

---

---

# CURRENT WATER AND POWER BILLS

---

---

**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON WATER AND POWER  
OF THE  
COMMITTEE ON  
ENERGY AND NATURAL RESOURCES  
UNITED STATES SENATE  
ONE HUNDRED THIRTEENTH CONGRESS  
SECOND SESSION  
ON

<b>S. 1419</b>	<b>S. 2010</b>
<b>S. 1771</b>	<b>S. 2019</b>
<b>S. 1800</b>	<b>S. 2034</b>
<b>S. 1946</b>	<b>H.R. 1963</b>
<b>S. 1965</b>	

---

FEBRUARY 27, 2014



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

---

U.S. GOVERNMENT PRINTING OFFICE

88-043 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

MARY L. LANDRIEU, Louisiana, *Chair*

RON WYDEN, Oregon	LISA MURKOWSKI, Alaska
TIM JOHNSON, South Dakota	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	

ELIZABETH LEOTY CRADDOCK, *Staff Director*

SAM E. FOWLER, *Chief Counsel*

KAREN K. BILLUPS, *Republican Staff Director*

PATRICK J. MCCORMICK III, *Republican Chief Counsel*

---

SUBCOMMITTEE ON WATER AND POWER

BRIAN SCHATZ, Hawaii, *Chairman*

TIM JOHNSON, South Dakota	MIKE LEE, Utah, <i>Ranking</i>
MARIA CANTWELL, Washington	JOHN BARRASSO, Wyoming
BERNARD SANDERS, Vermont	JAMES E. RISCH, Idaho
DEBBIE STABENOW, Michigan	DEAN HELLER, Nevada
JOE MANCHIN, III, West Virginia	JEFF FLAKE, Arizona
AL FRANKEN, Minnesota	TIM SCOTT, South Carolina

MARY L. LANDRIEU and LISA MURKOWSKI are Ex Officio Members of the Subcommittee

# CONTENTS

## STATEMENTS

	Page
Barrasso, Hon. John, U.S. Senator From Wyoming .....	2
Batten, Belinda A., Director, Northwest National Marine Renewable Energy Center, Oregon State University .....	39
Carr, Mike, Senior Advisor to the Director, Energy Policy and Systems Analysis, Principal Deputy Assistant Secretary, Energy Efficiency and Renewable Energy, Department of Energy .....	7
Duyck, Andy, Chairman, Washington County, Oregon Board of Commissioners, Chairman, Clean Water Services, Board of Directors .....	35
Katz, John, Deputy Associate General Counsel, Federal Energy Regulatory Commission .....	11
Merkley, Hon. Jeff, U.S. Senator From Oregon .....	5
Quint, Robert, Senior Advisor, Bureau of Reclamation, Department of the Interior .....	13
Schatz, Hon. Brian, U.S. Senator From Hawaii .....	1
Stern, Charles V., Specialist in Natural Resources Policy, Congressional Research Service .....	31
Wyden, Hon. Ron, U.S. Senator From Oregon .....	3

## APPENDIXES

### APPENDIX I

Responses to additional questions .....	47
---	----

### APPENDIX II

Additional material submitted for the record .....	61
--	----



## CURRENT WATER AND POWER BILLS

---

THURSDAY, FEBRUARY 27, 2014

U.S. SENATE,  
SUBCOMMITTEE ON WATER AND POWER,  
COMMITTEE ON ENERGY AND NATURAL RESOURCES,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:35 p.m. in room SD-366, Dirksen Senate Office Building, Hon. Brian Schatz presiding.

### OPENING STATEMENT OF HON. BRIAN SCHATZ, U.S. SENATOR FROM HAWAII

Senator SCHATZ. Good afternoon.

This afternoon the Subcommittee on Water and Power will consider 8 bills covering several different aspects of our water and power jurisdiction. Two of the bills on today's agenda, S. 1800 and S. 1946, directly address the Bureau of Reclamation's aging infrastructure. Reclamation provides vital services for irrigators, hydro-power dams, recreation and canals in 17 Western States.

