operators to move full tows, which will impact shipments of Northwest agricultural products, petroleum, and all other cargo handled on the Columbia Snake River System. Detailed information from the Northwest towboat community has been provided to the Corps on this issue.

PNWA members are also concerned about the impact flows may have on deep-draft ship handling on the Lower Columbia River. Higher flows may impact vessel handling, transit time, and the ability to safely anchor. Additionally, lower flows will exacerbate the lack of available draft that is already occurring on the Lower Columbia River. Operating the river at a lower level for extended periods will have significant adverse impacts to the regional economy, and will reduce the ability of U.S. growers and manufacturers to compete in international markets.

While we realize the flows being modeled may be within the authorized operating ranges of storage projects, these flows will represent a significant departure from the historic highs and lows anticipated by the navigation community on the river system. It is critical to assess the full economic impacts to each part of the river system before institutionalizing a new regime of higher high flows and lower low flows.

In earlier meetings with the U.S. Entity, navigation stakeholders have requested analysis of the potential impacts to the Corps' federal dredging program and other infrastructure, which are very likely to occur if changes to the current approach for managing spring high flows and fall low flows are pursued. We have reviewed this analysis, and noted that several of the flood control approaches being modeled by the U.S. Entity would result in an increased occurrence of flows which have historically presented significant challenges to safe navigation and the Corps' ability to maintain the deep draft Lower Columbia River navigation channel.

To date, the potential financial impacts to the Corps dredging program have not been evaluated. Given the significance of this navigation infrastructure to the Northwest and the nation, we feel it is critical to quantify how much additional federal funding will be required to maintain the deep draft Columbia River if changes are proposed to the current approach to managing flows on the river system. Failure to capture these increased costs would result in an incomplete picture of the burdens which would be shouldered by the U.S. taxpayer after 2024.

We have met several times with the U.S. Entity since autumn 2012. However, our participation has been limited, as the navigation community is not part of the Sovereign Review Team of federal agencies, states and tribes who are guiding development of the U.S. Entity recommendation. Greater stakeholder involvement in future Columbia River Treaty discussions and decision-making forums is essential to understanding comprehensive impacts to navigation.

Thank you for the opportunity to testify. I welcome any questions you may have.

The CHAIRMAN. Thank you.

Mr. Haller.

**STATEMENT OF GREGORY HALLER, CONSERVATION
DIRECTOR, PACIFIC RIVERS COUNCIL**

Mr. HALLER. Chairman Wyden, Ranking Member Murkowski, Senator Cantwell and Senator Risch, thank you for the opportunity to testify on the Columbia River Treaty 2014/2024 Review Process.

My name is Gregory Haller. I'm the Conservation Director for the Pacific Rivers Council or PRC. PRC is based in Portland, Oregon. We're a regional conservation group that works throughout the Columbia Basin in Northern California to protect rivers, their watersheds and the native aquatic species that depend on high quality, functioning ecosystems.

On the main points of my testimony, notably for modernizing the treaty by including ecosystem function as a third primary purpose, I also speak today for the Columbia River Treaty Conservation Caucus consisting of environmental and renewable energy advocacy organizations with several million members nationwide and tens of thousands in the Northwest.

In my testimony this morning I will discuss 5 issues for your consideration.

Support for modernizing the treaty with ecosystem function.

Opportunities to enhance ecosystem function through a Basin wide review of flood risk management.

Our view on the Canadian entitlement.

Issues with calls for additional flows for out of stream purpose.

Expanding the U.S. entity to include a representative for ecosystem function in the process moving forward.

PRC and the Conservation Caucus support the U.S. entity's inclusion in its draft recommendation to the Department of State that modernizing the Columbia River Treaty with Canada is in the best interest of the United States, the millions of people that rely on the river and of the Columbia River ecosystem. The elevation of ecosystem function as a primary purpose of a modernized treaty, along with flood control and power, accurately reflects the high value that citizens of the Pacific Northwest place on the health of the river and is consistent with nationally held opinions about how society should manage its interaction with the environment as evidenced by environmental laws such as the Endangered Species Act and the Clean Water Act.

Because ecosystem based function was not addressed when the current treaty was enacted in 1964 modernizing the treaty represents a rare opportunity to positively reflect the river ecosystem at the Basin scale through a comprehensive public planning process. Such an effort would integrate new analysis of flood risk management under predicted climate change scenarios with an assessment of how renewable and conventional energy sources will affect

the demand for and the use of power produced at Federal dams on the Columbia. This will help to determine the degree to which flows can be enhanced in the spring and summer, particularly in dry years where target flows for migratory fish are regularly not met and water temperatures are dangerously high for extended periods during the critical pre-spawning timeframe.

Further the planning process would involve a review of the adequacy of existing flood control infrastructure and an assessment of where plains can safely be reconnected to the river.

Because the Army Corps position is that it will not move forward with such a review absent Congressional authorization, we urge the Congress to direct the Corps to perform this review.

Absent a modernized treaty the Army Corps will default the flood risk strategies that may require larger and more frequent draw downs at Lake Roosevelt and perhaps all U.S. storage reservoirs including non-treaty dams such as Dworshak and Brownlee. Such operations would adversely impact anadromous and resident fish, recreation, riverbank stability, cultural resources and public safety and could limit system capability to provide needed spring and summer flows for salmon. Further it could jeopardize operations at Dworshak Dam develop pursuant to the Nez Perce water rights agreement and designed to enhance flows and lower temperature in the Snake River in the critical summer period when both ESA listed juvenile and adult Chinook and steelhead are present.

Treaty negotiations should proceed with full understanding and respect for these operations.

Given that ratepayers in the Pacific Northwest enjoy some of the lowest electric rates in the Nation, the United States must be cautious in its approach to suggestions that reducing or eliminating the Canadian entitlement to be a primary driver in treaty negotiations or as a basis to terminate the treaty to avoid power deliveries. The significance of entitlement power deliveries as an inducement to British Columbia and Canada to negotiate changes to the treaty that the U.S. may seek should not be underestimated, particularly when Canada can point to other benefits provided to the U.S. from operations of Canadian treaty dams.

Moving forward an ecosystem expert should be added to the U.S. entity to better prepare for negotiations with Canada and to implement the treaty for today's Northwest. This could include a third agency or sovereign in the U.S. entity co-equal to Bonneville Power and the Army Corps of Engineers for both negotiations and implementation of the treaty. We suggest that either the 15 Columbia Basin tribes along with the U.S. Fish and Wildlife Service, NOAA fisheries or the Environmental Protection Agency be co-managers of ecosystem based function.

While there are some differences that may remain unresolved among the region's stakeholders, states and Native American Indian tribes about the shape of the final recommendation, these differences should not be interpreted as a reason not to proceed with negotiations with Canada. Rather these differences merely highlight the importance and complexity of the many values the Columbia provides to society.

Thank you. I look forward to your questions.

[The prepared statement of Mr. Haller follows:]

PREPARED STATEMENT OF GREGORY HALLER, CONSERVATION DIRECTOR, PACIFIC RIVERS COUNCIL

Chairman Wyden, Ranking Member Murkowski and members of the Committee, thank you for the opportunity to testify on the Columbia River Treaty 2014/2024 Review process. My name is Gregory Haller, and I am the Conservation Director for the Pacific Rivers Council. The Pacific Rivers Council is a regional river conservation group, located in Portland, Oregon, which works throughout the Columbia Basin and northern California to protect rivers, their watersheds and the native aquatic species that depend on functioning, high quality ecosystems. On the main points of my testimony, notably for modernizing the Treaty by including ecosystem function as a third primary purpose, I also speak today for the Columbia River Treaty Conservation Caucus, consisting of environmental and renewable energy advocacy organizations with several million members nationwide, and tens of thousands in the Northwest.¹

SUPPORT FOR MODERNIZING THE TREATY WITH ECOSYSTEM FUNCTION AS A PRIMARY PURPOSE

The Pacific Rivers Council and Columbia River Treaty Conservation Caucus support the U.S. Entity's conclusion in its Draft Recommendation to the U.S. Department of State that modernizing the Columbia River Treaty with Canada is in the best interest of the United States, the millions of people that rely on the river and the Columbia River ecosystem. We commend the U.S. Entity for recommending ecosystem function as a primary purpose of the Treaty, along with flood risk management and power supply. The elevation of ecosystem function as a primary purpose accurately reflects the high value that citizens of the Pacific Northwest place on the health of the Columbia River and is consistent with nationally held opinions about how society should manage its interaction with the environment, as evidenced by environmental laws such as the Endangered Species Act (ESA) and the Clean Water Act (CWA). It also reflects the reality in today's Northwest that ecosystem health and economic health are inextricable.

Because Ecosystem-based Function was not addressed when the current Treaty was enacted in 1964, modernizing the Treaty represents a rare opportunity to positively affect the river ecosystem at the basin scale through a comprehensive, public planning process. This effort should integrate new analysis of flood risk management under predicted climate change scenarios with an assessment of the how renewable and conventional energy sources will affect the demand for and use of power produced at the Federal Columbia River Power System (FCRPS) in order to determine the degree to which flows can be enhanced in the spring and summer, particularly in dry years, where target flows for migratory fish are regularly not met and water temperatures are dangerously high for extended periods during the critical pre-spawning timeframe.² Further, it will involve a review of the adequacy of existing flood control infrastructure and an assessment of where floodplains can safely be reconnected with the river.

Given the fact that 38% of the Columbia's average annual flow and 50% of the peak flow originates in Canada,³ the United States has little choice but to seek modernization of the Treaty in order to continue coordinated river management to maximize the benefits that the three primary purposes of a modernized treaty will provide to the citizens in the U.S side of the basin.

As a result of dam building throughout the Basin, the Columbia River is now a highly fragmented and mechanized system, with degraded habitat and water quality and large areas of river inaccessible to anadromous fish. The sharply reduced populations of salmon and lamprey have imposed a substantial burden on communities

¹The Columbia River Treaty Conservation Caucus consists of Pacific Rivers Council, Save our Wild Salmon, Waterwatch of Oregon, The Center for Environmental Law and Policy, Sierra Club, NW Energy Coalition and Earthjustice.

²This summer, the reach of the lower Columbia River that includes The Dalles and John Day Dams experienced water temperatures of 70 degrees (or above) for 56 straight days. This previews coming years, when this year's highest temperature, 73.2 degrees at John Day Dam on September 11, will be the new norm that portends an unhealthy river pushing salmon to extinction. The Hells Canyon reach of the Snake River experiences temperatures well above 70 degrees into September, dangerously high for ESA-listed fall Chinook.