However, much of Reclamation's infrastructure is aging. Most of its 476 dams were built more than 50 years ago. This aging infrastructure can be a challenge to maintain.

Recognizing this maintenance challenge, Senator Barrasso and I introduced, S. 1800, the Bureau of Reclamation Transparency Act. Our bipartisan legislation would require the Secretary's Annual Asset Management Plan to provide more information about major repair and rehabilitation needs at all Reclamation sites.

Aging infrastructure can be dangerous. Three out of every 4 dams are listed as high or significant hazard meaning that the failure of the dam could cause death or significant damage to nearby communities. Reclamation's Safety of Dams program works to ensure that these dams are as safe as possible.

However, since the program's inception in 1978 it has received only piecemeal funding. Senators Wyden, Feinstein and I all agree that public safety is paramount. So together we introduced S. 1946, a bill to permanently authorize the Safety of Dams program allowing Reclamation to continue updating its aging infrastructure.

Another method of addressing aging infrastructure is the title transfer process in which Reclamation works with interested project operators to transfer title of certain Reclamation facilities out of government ownership. This transfer divests Reclamation of responsibility and liability for the project. It also provides the recipient with greater autonomy and flexibility to manage the facilities.

Currently all transfers require an act of Congress. My bill, S. 2034 would give Reclamation the authority to transfer certain uncomplicated projects to willing recipients. I'm looking forward to hearing the Bureau's testimony on it.

Finally I want to briefly talk about S. 2019, the Secure Water Act Amendments Act of 2014. Reclamation's WaterSMART program provides grants to fund local water management projects. These grants go toward cost shared projects which leverage government money by attracting non Federal investments. Because WaterSMART saves water and money I want to make sure that this program continues its good work. This work is particularly important as the Nation continues to experience severe and recurring droughts.

We have a number of other bills on the agenda today. I'm looking forward to hearing more about them.

Now I'll turn to our Ranking Member, Senator Barrasso for his opening comments, followed by the Finance Chairman, Senator Wyden.

**STATEMENT OF HON. JOHN BARRASSO, U.S. SENATOR  
FROM WYOMING**

Senator BARRASSO. Thank you very much, Mr. Chairman. I have two bills, as you know, on this hearing today, S. 1800, the Bureau of Reclamation Transparency Act and S. 2010, the Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act.

I'd also note that I'm pleased to be sitting in for subcommittee Ranking Member Mike Lee. He and I share the same concerns regarding addressing aging infrastructure and promoting hydropower, especially in the West where the Bureau of Reclamation facilities are located.

Water is the most fundamental issue in my home State of Wyoming. The need to provide a clean, abundant supply of water is essential to the survival of the Intermountain West. The infrastructure we have today in my home State and across the Nation is aging.

Where the weak points are we do not fully know. The longer we wait the more likely these facilities will fall into disrepair. This will impact the economic livelihood of ranchers and farmers in Wyoming and across the West that rely on these facilities to provide water.

I'm very concerned that the Interior Department and its leadership has been less than forthcoming about the depth and scope of this problem. In 2008 Reclamation testified that the backlog was \$3.2 billion. Similar figures have been quoted by the Administration officials since then. I still have not been able to get the information as to how these figures have been constructed nor have I been able to get a complete written list of the complete maintenance backlog for my home State of Wyoming.

I've introduced legislation, the Bureau of Reclamation Transparency Act, which would provide the maintenance and public safety information by project so Congress can address our backlog. I want to work together with my colleagues to get the answers we need and to find the solutions that we need to improve the aging water delivery systems and Bureau of Reclamation facilities across

the West. Mr. Chairman, I think this is a common sense bill that will accomplish that. I also want to thank the Chairman of this subcommittee for being an original co-sponsor of this important legislation.

Also briefly like to mention, S. 2010, the Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act. This act builds on common sense legislation that I'm proud to have worked with Senator, I'm sorry, Representative Scott Tipton in spurring private investment in clean hydroelectric power generation on existing Reclamation conduits all over the West. That bipartisan bill is now public law.

The legislation we consider here today, a companion to H.R. 16, I'm sorry, 1963 in the House, would complete the goal of allowing non Federal interests to develop electricity at Federal facilities. This bill will do this by promoting hydropower development at projects authorized under a very different statute than those covered by the previous legislation. Taken together Public Law 133-24 and S. 2010 would facilitate the development of clean, renewable energy at over 373 sites across the West lowering power cost to customers and creating new jobs in rural America while raising Federal revenue.

Mr. Chairman, I may say after this hearing that both of these bills be added to the earliest possible full committee markup. Thank you for your help. Thank you for the testimony of those here today.

Senator SCHATZ. Thank you, Senator Barrasso.  
Senator Wyden.

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

Senator WYDEN. Thank you very much, Chairman Schatz. I want to thank you and Senator Barrasso for this courtesy because I have to go to the Floor to handle a matter coming up for the Finance Committee. So I thank you both.

This is a particularly important hearing because it deals with the critical and timely issues with respect to that all important resource, water. There are 3 bills before the subcommittee today that are especially important to me and to my State. I'd just like to touch on them briefly.

The first bill is Senator Merkley's, S. 1771, the Crooked River Collaborative Water Security Act of 2013. Senator Merkley, for those who have been following this debate, has been the go to person for bringing together all of the stakeholders on the Crooked River to provide uncontracted water in Bowman dam for the city of Prineville and for endangered fish populations while giving the irrigators certainty on their contracted water. I want it understood that, I believe, Senator Merkley has done invaluable work on this, particularly in terms of bringing everybody together.

It's my intension to work closely with him, with Congressman Walden, with other colleagues in the Congress and the stakeholders in Central Oregon to see this bill through this year. As far as I'm concerned the city of Prineville needs this water yesterday. We are committed to getting that done.

The second bill I want to touch on is S. 1946, which I have proposed with you, Chairman Schatz and Senators Feinstein and Senator Merkley would permanently reauthorize the Safety of Dams programs within Reclamation. This is an important matter with respect to water infrastructure, a critical task across the West. To help illustrate the importance of this program, the Chair of Washington County, Andy Duyck, has made the trek, the 3,000-mile trek across the country, to explain how the program affects the safety and economic vitality in the Tualatin Basin given the process underway at Scoggins Dam.

Washington County is home to our semiconductor industry and to other major employers in our State making Scoggins Dam a central part of the region's water supply infrastructure that drives residential, agricultural and industrial development. This legislation is absolutely key, Mr. Chairman, to ensure that the necessary safety modifications are made in a timely way. I'm very appreciative of the opportunity to talk about the bill, to have Andy Duyck here and for your leadership.

Finally, I want to speak on behalf of S. 1419, my bipartisan bill with Senator Murkowski that would reauthorize the Department of Energy's Marine Hydrokinetic Energy program including research centers like the one hosted at Oregon State University and the University of Washington. We're glad to have Dr. Belinda Batten, Director of the Northwest National Marine Renewable Energy Center, as a witness. Oregon State University has been a world leader in the development of wave energy technology. I think that all who have observed their work have acknowledged that leadership.

One last point. A year ago, as Chair of the full committee, I asked Ernie Moniz, Dr. Ernie Moniz, during his confirmation hearing to make a greater commitment to what I've come to call the forgotten renewables, the forgotten renewable energy sources, particularly water, geothermal and biomass. In a few weeks when the President's FY 2015 budget is presented to the Congress we'll all have a chance to see whether or not these energy sources have finally made it to the Department's priority list. I do have some doubts that the executive branch will have made that commitment.