³Shurts, J. 2012. Rethinking the Columbia River Treaty. In B. Cosens, editor. The Columbia River Treaty revisited: transboundary river governance in the face of uncertainty. Oregon State University Press, Corvallis, Oregon, USA.

throughout the region that rely on these species for recreation, cultural heritage, food and economic purposes. Recent returns of Columbia River fall Chinook, which are not listed under the Endangered Species Act, are cause for celebration, but these runs are the result of good ocean conditions and the court-ordered spill program at the Columbia and lower Snake River dams. Because there is still no lawful federal plan to restore endangered Columbia-Snake salmon and steelhead, and because all but one of ESA-listed stocks are still far below levels needed for recovery, there is still much work to be done, particularly regarding flow management, improving river temperatures, which are dangerously high in both the Snake and Columbia rivers during the summer and early fall, restoring habitat, improving passage for lamprey, reconnecting floodplains and restoring salmon to areas now blocked by dams. Modernization of the Treaty will allow the region to address some of these issues by integrating strategies more consistent with regional salmon recovery and ecosystem health goals. Salmon recovery is only one component of a healthy Columbia River ecosystem, but it is a very important one.

Absent a modernized Treaty, the Army Corps of Engineers must demonstrate that it has “effectively used” all U.S. storage capacity for system flood control before it can “call upon” Canadian reservoirs for additional storage. Proceeding with this type of flood risk management may require larger and more frequent drawdowns at Lake Roosevelt and perhaps at all U.S. storage reservoirs, including non-treaty dams such as Dworshak and Brownlee. Such operations would adversely impact anadromous and resident fish, recreation, riverbank stability, cultural resources and public safety and could limit system capability to provide needed spring and summer flows for salmon. Further, it could jeopardize operations at Dworshak Dam, developed pursuant to the Nez Perce Water Rights Agreement, and designed to enhance flows and lower temperature in the Snake River in the critical late summer period when both ESA-listed juvenile and adult Chinook are present.⁴ Treaty negotiations should proceed with full understanding and respect for these operations.

Power production under a modernized Treaty must account for and promote development of non-carbon energy sources in the Northwest, including conservation and renewable resources, consistent with the region’s goals as stated in the Northwest Power and Conservation Council’s Sixth Northwest Conservation and Electric Power Plan. Energy efficiency and new renewables are the dominant growth areas in the region’s energy supplies. Based on expanded power production model, the United States and Canada should re-evaluate the division of surplus power generation between the two nations.

THE CANADIAN ENTITLEMENT

Though we acknowledge the concern about the calculation and size of power deliveries made to Canada pursuant to the current Treaty, we strongly believe that calls to terminate the Treaty as a negotiation tactic in order to reduce the so-called Canadian Entitlement are shortsighted. The United States must be cautious in its approach to suggestions that reducing or eliminating the Canadian Entitlement be a primary driver in Treaty negotiations, or as a basis to terminate the Treaty to avoid power deliveries. The significance of entitlement power deliveries as an inducement to British Columbia and Canada to negotiate changes to the Treaty that the U.S. may seek should not be underestimated, particularly when Canada can point to other benefits provided to the U.S. from operations of Canadian Treaty dams, including predictability of hydropower forecasting, flood control, recreation, navigation, water supply and ecosystem benefits. The U.S. analysis that has been done to determine what the cost of termination would be to the United States in reduced hydropower flexibility, and in resorting to “called upon” flood control is based upon assumptions of how Canada might operate in the absence of the Treaty, this should be a bilateral analysis. See <http://www.crt2014-2024review.gov/Files/Final—Report—No—Treaty—Canadian—Operations.pdf>. Canada estimates the benefits to the US of flood control over the lifetime of the current Treaty at \$32 billion, and in 2012 alone at over \$2 billion.⁵ Those numbers do not address the enormous economic benefit of predictable hydropower management, recreation, navigation, water supply and ecosystem benefits. Therefore, this issue, while important, should not be given undue weight moving forward, but should be fully examined in a transparent process to determine its role in modernizing the Treaty.

In our view, the most critical issue facing residents and users of the Columbia River and its tributaries over coming decades is not dividing up money or seeking

⁴ See Mediators Term Sheet, Snake River Water Rights Act of 2004

⁵ Province of British Columbia, “U.S. Benefits from the Columbia River Treaty-Past, Present, and Future: A Province of British Columbia Perspective,” June 25, 2013.

to protect current power and flood management operations. Weathering and adapting to climate change will be the major issue on the Columbia. The Northwest is far better placed to tackle this very difficult economic and environmental transition if ecosystem function is included in the Columbia River Treaty.

WATER SUPPLY ALLOCATION

PRC is concerned by calls from states and irrigators, and as acknowledged by the Draft Recommendation, for a process to allocate additional water from Canada for out-of-stream uses. Given existing streamflow deficits, allocating additional spring and summer flows for out-of-stream uses would be inconsistent with the elevation of ecosystem function as a primary purpose of a modernized Treaty. Only after instream uses are fully supported should analysis of consumptive uses be considered. Further, the Canadian government has already signaled that water supply is one of the many benefits it should be compensated for, and therefore, any additional out-of-stream use will be viewed as an additional benefit requiring additional compensation.

COLUMBIA RIVER BASIN FLOOD RISK POLICY REVIEW

In order to improve the health of the river's ecosystem and fulfill the promise of a modernized Treaty with ecosystem function as a primary purpose, a basin-wide assessment of flood risk management and how to best modernize it for the era of climate change is required. Only with such an assessment can the region move forward with confidence that flows can be increased without jeopardizing public health or property. The analysis should include an assessment of current flood control infrastructure and funding for the integration of modern precipitation and runoff forecasting techniques into seasonal planning processes. Flood risk management based on monthly forecasts has often resulted in unnecessarily large reservoir drawdowns and missed refill targets, resulting in diminished flows for anadromous fish and higher river temperatures. With improved forecasting and modeling, reservoirs can safely be maintained at higher levels to aid both anadromous and resident fish species. Maintaining reservoirs at higher levels also enhances recreational opportunities and protects Native American cultural resources. Because the Army Corps' current position is that the agency will not move forward with a basin-wide flood risk management review absent congressional authorization, we strongly urge Congress, particularly Northwest members of Congress, to direct the Corps, to perform this review, using the best available science in a fully transparent and public process.

Modernizing flood risk management offers the region a unique opportunity to address the challenges of climate change. Climate change will manifest in the Pacific Northwest as decreased snowpack, shorter and earlier runoff periods and elevated summer river temperatures. Improvements in Treaty-based operations can help to mitigate these issues by providing additional flow and temperature benefits during the summer months.

A REPRESENTATIVE FOR ECOSYSTEM FUNCTION IN THE U.S. ENTITY

An ecosystem-expert should be added to the U.S. Entity, to better prepare for negotiations with Canada and to better implement this 50-year Treaty for today's Northwest. The Treaty process should include a third agency or sovereign in the U.S. Entity, co-equal to Bonneville Power and the Army Corps of Engineers, for both negotiations on and implementation of the Treaty. We suggest that the 15 Columbia Basin Tribes, along with appropriate federal agencies such as U.S. Fish and Wildlife Service, NOAA Fisheries, and the Environmental Protection Agency, should be co-managers of ecosystem-based function.

In closing, PRC, and the Treaty Coalition of fishing and conservation groups, believes that modernizing the Treaty to include Ecosystem Function as a primary purpose is in the best interest of the United States and the Columbia River's ecosystem and economy. We believe the Draft Recommendation lays a solid foundation to begin negotiations with Canada. We also appreciate the commitment made by Deputy Assistant Secretary Mathew Rooney during the recent listening sessions held by the US Entity and the State Department that PRC would be invited to participate in the negotiation process as it relates to Ecosystem Function. We believe that while some differences may remain unresolved among the region's stakeholders, states, and Native American Indian Tribes about the shape of the final Recommendation, these differences should not be interpreted by the U.S. Department of State as reason not to proceed with negotiations with Canada. Rather, these differences merely highlight the importance and complexity of the many values the Columbia provides to society.

The CHAIRMAN. Thank you.

We wanted to have this panel because you are, sort of, a microcosm of the debate about resources in the Pacific Northwest. I mean, you 4 really bring, front and center, the debate about jobs, which, of course, we care about because our economy has been hard hit in the Pacific Northwest. ratepayers and the 3 of us here, Northwest Senators, have been talking about that and then salmon.

I mean let's just stipulate right at the beginning that this whole question about ecosystem function is really code for salmon protection. That's really what this issue is all about. I had a chance to look at your statements and I will tell you I think the premium is going to be trying to find ways that you can advance your interests in a way that's going to be compatible with some of the interests of the other stakeholders that are at this table and in the Pacific Northwest.

For example, Ms. Meira, I think you know I also Chair the Finance Subcommittee on International Trade. You know, I think that trade and shipping is practically in our chromosomes. Senator Cantwell and I have teamed up often for market opening kind of agreements. Why not if 6 jobs in Oregon depends on international trade, the trade jobs pay better than do the non-trade jobs?

So the question is going to be can we find some ways in this agreement to better protect navigation that Mr. Haller and people who care about fish are also going to be on the program for?

So that's going to be the premium for you four.

I was very interested. Maybe we'll start with you, Mr. Semanko. You said that you didn't want to have ecosystem function as a treaty purpose, but in your prepared statement you said there were other ways to address the issue.

If you feel like it, tell me what the other ways are to address the issue because maybe we can find a way to bring this in to the agreement.

Mr. Caan, same with you. You were concerned about the additional cost from ecosystem function. The question is going to be are there some activities that can promote, you know, salmon, that you all can live with. Because it goes right to that triangle of jobs and rates and fish protection.

So for any of you who would like to talk about some fresh ideas for advancing your interests, whether it's navigation, public power conservation, that also reach out to some of the other stakeholders, that's going to be the premium. I invite any of you 4 who'd like to take a crack at that.

You want to do it, Mr. Semanko?

Mr. SEMANKO. Sure.

The CHAIRMAN. You said there were other ways to protect fish.

Mr. SEMANKO. Absolutely.

The CHAIRMAN. Other than the traditional approach of another purpose in the treaty.

Mr. SEMANKO. I appreciate that. I must say I appreciate the bipartisan/nonpartisan manner within which you're approaching these issues as you have hydropower and other issues.