So one purpose of your valuable hearing, Mr. Chairman, is to underscore the committee's commitment to wave and tidal energy. Over the past decade congressional authorizing and appropriating committees have worked to maintain a Federal commitment to both conventional hydropower and wave energy technologies even when the Department was not particularly interested in that being done. So we've discussed this with Assistant Secretary Danielson, most recently a couple of weeks ago when he appeared before the committee. It seems that even when the Congress has appropriated funds for wave energy the Department has not been following through enough to ensure that those funds actually get turned into research and the important work that we could like to see in the wave energy field.

Now it's my understanding that Assistant Secretary Danielson and his team have taken a look to see what additional steps can be taken to address this matter. I'm looking forward to hearing from Dr. Danielson and his staff. I want to thank them for indicating that they will make this issue a higher priority.

At a time when our competitors around the world are putting an enormous effort into this very promising technology, S. 1419 puts this committee and the Congress on record as saying we are not going to sit out the competition in this important area.

So I thank you very much, Mr. Chairman, for your leadership and also for allowing me to break from the committee's regular order to make this statement. I look forward to working with you and Senator Barrasso on these matters.

Senator SCHATZ. Thank you very much, Senator Wyden.

We are honored to have Senator Merkley, also from the great State of Oregon, who is here to discuss a bill that he has introduced, S. 1771. We know you've worked very hard on this. We know that your tremendous negotiating skills and local knowledge have come to bear here. We look forward to hearing from you, Senator Merkley.

Go ahead.

**STATEMENT OF HON. JEFF MERKLEY, U.S. SENATOR  
FROM OREGON**

Senator MERKLEY. Thank you very much, Mr. Chair. It's a pleasure to be here. I'm going to submit my full testimony for the record and make a very abbreviated remarks given the pressure of time between votes.

I'd like to acknowledge Belinda Batten, Director of the Northwest National Marine Renewable Energy Center at Oregon State University, who is here as Senator Wyden noted, to testify on the bill related to wave energy, the Marine and Hydrokinetic Renewable Energy Act. I'm a proud co-sponsor of that bill.

I'd also like to recognize Commissioner Andy Duyck, who has been a County Commissioner for Washington County for many years and is here to advocate for the Safety of Dams Act because the Scoggins Dam is highly at risk. It is a critical supply of water to the region. We need to get more water behind that dam as well.

In terms of the bill I've come to testify on, it's the Crooked River Collaborative Water Security Act of 2013.

It will create economic opportunity by providing the city of Prineville with greater access to ground water.

The bill will also allow for retrofitting the Bowman Dam to generate hydroelectric power.

The bill strikes a balance between providing certainty to the agricultural community that depends on the reservoir for irrigation water, but also to release water to maintain healthy runs of steelhead salmon and to provide healthy conditions for trout.

The bill will create a dry year management process to help plan for years in which we have drought which occur all too often in order to best manage the available water, to have the best possible conditions for the ecosystem and for the recreational opportunities in the dam and on the river.

This issue of managing the water has been going on for decades, 4 decades, 40 years. We now have an opportunity where so many stakeholders have come together to say that there is a win/win solution.

I do have letters from those stakeholders that I'll submit for the record.

Let us seize this opportunity so that it is not yet another 40 years before we have this type of win/win opportunity for the various interests in this county.

Thank you very much, Mr. Chair.

Senator SCHATZ. Thank you very much, Senator Merkley.

We really appreciate your testimony, your leadership and your skill in helping to negotiate a solution and create an opportunity where this has been a long standing challenge for an area that you represent. I know this has been tremendously difficult. We're hopeful that the committee will be able to help along those lines.

We know you have a vote. Thank you very much, Senator Merkley.

[The prepared statement of Senator Merkley follows:]

PREPARED STATEMENT OF HON. JEFF MERKLEY, U.S. SENATOR FROM OREGON

I'd like to thank Subcommittee Chairman Schatz, and Ranking Member Lee, as well as other members of the Subcommittee for inviting me to give remarks today on a bill both Senator Wyden and I have worked hard on for several years now. I would like to particularly thank Senator Wyden for dedicating so much of his time and effort to negotiating a historic agreement that has garnered such broad support in Oregon.

This bill is called the Crooked River Collaborative Water Security Act of 2013.

What the bill does is forge an agreement in a debate that has lasted for decades over how to manage water releases from the Bowman Dam, which is a Bureau of Reclamation project on the Crooked River in Crook County, Oregon.

This Bureau project is critical to the well-being of central Oregon. The dam itself has reduced the risk of flooding downstream by stabilizing flows in the river, particularly in the rainy winter months.

The water released from this dam has provided a reliable source of irrigation water for the agricultural community in the area.

But unlike virtually any other Bureau of Reclamation Project, this one has the good fortune of having significant excess storage capacity, and for decades there has been debate over how to make the best use of that capacity.

This bill strikes a compromise across a broad range of stakeholders in the region, and enjoys the support of the local irrigation districts, fishing groups, conservation groups, Crook County, the Warm Springs Tribe, the City of Prineville, and the Governor of Oregon.

These groups have written letters of support for this bill, which will accompany my testimony for the record.

The bill will create economic opportunity in the region by providing the City of Prineville with greater access to groundwater, which will meet their growing municipal water needs.

The bill will also allow for retrofitting the Bowman Dam to generate hydroelectric power, which will create jobs as well as clean power for the region.

The bill also strikes a balance between providing greater certainty to the agricultural community that depends on the Prineville Reservoir for water, while also allowing water to be released from Bowman Dam to help maintain healthy steelhead, salmon and trout fisheries, which are cherished by local fisherman.

Finally, this bill will create a dry-year-management-process to help better plan for dry years, including the impact on fish habitat and fishing, as well as boating and other recreational activities.

The Crooked River Collaborative Water Security Act, to me, represents the best solution to a decades old debate in Central Oregon, and is a solution that came about by many diverse interests taking a leap of faith to come to the table together and ultimately find common ground.

I am proud that we are now at a point where we can move this bill through the committee, and it is my hope that this bill can move quickly through the Senate.

I would also like to quickly highlight two other bills that will be discussed in today's hearing, both of which are led by Senator Wyden and are bills I am proud to cosponsor. One is a bill to amend the Reclamation Safety of Dams Act, and the other would help to facilitate the development of marine hydrokinetic technologies.

I'd also just like to recognize and welcome the two witnesses from Oregon who will be testifying on these bills later—Belinda Batten and Andy Duyck. We are very grateful to each of you for coming to testify on these important bills today.

We have a dam in Oregon, the Scoggins Dam in Washington County, that has been in need of repairs for years to ensure that it could withstand a major earthquake.

The bill to amend the Reclamation Safety of Dams Act will help get more funding for dam safety work, which I know is an issue not only for this dam in Oregon, but many other Bureau dams across the country.

We also have in Oregon a program at Oregon State University that is working on creating a test facility for wave energy. This facility is exciting because it will allow companies to try out their technologies at utility scale and be grid connected.

The Marine and Hydrokinetic Renewable Energy Act will also help to develop wave energy technology by removing regulatory obstacles for pilot projects and encourage more research and development.

I am grateful for Senator Wyden's leadership on these two important bills, and I look forward to working with the members of the committee to advance these bills as well as the Crooked River Collaborate Water Security Act.

I will now call upon the witnesses to come to the table and ask you to provide your testimony.

Our first witness is Michael Carr, Principal Deputy Assistant Secretary in the Office of Energy Efficiency and Renewable Energy at the Department of Energy.

We have also John Katz, Deputy Associate General Counsel for the Federal Energy Regulatory Commission.

Finally Robert Quint, Senior Advisor at the Bureau of Reclamation in the Department of the Interior.