The CHAIRMAN. By the way, when we're talking about bringing stakeholders together in the Pacific Northwest, the gentleman, who

has, sort of, written the book on that is Senator Risch, who, as you know, you know, has a degree in forestry and he has really done a good job over the years of environmentalist and timber industry people.

So this is not something that's new to us. But if we're going to advance the multiple interests that we have in the Pacific Northwest, the premium is going to be on people who can advance purposes that they feel strongly about that the other stakeholders are going to come together on.

So we'll give you the first crack at it.

Mr. SEMANKO. Absolutely. As you said, the river is the life blood of our region. It's not a partisan issue. It's something that we all rely upon.

I think it goes back to what you said at the beginning of the hearing that ecosystem function should be included but it needs to be clearly defined and limited. So as an example when—and Mr. Haller referenced this, when we entered into the historic Nez Perce water rights agreement, the Federal Government, the State of Idaho, the Nez Perce nation, the water users. That agreement was heard in this committee room and approved by this committee in 2004 and included in the Omnibus Appropriations bill that was signed into law later that year.

We all knew, with clarity, for the next 30 years what we were signing up for. The amount of flow augmentation we were going to provide. How it was going to be provided, under what State laws, under what local rental pool procedures. Those are the kinds of things that we need.

But the Oregon Water Resource Congress observed it in their comments as well. The problem with ecosystem based function being included as a primary purpose is it becomes this overriding gloss that's laid on top of the treaty without any specificity.

When I'm talking to the U.S. entity and they were in Boise last week. We talked about what exactly do you want? Let's look at the 6 things that are listed under ecosystem.

You want better, firmer, longer term assurances from Canada that Canada will do certain things. Say that. Put that in the treaty.

But leaving the ability for others in the region to interpret this change to mean that we are going to go outside the bounds of domestic environmental laws beyond what's already required under the Endangered Species Act, the Clean Water Act, which is incredibly huge already. That's the danger that we see. That this, as an international treaty, will now expand the obligations even beyond what's required and what's well understood in some cases like under the Nez Perce agreement.

The CHAIRMAN. So would it be fair to summarize what you're saying is that you're open to some specific language with respect to salmon protection? You just don't want something open-ended that goes to this ecosystem function that might be misinterpreted.

Is that accurate?

Mr. SEMANKO. Mr. Chairman, that's exactly right.

The CHAIRMAN. OK.

Mr. SEMANKO. I'll go so far as to say in the materials that we submitted we provided red line changes to the recommendation. We

didn't just bark and moan and vent. We provided specific recommendations.

Things like we can do these things provided that they don't adversely impact the other authorized uses on the river, that kind of language. So yes, absolutely, we are trying to play within the rule.

The CHAIRMAN. I never saw you in the barking and moaning caucus.

[Laughter.]

The CHAIRMAN. You know, I think this is tough stuff.

[Laughter.]

The CHAIRMAN. If you want to take on my friend, your Senator, it's your Constitutional right.

Mr. SEMANKO. No.

The CHAIRMAN. But the point is this is heavy lifting. This is what we do in the Pacific Northwest. We've got jobs over here. We need more of them. We need good paying ones.

We got ratepayers over here. As Senator Risch and I thrash around on a bunch of these, we also have certain environmental values. I mean, those are in our chromosomes, too, protecting fish and thinking about our resources.

So I think that your point is well made, Mr. Semanko. We're going to follow it up.

Anybody else for the purposes of coalition building?

Ms. Meira.

Ms. MEIRA. OK, I'll jump in.

The CHAIRMAN. The first bill that I wrote back when I was a legislator and had a full head of hair and rugged good looks and all that was working with you all on the Bonneville lock.

Ms. MEIRA. Yes.

The CHAIRMAN. Because that was important to the shipping. I don't think most of your members even knew anything about me. They said who's that Gray Panther kid? What's he talking to us about?

So we worked often with you all.

So tell us a little bit about shipping. How we can promote your interests and have them intersect with some of these other kinds of questions?

Ms. MEIRA. Understood. Thank you again for Bonneville lock. I think that was 1993 that that was installed.

The CHAIRMAN. Thank the late Senator Hatfield. I was just the kid partner.

Ms. MEIRA. Yes.

I think the ports in the navigation community in the Northwest recognizes that we do things differently in our region. That's a good thing. We all care deeply about how the system is run because we're all living on it. We're working on it.

I think the question that the navigation community has had is what do we need to be doing that's beyond what our agencies and what our colleagues are doing now? If we need to be doing something more why aren't we already doing it?

If we're looking for more through those treaty negotiations well why isn't it happening already through the buy op or through all the other processes that we have going that we all support?

We come back here to talk and to request funding, not just for navigation projects but we're advocating for the Corps salmon recovery budget and other things.

If we're not already doing it in the region why are we talking about doing more in 2024? Why isn't it a part of the conversation today?

So when we think about the ecosystem function and that becoming a part of the treaty conversations that's what we continue coming back to. If more is desired why aren't we already talking about it through existing efforts?

The CHAIRMAN. I'm way over my time.

Senator Risch.

Senator RISCH. Thank you, Mr. Chairman.

Thank you for putting this panel together. I think this has been really good for an opening solve on this. I think your description of this particular panel as bringing to focus all the various interests here is really important.

I don't know the others well, but Mr. Semanko I know well. He represents the view of his particular interest incredibly well.

I think that rather than ask any questions I would just point out that I think the testimony of each of the 4 people have really focused on the rubics cube, kind of a difficulty we're going to have in bringing this thing together. I think, particularly here at the beginning, this is a good opening discussion of what part will each of these interests play. The focus has been here, I think, a little bit more on environmental things, but every one of these interests is important. I think it's appropriate that we have a robust discussion as to where each of these are going to fall in what we're looking for in redoing this.

This is probably lifetime employment for a number of people to get through this. But it's going to take a while. It's going to be a heavy lift, as you pointed out. Thanks so much for having the hearing.

Thank all of you for coming today and helping us.

The CHAIRMAN. Thank you and as I've tried to indicate I think the premium is going to be on those who've got fresh ideas that address concerns that they have that can reach out to other kinds of parties and to get to us quickly. You heard me ask the Bonneville people to get us the numbers and the assumptions within a week because the clock is really ticking down on it.

Mr. Haller, you have something I think—did you have something you wanted to just add because I'm going to have to get to the Budget Conference where we're also working on some Northwest issues, or the budget meeting that's being held.

Mr. HALLER. Sure, thank you, Chairman.

Regarding your question about fresh ideas.

The CHAIRMAN. Yes.

Mr. HALLER. Finding an intersection of goals. I really believe the lynch pin to that is this Basin wide assessment of flood risk management. I think with that we can get a better understanding of how reservoirs can be maintained at a fuller level which will enhance recreation and other values in those areas which will also provide spring and summer flows at a critical time period. But will

also potentially maintain system capability for power production at a greater level.

So I think that flood risk assessment is probably the key to that.

The CHAIRMAN. Very good. Good way to wrap up.

Thank you all.

The Energy Committee is adjourned.

[Whereupon, at 11:02 a.m., the hearing was adjourned.]

APPENDIX

RESPONSES TO ADDITIONAL QUESTIONS

RESPONSES OF BRIGADIER GENERAL JOHN KEM TO QUESTIONS FROM
SENATOR MURKOWSKI

Question 1a. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years?

Answer. The view of the U.S. Entity is that the Columbia River Treaty (CRT) between the United States and Canada has been an important economic driver for the region on both sides of the border since it was executed in 1964. The Treaty required the construction of three large dams in British Columbia, Canada, and gave the United States the right to build Libby Dam in Montana with a reservoir that extends into Canada. This more than doubled the amount of Columbia River basin reservoir storage, which eliminated major flood damages for all but extreme events and increased downstream hydropower generation. The smoothing of annual stream flows has also provided billions of dollars of power benefits in both countries.

The U.S. Entity also believes that one of the strengths of the Treaty is that it also provides for the certainty of coordination of flows across the border and benefits a number of other uses of the Columbia River, including navigation, irrigation and municipal and industrial water supply. In addition, the two nations have been able to negotiate supplemental agreements for other ecosystem benefits, including an annual agreement that provides up to 1 million acre-feet to augment flows for fish in both the U.S. and Canada.

Question 1b. What are its greatest shortcomings?

Answer. While the CTR has provided many critically important benefits to the Region particularly in energy production and flood risk management, the Treaty does not identify ecosystem considerations. While it is recognized that significant ecological improvements are being implemented and realized in a number of critical areas and are anticipated to continue over time, there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty. Accordingly, the U.S. Entity sees opportunities to better meet future needs and changing values through “modernizing” the Treaty in several important areas including: designing a mutually-workable “called-upon” flood risk management operation; rebalancing the Canadian Entitlement; incorporation of ecosystem operations; providing for future water supply needs; and the ability to address climate change.

Question 2. What are the Administration’s expectations for the advice and consent of the Senate? Are there any potential Treaty modifications under consideration that the Administration does not believe would require consideration by the Senate? If so, please explain.

Answer. The U.S. Entity cannot speak to the Administration’s expectations for the advice and consent of the Senate. However, the entities (U.S. Entity and Canadian Entity) are empowered and charged with the duty to formulate and carry out the operating arrangements necessary to implement the Columbia River Treaty, in the form the two countries have entered into it. Through the Columbia River Treaty Review, the U.S. Entity conducted a preliminary evaluation of implementation of the current Treaty post 2024 and looked at possible alternative scenarios to assist us in the development of a regional recommendation for consideration by the Administration through the National Policy Interest Review. The region’s goal is for the United States and Canada to develop a modernized framework for the Treaty that ensures a more resilient and healthy ecosystem-based function throughout the Columbia River Basin while maintaining an acceptable level of flood risk and assuring reliable and economic hydropower benefits. Therefore, the U.S. Entity believes it is important to achieve a modernized framework for the Treaty that balances power production, flood risk management, and ecosystem-based function as the primary purposes, while also recognizing and implementing all authorized purposes.

Question 3. You've testified that the U.S. Entity would also like to "pursue operational flexibility necessary to respond to climate change" in an updated Treaty. Indeed, the Draft Recommendation states that there should be "new terms in the post-2024 Treaty to allow the adaptive management of coordinated Treaty operations to better mitigate any impacts associated with climate change." What exactly does that mean? How will "associated impacts" of climate change be measured? Is this concentration on climate change in addition to a new Ecosystem Function as an authorized purpose of the Treaty?