Thank you very much for being here. Your written testimony will be included in the record in full. So please take approximately 5 minutes to summarize.

Mr. Carr, we will start with you and then move down the line.

**STATEMENT OF MIKE CARR, SENIOR ADVISOR TO THE DIRECTOR, ENERGY POLICY AND SYSTEMS ANALYSIS, PRINCIPAL DEPUTY ASSISTANT SECRETARY, ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY**

Mr. CARR. Thank you, Chairman Schatz, Ranking Member Lee and members of the subcommittee. Thank you for the opportunity to testify on behalf of the U.S. Department of Energy on S. 1419, the Marine and Hydrokinetic Renewable Energy Act of 2013.

The Administration is still reviewing S. 1419 and does not yet have a formal position on the bill. But I'd like to summarize briefly here a few points about the bill.

S. 1419 would reauthorize the Department's research and development program on marine and hydrokinetic or MHK technologies to improve their performance and survivability and drive down cost; among other things, directing DOE to develop appropriate testing infrastructure and support demonstrations of MHK energy technologies to verify performance and cost; and would expand the role of the National Marine Renewable Energy Centers to include in water testing and demonstration of MHK technologies.

DOE supports the goals of ensuring U.S. leadership in innovating, validating and manufacturing MHK domestically and deploying these technologies sustainably.

The Office of Energy Efficiency and Renewable Energy or EERE leads DOE's efforts to build a strong clean energy economy. We support research, development, and demonstration of cutting edge

technologies in sustainable transportation, energy efficiency and renewable electricity generation including both hydropower and MHK technologies.

Within EERE, the Water Power Program has made significant strides in advancing next generation MHK technologies; assessing existing resource potential; promoting deployment opportunities; and, in cooperation with other government agencies, assessing and mitigating any potential wildlife or environmental conflicts.

A recent resource assessment of the Nation's wave, tidal, ocean and river current energy shows that the extractable potential of these resources represents up to 25 percent of projected U.S. generation needs by 2050. In particular there is significant potential to provide MHK generated electricity to coastal communities with higher average electricity prices and where long transmission runs are not cost effective.

The Department plans to invest \$41.3 million in fiscal year 2014 to promote MHK technology, research, development, testing and demonstration.

Fostering a domestic MHK industry requires strategic investments in research and development to drive down the cost and improve the performance of the most promising and cost competitive technologies. The Water Power Program goal is to achieve cost competitiveness at local coastal hurdle rates which are about 12 to 15 cents per kilowatt hour in 2030, projected.

The Program's research activities enable the development of innovative technologies such as new drive train, generator and structural components and software that can better predict ocean conditions. DOE research also improves MHK reliability, technology readiness and survivability, like, for example, research on innovative corrosion resistant composite materials that can reduce the need for repairs and lower operations and maintenance costs.

For testing and demonstration of MHK devices DOE has invested in 3 National Marine Renewable Energy Centers or NMRECs which are geographically diverse and test a wide range of MHK technologies in different water conditions and climates in order to validate technology performance and identify and address technology challenges early in the development cycle.

A recent example includes the Northwest National Marine Renewable Energy Center's launch of a mobile instrumentation buoy that obtains critical technical and cost performance data for a variety of wave energy technologies. In general these centers will continue to support rapid technology evolution enabling cost competitive MHK technologies.

One specific Water Power Program focus is on making strategic investments in transformative technologies like wave energy converter technologies through open water and test tank environment demonstrations. In-water demonstrations help evaluate the entire process of deploying MHK devices, validating construction, generation and operating expenses, and have greatly increased our knowledge and understanding of device performance and commercial readiness of MHK technologies.

EERE's MHK sub program also pursues market acceleration and deployment activities that address key environmental and ecological uncertainties, which DOE believes currently represent the most

significant barrier to rapid and efficient permitting and licensing of new demonstrations or commercial projects.