Answer. While the U.S. Entity is not a principal element of the U.S. Government engaged in climate studies or analysis of impacts, climate change studies conducted by the Army Corps of Engineers (Corps) and BPA for the Columbia River basin have indicated the potential for increased runoff in the winter, earlier timing of the peak spring snowmelt, and the subsequent risk of lower summer flows. It is the conclusion of the U.S. Entity that greater operational flexibility would give both the U.S. and Canada the ability to address these risks as they may appear in the future.

With respect to measuring the "associated impacts" of climate change, the U.S. and Canadian Entities have a joint Hydro-Meteorological team that continuously studies precipitation and streamflows in the basin. In addition, the U.S. Entity continues to work with the research community to intensify regional monitoring, particularly temperatures and streamflow timing, using existing meteorological and streamflow data networks. This allows us to monitor whether the warming we are already observing in the region is beginning to impact our ability to manage floods, to meet electricity demands, and sustain ecosystems. Using this regional monitoring data and the best available science, operating criteria can be adapted in response to a changed climate.

With respect to the relation of climate change to purposes of the Treaty, the latest climate change modeling by the Corps, BPA, University of Washington, USGS and others suggests that flood control, power production, and ecosystems could all be impacted by climate change. Thus, the U.S. Entity sees climate change, not as a proposed new primary purpose, but as an overarching issue which could impact all Treaty operations if the Treaty were to continue over the long term.

Question 4. The "Canadian Entitlement" as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage. Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S. is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the "Canadian Entitlement"? How does the U.S. position differ? Do you agree with Dr. Karier's assessment that the U.S. is receiving only about one-tenth of the actual power benefits? Should the U.S. obligation to return power to Canada be reduced?

Answer.

HOW DOES CANADA PERCEIVE THE "CANADIAN ENTITLEMENT"?

The Government of Canada, to our knowledge, has not asserted a formal perspective on the Canadian Entitlement.

The Province of British Columbia, through the BC Ministry of Energy and Mines, released a paper on June 25, 2013 on, "U.S. benefits from the Columbia River Treaty—Past, Present, and Future: A Province of British Columbia Perspective". <http://blog.gov.bc.ca/columbiarivertreaty/files/2012/07/US-Benefits-from-CRT-June-25-132.pdf>. Further, the Province of British Columbia released its draft recommendation on the Treaty earlier this fall that included a statement about its view of the Canadian Entitlement in its second of 14 principles. It reads, "2. The ongoing impacts to the Canadian Columbia Basin to meet Treaty requirements should be acknowledged and compensated for. The level of benefits to the Province, which is currently primarily in the form of the Canadian Entitlement, does not account for the full range of benefits in the United States (U.S.) or the impacts in British Columbia."

HOW DOES THE U.S. POSITION DIFFER?

While the U.S. Entity cannot speak for the U.S. government on this point, the U.S. Entity perspective is that the Treaty should be modernized so that the payments to Canada post 2024 should be based on an equitable sharing of the power benefits of a coordinated Canadian operation as compared to a non-coordinated operation. Based on the present formula developed in the 1960s, BPA estimates the Ca-

nadian share of the downstream benefits in 2024 is significantly greater than anticipated, and far exceeds the value of coordinated power operations under the Treaty.

DO YOU AGREE WITH DR. KARIER'S ASSESSMENT THAT THE U.S. IS RECEIVING ONLY ABOUT ONE-TENTH OF THE ACTUAL POWER BENEFITS?

Dr. Karier's assessment is based on only one specific predominant aspect of the Entitlement relative to its energy value. If we consider a more complete array of factors, however, preliminary estimates by BPA of one-half of the estimated actual value of Canadian coordination post 2024 range from 10 percent to 30 percent. This range considers other factors such as 1) certainty of operations, 2) firm energy value, and 3) seasonal shape and value of energy and capacity.

THE U.S. OBLIGATION TO RETURN POWER TO CANADA BE REDUCED?

In the opinion of the U.S. Entity, yes, although this is a matter for the U.S. Government to decide. In our opinion, based on the present formula developed in the 1960s, the estimated value of the Canadian share of the downstream benefits in 2024 is significantly greater than anticipated, and far exceeds the value of coordinated power operations under the Treaty.

Question 5. What is the Executive Branch doing to integrate the concerns raised by various groups in their public comments on the draft recommendations? Should Congress expect major changes to the draft recommendations?

Answer. The U.S. Entity was tasked by the Department of State and the Inter-agency Policy Committee to produce a regional recommendation that reflects the broadest possible consensus. The regional recommendation was developed by the U.S. Entity in collaboration and consultation with the Pacific Northwest states and federally recognized Columbia Basin Tribes, a variety of stakeholders, and the public through the multi-year Columbia River Treaty Review process. As such, it is a regional recommendation only, not an Executive Branch Statement of Administration Policy. We have conducted extensive stakeholder and public outreach through workshops, panel discussions, and individual meetings, and amassed valuable perspectives, comments, and technical analyses.

We have collated all the comments received on the June 27, 2013, working draft regional recommendation and the September 20, 2013, draft regional recommendation, and have continued to coordinate and seek input from sovereigns and interested stakeholders as we complete the recommendation.

Changes to the recommendation have been made in an attempt to accommodate various perspectives, achieve as much regional consensus as possible, and ultimately to develop a modernized framework.

Question 6. Do you support the continuation of this treaty with Canada?

Answer. The determination on the future of the Treaty is within the purview of the U.S. Government. The U.S. Entity supports improving the Treaty for the benefit of all interests in the Pacific Northwest region and ensuring that the Treaty is sustainable for the long term.

Question 7. Has Canadian flood storage provided for under the Columbia River Treaty been utilized to the extent envisioned in the original Treaty? Why or why not?

Answer. Yes, the Canadian flood storage provided for under the Columbia River Treaty has been utilized as envisioned in the original Treaty. Under the existing Treaty flood control operating plan, Canada operates their projects to provide assured flood storage up to 8.95 million acre-feet based on forecasted runoff. Since 1964, this assured flood storage, combined with additional flood control storage provided by the Canadian power drafts, has been utilized as envisioned to manage streamflows conditions.

Question 8. What are the primary differences between the U.S. and Canada with regard to the assumptions and estimates related to "called upon" flood control? Which U.S. reservoirs are currently expected to alter their operations for called upon operations?

Answer. Any differences between the U.S. and Canada with regard to the assumptions and estimates related to 'Called Upon' flood control are at the core of the interpretation of the Treaty and would be the subject of discussions between the U.S. and Canadian Governments.

At this point, the U.S. Government has not formulated a position on the assumptions for Called Upon. However, through the Columbia River Treaty Review, a preliminary evaluation of operations post 2024 was conducted, which looked at possible alternative scenarios to assist in the development of a regional recommendation for consideration by the Administration through the National Policy Interest Review. Eight U.S. reservoirs in the U.S. portion of the Columbia Basin are now authorized

for flood control. Those eight projects are Grand Coulee, Hungry Horse, John Day, Libby, Dworshak, Albeni Falls, Brownlee, and Kerr. Under the regional recommendation for post 2024 flood risk management, the U.S. would continue providing for similar level of flood risk and operate all eight of these projects for all authorized uses.

The Canadian Entity has preliminarily expressed its views on the “Called Upon” provisions; although unclear, it appears these are the views solely of the Canadian Entity, so it is uncertain whether or not they also represent the views of the Canadian Government. From what we have heard, it is the U.S. Entity’s understanding that the Canadian Entity may be assuming that all reservoirs in the U.S. portion of the Columbia Basin should be used first prior to calling upon Canadian storage, regardless of the U.S. project authorizations or impacts to other project uses. The U.S. Department of State has informed the U.S. Entity that the U.S. Government does not share the Canadian Entity’s interpretation of this provision of the Treaty. In addition, the U.S. Entity’s analysis indicates that the Canadian Entity’s views on the forecasted water supply that would allow the U.S. Entity to call upon Canadian storage post 2024 could increase flood risk in the U.S.

Question 9. What are the advantages and disadvantages of the scheduled transfer to called upon flood storage? Would there be an increased risk for flooding in the basin under a called upon storage scenario?

Answer. Transferring from the current assured flood control procedures to Called Upon flood storage will require both countries to reevaluate reservoir flood control operations and develop a new flood control operating procedure for operating the reservoirs in the future for flood control. It is premature to speculate on whether the called upon flood control procedure has advantages or disadvantages for the U.S.

The issue of increased or decreased flood control risk would be considered and would inform future U.S. positions that might arise in any negotiation with Canada, and therefore any speculation by the U.S. Entity at this point is premature.

Question 10. Who should or will be responsible for paying for the costs of called upon flood storage under the Treaty?

Answer. The allocation of such costs as between Canada and the U.S. would be one of the subjects of any negotiation. Under the existing provisions of the Treaty, the first 60 years of flood risk management were pre-paid through transfer of U.S. funds to Canada. Unrelated to treatment of this issue under any new or modified Treaty, the U.S. Entity’s regional recommendation suggests that any U.S. payments for Columbia River flood risk management post-2024 should be consistent with the U.S. national flood risk law and policy.

RESPONSES OF GREGORY HALLER TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. The greatest strength of the Columbia River Treaty over the last fifty years has been the added system flexibility to manage flood risk in the United States. Without the benefits of the Canadian storage reservoirs, storage reservoirs in the United States would bear the brunt of flood control operations, resulting in deeper drawdowns and less flexibility to provide critical spring and summer flows for salmon migration. Coordinated power production has also provided important benefits.

The greatest shortcoming of the Treaty is its narrow focus on flood risk management and power production, which have occurred at the expense of ecosystem health, salmon fisheries, and economies and communities dependent on river and watershed health. An important example among many is the Army Corps of Engineers’ overly conservative management of reservoirs for flood risk, which can result in diminished capability of the system to provide summer flows—particularly in dry years—and limits the ability to provide more natural flow conditions in the spring. A second shortcoming is the extinction and endangerment of many salmon stocks and species that Treaty dams and operations have contributed to. Finally, the Treaty’s failure to co-manage for ecosystem health is significantly hampering the ability of people and ecosystems in the Columbia Basin to respond to and weather climate change effects now occurring, and this shortcoming will grow each year in its negative effect on the Basin and its people.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the

Endangered Species Act? Who will bear the costs of this new Ecosystem Function? Do you support the addition of this new Treaty purpose?

Answer. Pacific Rivers Council strongly supports including Ecosystem-based Function (EbF) as a new primary purpose of the Treaty.

Our definition of EbF: The interaction of the living components (plants, animals and microorganisms) with the non-living components (air, water, rocks, physical and chemical processes) of the environment which sustain an environmental community rich in abundance and diversity and resilient to natural processes and disruptions so that it may persist into the future. In the context of the Columbia River, ecosystem function is the interaction of physical and chemical processes that create environmental conditions, i.e., good water quality, normative hydrograph, and cool river temperatures that support healthy populations of wild salmon and steelhead, sturgeon, and Pacific lamprey and the food web that supports them.

A vital corollary to any definition is that, in the Northwest, ecosystem function underlies economic function. The health of the river is the basis for every economic activity undertaken in the basin.

At this time, the “costs” of including EbF in a modernized Treaty are speculative. Any attempt to quantify those costs must also include a parallel estimation of benefits that including EbF will provide.

A economic analysis of the existing Treaty’s costs and benefits, and a modernized Treaty’s costs and benefits, would likely benefit the dialogue between both nations about the Treaty. But we do not see a legal, analytic or commonsense basis for creating “credits” for compliance with the Endangered Species Act (or any law) that would be subtracted from yet-to-be-determined costs (if any) that EbF may provide. For example, such one-sided analysis ignores the very large benefits accruing to Northwest communities and people from compliance with such laws. We also note that the federal dam system on the Columbia and Snake Rivers is not in compliance with the Endangered Species Act, and has not been since 2000.

Question 3. The “Canadian Entitlement” as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage. Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the “Canadian Entitlement”? How does the U.S. position differ? Do you agree with Dr. Karier’s assessment that the U.S. is receiving only about one-tenth of the actual power benefits? Should the U.S. obligation to return power to Canada be reduced?

Answer. Canada perceives the Canadian Entitlement, as it is currently calculated, as a very good deal for the United States. Canada believes that if all the benefits (power, reduced flood risk, water for ecosystem benefits, irrigation, navigation, recreation, etc.) that the Canadian reservoirs provide to the U.S. were calculated, the U.S. would be paying much more than \$250-350 million currently paid in power deliveries. The U.S. position is that the Entitlement, combined with a separate flood risk management payment, has more than repaid the cost to Canada of the three dams built in Canada pursuant to the Treaty.

Without additional information, we are not comfortable providing an opinion on Dr. Karier’s estimation that the U.S. is receiving one-tenth of the actual power benefits or on whether the U.S. obligation to return power be reduced. However, the U.S. should be cautious in its approach and avoid making reduction of the Canadian Entitlement the central focus of Treaty negotiations going forward, particularly as power delivery is the primary inducement to Canada to negotiate changes to the Treaty.

Question 4. Has the Executive branch adequately captured your concerns and interests during the Treaty Review process?

Answer. The Executive Branch has done a commendable job of recognizing our concerns and interests. We are particularly pleased with the commitment made by former Deputy Assistant Secretary Mathew Rooney during recent listening sessions that PRC would be invited to participate in the negotiation process as it relates to EbF.

Question 5. Do you support the continuation of this treaty with Canada?

Answer. We absolutely believe that continuation of a modernized treaty with Canada is in the best interests of the United States, the Columbia River ecosystem and of the regional economy.

Question 6. To date, how has the Columbia River Treaty taken fisheries and ecosystem resources into account?

Answer. In the development of annual operating plans (AOP) under the Treaty, issues such as the ability to provide flows for salmon migration and the ability to refill reservoirs under projected run-off scenarios are considered. However, these issues are secondary to power and flood risk management—i.e., they are addressed only in the context of what is left over after these two purposes are fulfilled. Additionally, the AOPs are made in well advance of the spring run-off season and therefore do not reflect actual conditions when they occur. And although adjustments are made as the timing of run-off is more accurately ascertained, these changes are limited due to the Corps' very conservative flood risk management operations. Modernizing flood risk management through a basin-wide review of flood risk is necessary in order to provide for and realize the benefits of an enhanced ecosystem.

In addition, the current Treaty and operations under it have not genuinely tackled the rising effects of climate change on both the Columbia itself and its current uses and operations. We believe this is a vital new task for both nations within the Treaty framework, and only by making EbF a co-equal Treaty purpose can it be done effectively and pro-actively.

RESPONSE OF STEPHEN OLIVER TO QUESTION FROM SENATOR WYDEN

Question 1. The United States is obligated to return to Canada one-half of the downstream power benefits gained as a result of operation of the three Columbia River Treaty dams in Canada. My understanding is that the half of the downstream power benefits owed to Canada is called the "Canadian Entitlement." What is the current Canadian Entitlement calculated using the current assumptions built into the Columbia River Treaty? What now does BPA estimate is the actual value of the Canadian Entitlement?

Answer. Currently, Canada's portion of the downstream power benefit, the "Canadian Entitlement," is based on the additional hydrogeneration produced by Canadian Treaty dams—essentially, the difference between the power generated by the U.S. 1961 power system with and without the dams. The Canadian Entitlement is power returned to Canada, not a monetary payment. The current value of the power returned to Canada is estimated to be between \$220 million and \$360 million annually. It is the opinion of the U.S. Entity—and Bonneville Power Administration (BPA)—that the power benefits between the two countries should be rebalanced to instead be based on the more realistic measure of the power value of coordinated operations as compared to non-coordinated operations. BPA estimates that the resulting value of the Canadian Entitlement would be between \$44 million and \$110 million annually. A document describing in more detail how we continue to analyze this estimate is attached to this response.

RESPONSES OF STEPHEN OLIVER TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1a. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years?

Question 1b. What are its greatest shortcomings?

Answer 1a. The view of the U.S. Entity is that the Columbia River Treaty (CRT) between the United States and Canada has been an important economic driver for the region on both sides of the border since it was executed in 1964. The Treaty required the construction of three large dams in British Columbia, Canada, and gave the United States the right to build Libby Dam in Montana with a reservoir that extends into Canada. This more than doubled the amount of Columbia River basin reservoir storage, which eliminated major flood damages for all but extreme events and increased downstream hydropower generation. The smoothing of annual stream flows has also provided billions of dollars of power benefits in both countries.

The U.S. Entity also believes that one of the strengths of the Treaty is that it also provides for the certainty of coordination of flows across the border and benefits a number of other uses of the Columbia River, including navigation, irrigation and municipal and industrial water supply. In addition, the two nations have been able to negotiate supplemental agreements for other ecosystem benefits, including an annual agreement that provides up to 1 million acre-feet to augment flows for fish in both the U.S. and Canada.

Answer 1b. While the CRT has provided many critically important benefits to the Region particularly in energy production and flood risk management, the Treaty does not identify ecosystem considerations. While it is recognized that significant ecological improvements are being implemented and realized in a number of critical areas and are anticipated to continue over time, there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty. Accordingly,

the U.S. Entity sees opportunities to better meet future needs and changing values through “modernizing” the Treaty in several important areas including: designing a mutually-workable “called-upon” flood risk management operation; rebalancing the Canadian Entitlement; incorporation of ecosystem operations; providing for future water supply needs; and the ability to address climate change.

Question 2. What are the Administration’s expectations for the advice and consent of the Senate? Are there any potential Treaty modifications under consideration that the Administration does not believe would require consideration by the Senate? If so, please explain.

Answer. The U.S. Entity cannot speak to the Administration’s expectations for the advice and consent of the Senate. However, the entities (U.S. Entity and Canadian Entity) are empowered and charged with the duty to formulate and carry out the operating arrangements necessary to implement the Columbia River Treaty, in the form the two countries have entered into it. Through the Columbia River Treaty Review, the U.S. Entity conducted a preliminary evaluation of implementation of the current Treaty post 2024 and looked at possible alternative scenarios to assist us in the development of a regional recommendation for consideration by the Administration through the National Policy Interest Review. The region’s goal is for the United States and Canada to develop a modernized framework for the Treaty that ensures a more resilient and healthy ecosystem-based function throughout the Columbia River Basin while maintaining an acceptable level of flood risk and assuring reliable and economic hydropower benefits. Therefore, the U.S. Entity believes it is important to achieve a modernized framework for the Treaty that balances power production, flood risk management, and ecosystem-based function as the primary purposes, while also recognizing and implementing all authorized purposes.

Question 3a. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function?

Question 3b. Would it include credit for actions already being done, such as compliance with the Endangered Species Act?

Question 3c. Who will bear the costs of this new Ecosystem Function?

Answer 3a. The U.S. Entity’s perspective is that although the definition of ecosystem in general is very broad, the definition of Ecosystem-based Function in the context of the Columbia River Treaty Regional Recommendation is specifically defined by the content of the recommendation. The Ecosystem-based Function section states that providing streamflows from Canada with appropriate timing, quantity and water quality to promote productive populations of anadromous and resident fish, and provide reservoir conditions to promote productive populations of native fish and wildlife is the general objective. Then the specific recommendations are to: incorporate current flow augmentation and dry year flow strategies; accommodate flow augmentation modifications post-2024; recognize and minimize adverse effects to tribal, First Nations and other cultural resources in Canada and the United States; adapt to meeting ecosystem-based function requirements as new information becomes available or conditions change; jointly explore fish passage on the main stem Columbia with Canada; and, continue to coordinate the variable quantity flows from Libby in support of specific listed fisheries.

Answer 3b. This is a question that would have to be negotiated between Canada and the U.S., however, in the Recommendation, it is expected that any storage and release actions performed under the Treaty would be coordinated and complement U.S. domestic fishery mitigation actions. The recommendation states this as follows: “it is recognized that significant ecological improvements are being implemented and realized in a number of critical areas and are anticipated to continue over time, there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty”.

Answer 3c. While the exact allocation of costs would be a subject of a negotiation between the parties, one of the central principles of our recommendation is that we are advocating a balanced approach to any Treaty modernization that respects the current balance of water uses in the Pacific Northwest, “with the intent that all of the interests addressed herein be improved”. The recommendation states that, “U.S. interests should ensure that costs associated with any Treaty operation are aligned with the appropriate party.” We also make it clear that, “implementation of ecosystem-based functions in the Treaty should be compatible with rebalancing the entitlement and reducing U.S. power costs” as well as “preserving an acceptable level of flood risk to the people of the Basin, and continuing to recognize and implement the other authorized purposes in the Basin”.

Analyses performed as part of the Sovereign Review Team process showed that some Ecosystem-based Function actions could potentially involve significant trade-

offs from a power operations perspective and flood risk perspective for both the U.S. and Canada.

We also identified some lesser magnitude actions potentially beneficial to ecosystems that would not entail significant costs or risks that might be explored.

Question 4. You've testified that the U.S. Entity would also like to "pursue operational flexibility necessary to respond to climate change" in an updated Treaty. Indeed, the Draft Recommendation states that there should be "new terms in the post-2024 Treaty to allow the adaptive management of coordinated Treaty operations to better mitigate any impacts associated with climate change." What exactly does that mean? How will "associated impacts" of climate change be measured? Is this concentration on climate change in addition to a new Ecosystem Function as an authorized purpose of the Treaty?

Answer. While the U.S. Entity is not a principal element of the U.S. Government engaged in climate studies or analysis of impacts, climate change studies conducted by the Army Corps of Engineers (Corps) and BPA for the Columbia River basin have indicated the potential for increased runoff in the winter, earlier timing of the peak spring snowmelt, and the subsequent risk of lower summer flows. It is the conclusion of the U.S. Entity that greater operational flexibility would give both the U.S. and Canada the ability to address these risks as they may appear in the future.

With respect to measuring the "associated impacts" of climate change, the U.S. and Canadian Entities have a joint Hydro-Meteorological team that continuously studies precipitation and streamflows in the basin. In addition, the U.S. Entity continues to work with the research community to intensify regional monitoring, particularly temperatures and streamflow timing, using existing meteorological and streamflow data networks. This allows us to monitor whether the warming we are already observing in the region is beginning to impact our ability to manage floods, to meet electricity demands, and sustain ecosystems. Using this regional monitoring data and the best available science, operating criteria can be adapted in response to a changed climate.

With respect to the relation of climate change to purposes of the Treaty, the latest climate change modeling by the Corps, BPA, University of Washington, USGS and others suggests that flood control, power production, and ecosystems could all be impacted by climate change. Thus, the U.S. Entity sees climate change, not as a proposed new primary purpose, but as an overarching issue which could impact all Treaty operations if the Treaty were to continue over the long term.

Question 5a. The "Canadian Entitlement" as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage. Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S. is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the "Canadian Entitlement"?

Question 5b. How does the U.S. position differ?

Question 5c. Do you agree with Dr. Karier's assessment that the U.S. is receiving only about one-tenth of the actual power benefits?

Question 5d. Should the U.S. obligation to return power to Canada be reduced?

Answer 5a. The Government of Canada, to our knowledge, has not asserted a formal perspective on the Canadian Entitlement.

The Province of British Columbia, through the BC Ministry of Energy and Mines, released a paper on June 25, 2013 on, "U.S. benefits from the Columbia River Treaty—Past, Present, and Future: A Province of British Columbia Perspective". <http://blog.gov.bc.ca/columbiarivertreaty/files/2012/07/US-Benefits-from-CRT-June-25-132.pdf>. Further, the Province of British Columbia released its draft recommendation on the Treaty earlier this fall that included a statement about its view of the Canadian Entitlement in its second of 14 principles. It reads, "2. The ongoing impacts to the Canadian Columbia Basin to meet Treaty requirements should be acknowledged and compensated for. The level of benefits to the Province, which is currently primarily in the form of the Canadian Entitlement, does not account for the full range of benefits in the United States (U.S.) or the impacts in British Columbia."

Answer 5b. While the U.S. Entity cannot speak for the U.S. government on this point, the U.S. Entity perspective is that the Treaty should be modernized so that the payments to Canada post 2024 should be based on an equitable sharing of the power benefits of a coordinated Canadian operation as compared to a non-coordinated operation. Based on the present formula developed in the 1960s, BPA estimates the Canadian share of the downstream benefits in 2024 is significantly great-

er than anticipated, and far exceeds the value of coordinated power operations under the Treaty.

Answer 5c. Dr. Karier's assessment is based on only one specific predominant aspect of the Entitlement relative to its energy value. If we consider a more complete array of factors, however, preliminary estimates by BPA of one-half of the estimated actual value of Canadian coordination post 2024 range from 10 percent to 30 percent. This range considers other factors such as 1) certainty of operations, 2) firm energy value, and 3) seasonal shape and value of energy and capacity.

Answer 5d. In the opinion of the U.S. Entity, yes, although this is a matter for the U.S. Government to decide. In our opinion, based on the present formula developed in the 1960s, the estimated value of the Canadian share of the downstream benefits in 2024 is significantly greater than anticipated, and far exceeds the value of coordinated power operations under the Treaty.

Question 6. What is the Executive Branch doing to integrate the concerns raised by various groups in their public comments on the draft recommendations? Should Congress expect major changes to the draft recommendations?

Answer. The U.S. Entity was tasked by the Department of State and the Inter-agency Policy Committee to produce a regional recommendation that reflects the broadest possible consensus. The regional recommendation was developed by the U.S. Entity in collaboration and consultation with the Pacific Northwest states and federally recognized Columbia Basin Tribes, a variety of stakeholders, and the public through the multi-year Columbia River Treaty Review process. As such, it is a regional recommendation only, not an Executive Branch Statement of Administration Policy. We have conducted extensive stakeholder and public outreach through workshops, panel discussions, and individual meetings, and amassed valuable perspectives, comments, and technical analyses.

We have collated all the comments received on the June 27, 2013, working draft regional recommendation and the September 20, 2013, draft regional recommendation, and have continued to coordinate and seek input from sovereigns and interested stakeholders as we complete the recommendation.

Changes to the recommendation have been made in an attempt to accommodate various perspectives, achieve as much regional consensus as possible, and ultimately to develop a modernized framework.

Question 7. Do you support the continuation of this treaty with Canada?

Answer. The determination on the future of the Treaty is within the purview of the U.S. Government. The U.S. Entity supports improving the Treaty for the benefit of all interests in the Pacific Northwest region and ensuring that the Treaty is sustainable for the long term.

RESPONSES OF GEORGE CAAN TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. The Columbia River is a magnificent asset that plays a central role in the Northwest's economy and cultural identity. It generates clean electricity to millions of people, avoids carbon emissions, provides habitat for fish and wildlife, offers recreational opportunities, provides water for navigation, and has been pressed into service to integrate wind into the electric grid.

The Columbia River Treaty's (Treaty) greatest strengths remain the original reasons for its negotiation and adoption to provide hydropower and flood risk management to the Columbia River Basin.

The Treaty's greatest shortcoming is the calculation of the Canadian Entitlement. When the Treaty was ratified, both the U.S. and Canada anticipated that the Treaty calculation of U.S. power benefits would result in a much smaller energy benefit by 2024, with any capacity benefit being eliminated even earlier due to certain assumptions such as high load growth and a large amount of thermal installations. The U.S. and Canada acknowledged that the real power benefits would be much less than the Treaty calculation due to additional U.S. storage reservoirs and transmission interconnections that are not included in the Treaty calculation.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the Endangered Species Act? Who will bear the costs of this new Ecosystem Function? Do you support the addition of this new Treaty purpose?

Answer. The Power Group appreciates the U.S. Entity's acknowledgement in the September 20th Draft Recommendation that any expansion of the Treaty to include

ecosystem function must “formalize, provide certainty, and build on the many ecosystem actions already undertaken through annual or seasonal mutual agreements between the countries.” The Power Group is concerned, however, that the ecosystem function recommendation remains vague and offers little certainty and structure. Without additional details, adding a sweeping and broad third primary purpose of the Treaty would lead to conflicting obligations and priorities. Further, the Draft Recommendation provides no explanation as to how an expanded Treaty would fit in with the numerous environmental programs currently in place within the Federal Columbia River Power System (FCRPS) and at the generating projects of Power Group members. These uncertainties could diminish, or threaten altogether, ecological benefits achieved after years of detailed studies, tireless investigations and negotiations, and at times, litigation. The uncertainties associated with ecosystem function, as presented in the Draft Recommendation, create significant risk to environmental resources and electric customers in the Northwest.

Members of the Power Group are proud of their environmental stewardship and the progress that their significant efforts have made in protecting and managing fish and wildlife resources. This is why we urged the U.S. Entity to “account for the significant ecosystem stewardship actions taken to date.” By asking for this recognition, Power Group members were not merely seeking acknowledgement of our successful environmental programs, though it is important for stakeholders to have a robust understanding of the investments already undertaken. Rather, we are expressing concern that proposals to inject ecosystem functions at the Treaty level could have unintended consequences for existing, publicly developed programs in the U.S. that represent significant investments for electric customers. Treaty-mandated changes in flow regimes, fish passage operations, or similar requirements could conflict or interfere with ongoing programs in the Columbia River Basin and harm the very resources Treaty-imposed ecosystem functions seek to protect.

Any final recommendation to the State Department related to ecosystem function should carefully account for all ongoing efforts in the Basin, to ensure that the recommendation does not inadvertently conflict with, undermine, or disrupt these efforts—particularly those that were developed in close consultation and negotiations with the public, other federal and state resource agencies and Tribes, and environmental advocacy groups. Such ongoing programs include, for example:

- The FCRPS Biological Opinion;
- Requirements of Federal Energy Regulatory Commission licenses, Habitat Conservation Plans, and other permitted activities of Power Group Members; and
- The Columbia Basin Fish Accords.

Question 3. The “Canadian Entitlement” as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage. Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S. is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the “Canadian Entitlement”? How does the U.S. position differ? Do you agree with Dr. Karier’s assessment that the U.S. is receiving only about one-tenth of the actual power benefits? Should the U.S. obligation to return power to Canada be reduced?

Answer. While the Canadian Entitlement is the financial lynchpin of the Treaty, the U.S. obligation under the Entitlement far exceeds the actual power benefit received. The U.S. Entity has estimated that the U.S.’s obligation under the Entitlement costs Northwest electric customers between \$250 and \$350 million in annual power benefits transferred by the U.S. to Canada, even though the U.S. Entity itself has estimated that one-half of the downstream power benefits received the U.S. would be worth about one-tenth of the exported electricity (valued at \$25 to \$30 million annually).

This disparity is wholly unacceptable to the Power Group. We believe the U.S. has a duty on behalf of its citizens, and all Northwest electric customers in particular, to rebalance the Canadian Entitlement in a manner that ensure the U.S. obligation under the Treaty is commensurate with the power benefits actually received.

The Province of British Columbia has issued several papers including a recent Draft BC Recommendation that acknowledges Treaty dams, “in creating renewable energy that powers a large portion of the province, in providing jobs and economic spinoff to nearby communities, and contributing to the province’s general revenue that supports services to all British Columbians.”

Question 4. Has the Executive branch adequately captured your concerns and interests during the Treaty Review process?

Answer. For three years, the U.S. Entity has led a review of the Columbia River Treaty. During most of this review, the Columbia River Power Group and other key stakeholders in the Northwest were largely excluded from the process established by the U.S. Entity. This process resulted in an initial recommendation that failed to capture the interests of the Power Group and its 6.4 million electric customers in the Northwest.

Over the last three months, the U.S. Entity has actively sought more input from all Columbia River Treaty stakeholders including the Power Group. We appreciate the leadership demonstrated by the U.S. Entity as it seeks to craft a Final Recommendation to be delivered to the State Department on the future of the Columbia River Treaty. The Columbia River Power Group believes this high level engagement with all stakeholders should continue, and specifically, the Power Group should be included in the Administration's review of the Treaty in 2014 and follow-on engagement with Canada.

Question 5. Do you support the continuation of this treaty with Canada?

Answer. The Power Group encourages the U.S. government to engage directly with our Canadian neighbors, trading partners and allies to secure a mutually beneficial future for the Columbia River Treaty beyond 2024. The primary U.S. objective of engaging in any negotiations with Canada must be intensely focused on correcting the current inequity of the U.S. obligation under the Canadian Entitlement.

RESPONSES OF THOMAS KARIER TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. The value of the Columbia River Treaty over the past 50 years to both Canada and the Northwest has been significant. The treaty made the construction of three large hydroelectric projects in Canada possible when the United States agreed to split the downstream power benefits with Canada and pay for additional flood control. The entire Columbia River power system, with the addition of the Canadian projects, almost eliminated mainstem flood damage and ensured billions of dollars worth of power generation in both countries.

Fulfilling the vision of the treaty, the dams were constructed and Canada was fully compensated for their costs. They are Canadian projects, owned and operated by Canada. But continuing the agreement as it was initially designed—to finance the construction of new dams—would place a disproportionate economic burden on the Northwest while creating a windfall for Canada. For this reason, the current Canadian entitlement payment by the Northwest is unsustainable.

In addition to correcting the entitlement formula, the region has identified other benefits that the United States should pursue in a modernized treaty. The two countries should go further than they have to date to incorporate scientifically defensible actions into treaty planning that provide benefits to fish and the ecosystem. We should also ensure that additional storage secured through the treaty will supplement both in-stream flows for the ecosystem and out-of-stream use for domestic water supply in Washington and Oregon. The final outcome should add these benefits in an equitable manner so that the Northwest achieves gains in all areas: power, flood risk, ecosystem and water supply. Along with these additional values, we can prepare the Treaty to better address climate change and protect ongoing benefits for recreation, transportation, water quality, irrigation, and cultural resources.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the Endangered Species Act? Who will bear the costs of this new Ecosystem Function? Do you support the addition of this new Treaty purpose?

Answer. The ecosystem is a complex environment defined by physical conditions and living organisms. One purpose of the treaty should be to enhance the natural conditions in which native plants and animals survive and flourish.

We have made significant progress in the Northwest, especially since 1980, in recognizing the importance of the ecosystem and trying to protect natural functions. Through various mechanisms, including the Northwest Power Act, the Endangered Species Act, the Clean Water and Clean Air Acts, and FERC relicensing, the Northwest has dedicated significant funding to restoring its health. The treaty should not

be an exception. Where we find cost-effective and scientifically warranted opportunities to improve the ecosystem through treaty operations we should pursue them.

The draft recommendations from the U.S. entity states that “The health of the Columbia River ecosystem is a shared benefit and cost of the United States and Canada,” and that “United States interests should ensure that the costs associated with any Treaty operation are aligned with the appropriate party.” These are the right principles to begin the discussion about who pays for ecosystem operations.

The state of Washington supports incorporating ecosystem function into a modernized treaty, along with the other essential elements included in the draft recommendations.

Question 3. Has the executive branch adequately captured your concerns and interests during the treaty review process?

Answer. The draft recommendation does a good job of capturing the many interests represented by the state of Washington. Although we might have used different language, the essential message would have been the same: The State Department needs to involve the region in developing a new, modernized treaty with significant and balanced improvements in a number of areas.

Question 4. Do you support continuing this treaty with Canada?

Answer. We support developing and implementing an improved and modernized treaty. Under the current treaty, every three to five years the Northwest delivers approximately a billion dollars worth of carbon-free hydropower to British Columbia in excess of actual downstream benefits. Also, the current treaty does not adequately incorporate ecosystem operations, water supply, or potential climate change impacts. For these reasons, the current treaty, as it is now implemented, is not sustainable for the long term.

RESPONSES OF KRISTIN MEIRA TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. For nearly fifty years, the Columbia River Treaty has been a model of cross-border cooperation for management of a river system for critical flood protection and mutually beneficial hydropower production. As the time arrives for the United States and Canada to evaluate the future of their historic partnership, the original goals and successful implementation of the Treaty should be recognized. The Treaty was constructed to protect people and businesses from ravaging floods, and to coordinate the efforts of the U.S. and Canada as both nations sought to harness the strength of the Columbia River to provide power to a growing region.

However, as the decades have passed, it has become clear that the original calculations which produced the Canadian Entitlement are flawed, and must be addressed by both nations. Rebalancing the Canadian Entitlement must be a major goal of the United States in any negotiations with Canada regarding the future of the Treaty. We would also strongly encourage continued cooperation to provide the same level of flood damage protection that is currently provided under the Treaty.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the Endangered Species Act? Who will bear the costs of this new Ecosystem Function? Do you support the addition of this new Treaty purpose?

Answer. The current environmental programs underway in the Columbia River Basin are comprehensive and costly, and the result of decades of science and effort in both the United States and Canada. Though earlier versions did not recognize these activities, the current Draft Regional Recommendation notes that “the region, principally through its electric utility ratepayers, has invested hundreds of millions of dollars annually to achieve ecosystem mitigation and improvements throughout the Basin.” The current Draft also notes “there are a number of domestic actions that have contributed, and will contribute, to ecological improvements in the Basin. These include the Federal Columbia River Power System Biological Opinion requirements under the Endangered Species Act, the Nez Perce Water Rights Agreements of 2004, actions under the Northwest Power and Conservation Council’s Columbia River Basin Fish and Wildlife Program, actions under the Clean Water Act to improve water quality, and implementation of the Columbia Basin Fish Accords. In addition, there are numerous habitat and conservation programs and FERC license requirements associated with non-federal dams on the Columbia.”

The United States and Canada already work together to manage flows for ecosystem function. The Draft Recommendation notes that “in 1993 the United States

and Canadian entities began using the flexibilities in the Treaty to assist in meeting Endangered Species Act (ESA) requirements and to address ecosystem considerations on an annual basis through actions such as flow augmentation agreements.”

Despite the recognition of the decades of cross-border cooperation, and significant programs in the United States to benefit ecosystem health in the Basin, the Draft Recommendation still suggests that “there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty.” This generalized idea of expansion does not appear to be the result of a federal agency study, nor is it tied to any specific proposal from a federal agency. This vague suggestion of “more” should not undermine the many ongoing programs already underway in the Basin, which are the product of years of science, multi-party collaboration and significant work in the water and on land to benefit our protected species. These publicly developed programs have resulted in billions of dollars already invested by Northwest electric customers and hundreds of millions of dollars in fish and wildlife programs each year.

Question 3. The “Canadian Entitlement” as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage. Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S. is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the “Canadian Entitlement”? How does the U.S. position differ? Do you agree with Dr. Karier’s assessment that the U.S. is receiving only about one-tenth of the actual power benefits? Should the U.S. obligation to return power to Canada be reduced?

Answer. The Columbia River Treaty review has provided an opportunity to highlight the fundamental need to reestablish an equitable distribution of power benefits between the U.S. and Canada. We agree with the Draft Recommendation’s note that “when the Treaty was ratified, the United States and Canada structured Canada’s share of these benefits as one-half of the downstream power benefits with the Canadian Treaty projects as compared to without those projects. An equitable sharing of these benefits should instead be based on the more realistic measure of the power value of coordinated operations as compared to non-coordinated operations. Based on the present formula developed in the 1960s, the estimated value of the Canadian share of the downstream benefits in 2024 is significantly greater than anticipated, and far exceeds the value of coordinated power operations under the Treaty.”

Question 4. Has the Executive branch adequately captured your concerns and interests during the Treaty Review process?

Answer. The membership of the Pacific Northwest Waterways Association sincerely appreciates the efforts of the U.S. Army Corps of Engineers (Corps), Bonneville Power Administration (BPA), and the select representatives from the region who have given many hours of their time on the Sovereign Review Team (SRT). This historic Columbia River Treaty review effort was a unique endeavor for which there were not an abundance of existing federal templates for stakeholder participation. We recognize the efforts of the Corps and BPA to construct a review process to provide a regional recommendation in the time available.

Moving forward, we would strongly recommend increased stakeholder involvement. It is critical that regional interests that would be impacted by changes to the river system—utilities, navigation, irrigators, and flood control authorities—have more opportunity to participate. These regional interests serve millions of Northwest residents through power delivery, facilitating trade routes for regional and national cargo, producing high-value crops, and protecting lives and businesses from floods. Their expertise is critical as proposed changes to river operations are contemplated.

Question 5. Do you support the continuation of this treaty with Canada?

Answer. The Columbia River Treaty has provided great benefits for both nations, and it is clear that continued cooperative management of the valuable—and sometimes dangerous—flows of the Columbia River is in the interest of both countries. The current review process provides the opportunity to correct outdated calculations for the Canadian Entitlement, while also addressing the need for continued management of the river system to mitigate the threat to human life and property from flood waters.

Question 6. You testified that the Columbia River is essentially a river highway and is the nation’s number one gateway for the export of wheat and barley. It appears that navigation stakeholders are most concerned with the Draft Recommendation of providing higher flows in the spring and summer which could impede the

ability to safely and efficiently navigate the river. You further note that the “ecosystem flows” referred to throughout the Draft Recommendation are not backed up by scientific explanation or reference. Do you believe the U.S. Entity is not giving proper consideration to navigation issues? Do you expect any scientific explanation in a final document?

Answer. Early drafts of the regional recommendation contained scant reference to navigation, and did not capture any of the concerns which had been repeatedly expressed by the navigation community. However, in the past few months we have been provided additional opportunities to provide feedback to the U.S. Entity. The latest version of the Draft Recommendation, circulated by the U.S. Entity on November 26, 2013, represents an improvement from earlier drafts in its inclusion of the importance of Columbia River navigation to the region and the nation, and the concerns expressed by navigation stakeholders.

We appreciate the work of the Corps team over the past year to analyze potential impacts to navigation which would result from implementation of several of the flow regimes sought by some state and tribal members of the Sovereign Review Team. The desire of some for increased “ecosystem flows”, and the reflection of this desire in early drafts of the regional recommendation with no reference to potential impacts to navigation and other authorized purposes, created great concern among many river system users. The current draft of the regional recommendation now notes that “potential impacts to other river uses and infrastructure such as navigation, bridges, and other transportation features, hydropower, irrigation, recreation, fish and wildlife, and cultural resources will also be evaluated and addressed.”

We would expect that any proposed change to existing river system operations would only result from a federally-authorized study, using the best available science.

Thank you again for the opportunity to respond. Please do not hesitate to contact me with any questions you or the Members of the Committee may have.

RESPONSE OF JOEL MOFFETT TO QUESTION FROM SENATOR WYDEN

Question 1. When the Treaty was first negotiated, tribes were not at the table. Now, most affected tribes are part of the Sovereign Review Team. Do you think your inclusion this time around will ensure our goal of steering clear of unintended consequences related to tribal interests?”

Answer. Despite limited financial resources the 15 tribes have committed substantial policy and technical resources to participation in the Sovereign Review Team (SRT) process. The SRT has been an invaluable forum to introduce and vet the rights, interests and aspirations of the millions of residents of the Basin, including the tribal citizenry. Much has been accomplished in the SRT. Significant consensus has been forged. However, the essence of the SRT has not always been faithfully rendered in the draft US Entity recommendations. At this writing, we hold concerns that the final Recommendation may fall short of capturing both the Tribes’ views and those of the broader SRT.

RESPONSES OF JOEL MOFFETT TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. The Treaty has performed well for its narrowly scoped purposes, hydropower and flood control. The Treaty’s greatest shortcomings are dual: lack of tribal consideration and; failure to include ecosystem functions in its original, and current iteration. The regional sovereigns agree that the Treaty can and should be modernized, specifically to include ecosystem function as a third primary purpose. It stands to reason that a modernized treaty should consider modernized governance. That might include full tribal participation in a new US Entity.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the Endangered Species Act? Who will bear the costs of this new Ecosystem Function?

Answer. Columbia Basin Tribes view ecosystem-based function of the Columbia Basin watershed as its ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its’ length and breadth. Clean and abundant water that is sufficient to sustain healthy populations of fish, wildlife, and plants is vital to holistic ecosystem-based function and life itself. A restored, resilient and healthy watershed will include ecosystem-based function such as:

- Increased spring and summer flows resulting in a more natural hydrograph;

- Higher and more stable headwater reservoir levels;
- Restoring and maintaining fish passage to historical habitats.
- Higher river flows during dry years;
- Lower late summer water temperature;
- Reconnected floodplains throughout the river including a reconnected lower river estuary ecosystem as well as reduced salt water intrusion during summer and fall;
- Columbia River plume and near shore ocean enhanced through higher spring and summer flows and lessened duration of hypoxia;
- An adaptive and flexible suite of river operations responsive to a great variety of changing environmental conditions, such as climate change;

Improved ecosystem-based function in the Columbia Basin Watershed is expected to result in at least:

- Increased recognition, protection and preservation of tribal first foods and cultural/sacred sites and activities. First foods includes water, salmon, other fish, wildlife, berries, roots, and other native medicinal plants.
- An estuary with an enhanced food web and increased juvenile fish survival;
- Increases in juvenile and adult salmon survival;
- Decreased mainstem travel time for migrating juvenile salmon;
- Increased resident fish productivity that provides stable, resilient populations;
- Increased wildlife productivity that provides stable, resilient populations;
- Salmon and other juvenile and adult fish passage to historical habitats in the Upper Columbia and Snake River basins, and into other currently blocked parts of the Columbia River Basin.

A modernized CRT needs to address the Columbia Basin using a watershed approach that integrates Ecosystem-based Function, hydropower, and flood risk management on both sides of the border.

The tribes developed and offered this definition of Ecosystem Function to the Regional Sovereigns and the U.S. Entity. Despite this, the U.S. Entity has not adopted a definition of Ecosystem-based Function. The reason the Columbia Basin tribes developed the definition and offered it for use by the U.S. Entity and the other members of the Sovereign Review and Technical Teams was that the tribes' designees on the Sovereign Review Team were often asked by the U.S. Entity "what do you mean by ecosystem-based function?" The tribes thought it was important to provide the definition so that folks had a better context and understanding for our conversations. You'll find that it's really not much different than a standard text book definition, except that it probably has a greater focus on riverine and riparian ecosystems—that is, river-focused ecosystems. By way of example, very early in the process (December 2010), as Entity, federal, tribal and state staff were working on developing the Sovereign Participation Process structure, tribal staff had used "ecosystem-based function" in several places throughout the "charter" for the Sovereigns process—and the Entity staff took it out and replaced it with "salmon fisheries" because they thought that is what the tribes meant. That event made it clear that a definition was needed for this process. Again, at this time we don't know that the Entity has adopted a definition—we would hope they adopt the tribes' proposed definition as we think it would help the State Department in their consideration of the regional recommendation.

The flows and spills that are now part of the river and reservoir operations now provide a good platform upon which to build a more comprehensive, ecosystem-based approach. We've made a good start in the region, but we think we can do better with a comprehensive, bilateral approach with Canada, where they too are invested in the benefits of changed river and reservoir operations. Remember, the BiOp and the litigation over the BiOp are focused on recovery goals for ESA-listed salmon populations, as well as a few sturgeon and bull trout population needs. We're advocating for a more comprehensive approach than that, an ecosystem-based function approach for the watershed, where we're also taking into consideration goals and objectives for healthy and sustainable fish and wildlife populations.

It's premature to attempt to estimate costs or define credits. It's far preferable to build a bi-nation ecosystem function and ethic into a new treaty to create shared benefits and obligations. In so doing, it makes sense to establish a new formula for calculating downstream benefits to ensure ratepayers are paying only for those benefits directly realized as hydropower production.

Question 3. Has the Executive branch adequately captured your concerns and interests during the Treaty Review process?

Answer. The tribes have had sustained engagement across the Administration including the U.S. Entity on all aspects of the Columbia River Treaty Review. It is

apparent to us that the Administration itself has wide-ranging interests on the future of the Treaty ranging from agency mission-specific interests to the broader rubric of trade and national security. The US Entity's efforts to gather regional perspective in the form of a recommendation has not fully captured the concerns and interests of our tribes. As such, we reserve our opportunity for full consultation with the Administration post-regional recommendation to ensure our concerns and interests are captured.

Question 4. Do you support the continuation of this treaty with Canada?

Answer. We support a modernized treaty that includes ecosystem function as a new primary purpose. We could not support the continuation of status-quo due to the effects on the ecosystem and thereby tribal rights and interests.

Question 5. To date, how has the Columbia River Treaty taken fisheries and ecosystem resources into account?

Answer. Fisheries, particularly ESA-affected stocks, have been subject to annual negotiations for flows. These annual negotiations create uncertainty for the species, ratepayers and tribal rights.

The Ecosystem, when taken as a whole, has been severely altered and compromised as a direct consequence of treaty requirements and ongoing implementation. As my testimony states, to prevent the chance of downriver floods, we've created permanent floods upriver. Our nations are unlikely to radically alter our hydro-power and flood risk management infrastructure, but we can give equitable weight and consideration, through planning, forecasting and commitment to a healthy ecosystem.

RESPONSES OF NORM SEMANKO TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. In your view, what have been the greatest strengths of the Columbia River Treaty over the last 50 years? What are its greatest shortcomings?

Answer. The greatest strengths of the Treaty over the last 50 years have been its ability to assist in effectively managing flood risk in the region and providing flows to support the region's hydropower system. The greatest shortcoming of the current Treaty is the change to "called upon" flood protection in 2024 and the differing interpretations of this provision by the United States and Canada.

Question 2. The Draft Recommendation calls for adding a comprehensive Ecosystem Function as the third primary purpose (in addition to power production and flood control) of the Columbia River Treaty. How do you define Ecosystem Function? Would it include credit for actions already being done, such as compliance with the Endangered Species Act? Who will bear the costs of this new Ecosystem Function? Do you support the addition of this new Treaty purpose?

Answer. We do not support the addition of "Ecosystem-Based Function" as a third primary purpose of the Treaty. The term is not defined and means different things to different groups, as was apparent at the hearing. The Tribes' understanding of the term and the U.S. Entity's understanding are worlds apart. It is appropriate to recognize compliance with domestic environmental laws as an authorized purpose, similar to other authorized purposes such as water supply, irrigation, navigation and recreation. That should be the limit of the ecosystem component in the Treaty. Including ecosystem-based function as a separate, primary purpose of the Treaty will cause uncertainty and chaos in the operation of the river system for decades to come. It will also add untold costs to the region.

Question 3. The "Canadian Entitlement" as it has become known, is the amount of electric power the U.S. is obligated to deliver to Canada—equal to one-half the estimated downstream power benefits from the operation of Canadian Treaty storage.

Currently, the entitlement requires the U.S. to deliver power to Canada worth approximately \$250-\$350 million annually. However, the Treaty assumes that the power generation in the U.S. is optimized for power generation even though our system operations have a number of competing demands, such as environmental requirements. How does Canada perceive the "Canadian Entitlement"? How does the U.S. position differ? Do you agree with Dr. Karier's assessment that the U.S. is receiving only about one-tenth of the actual power benefits? Should the U.S. obligation to return power to Canada be reduced?

Answer. This topic lies outside of our area of expertise and we have no opinion on these matters. We defer to the opinions provided by the U.S. power interests in the region.

Question 4. Has the Executive branch adequately captured your concerns and interests during the Treaty Review process?

Answer. We believe that the U.S. Entity has listened to our concerns during the process. In particular, they have done an adequate job of addressing our concerns regarding “called upon” flood control procedures by advocating a position that only the eight authorized dams in the U.S. should be used to provide system flood control. Unfortunately, our concerns regarding ecosystem-based function have not been adequately addressed, as discussed in response to question 2 above.

Question 5. Do you support the continuation of this treaty with Canada?

Answer. Yes.