In fiscal year 2014 DOE plans to invest \$5 million in research that includes development of instrumentation for cost effective MHK environmental monitoring.

In conclusion I'd like to thank you, the committee, for the opportunity to testify on S. 1419 and on DOE's work in advancing marine and hydrokinetic technologies. I look forward to working with this subcommittee to foster U.S. leadership in this nascent industry. I look forward to any questions you may have.

Thank you.

[The prepared statement of Mr. Carr follows:]

PREPARED STATEMENT OF MIKE CARR, SENIOR ADVISOR TO THE DIRECTOR, ENERGY POLICY AND SYSTEMS ANALYSIS AND PRINCIPAL DEPUTY ASSISTANT SECRETARY, OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

#### INTRODUCTION

Chairman Schatz, Ranking Member Lee, and members of the Subcommittee, thank you for the opportunity to testify on behalf of the U.S. Department of Energy (DOE) on S. 1419, the Marine and Hydrokinetic Renewable Energy Act of 2013.

The Department is still reviewing S. 1419 and therefore does not have a position on the bill at this time. S. 1419 would authorize the Department to perform research and development on marine and hydrokinetic (MHK) technology components, materials, and systems in order to improve performance, increase survivability, and drive down the technology's cost. S. 1419 would authorize the Department to develop appropriate testing infrastructure and support demonstrations of MHK energy technologies to verify their performance and cost. The legislation also would expand the authorized role of National Marine Renewable Energy Research, Development, and Demonstration Centers to include in-water testing and demonstration of MHK technologies.

#### BACKGROUND

DOE is pursuing an all-of-the-above approach to developing every source of American energy. The Office of Energy Efficiency and Renewable Energy leads DOE's efforts to help build a strong clean energy economy, a strategy that is aimed at reducing our reliance on oil, saving families and businesses money, creating jobs, and reducing pollution. We support research, development, and demonstration (RD&D) of cutting-edge technologies in sustainable transportation, energy efficiency, and renewable electricity generation, including both hydropower and MHK technologies. The Department supports the goals of ensuring United States leadership in innovating, validating, and manufacturing MHK technologies domestically, as well as deploying these technologies sustainably in order to harness the energy potential of our various water resources while building a clean energy economy.

The Water Power Program has recently completed comprehensive resource assessments that identify the potential of the nation's waves, as well as tidal, ocean, and river currents. These resource assessments estimate that the technically extractable resource potential is almost 900 TWh/yr for wave energy<sup>1</sup> and under 400 TWh/yr for tidal<sup>2</sup> and ocean current,<sup>3</sup> which represents up to 25 percent of projected U.S. generation needs by 2050. With more than 50 percent of the population living within 50 miles of coastlines, there is significant potential to provide clean, renewable electricity to communities and cities in these coastal regions using marine and

<sup>1</sup> Reprocessed at 100 meter depth data from P. Jacobson, G. Hagerman, and G. Scott, "Mapping and Assessment of the United States OceanWave Energy Resource," Electric Power Research Institute, Report Number 1024637, 2011.

<sup>2</sup> K. Haas, H. Fritz, S. French, B. Smith, and V. Neary, "Assessment of Energy Production Potential from Tidal Streams in the United States," Georgia Tech Research Corporation, 2011. Upper bound derives from variation on assumptions in numerical models used.

<sup>3</sup> K. Haas, H. Fritz, S. French, and V. Neary, "Assessment of Energy Production Potential from Ocean Currents Along the United States Coastlines," Georgia Tech Research Corporation, 2013. Upper bound derives from variation on assumptions in the numerical models used, and represents Gulfstream from FL to NC.

hydrokinetic technologies. MHK technologies can more readily compete in the near term in coastal regions with higher average electricity prices, and close proximity of coastal populations to water resources reduces transmission distances. There are potentially many different ways that we can sustainably develop our water resources for energy and the Department is committed to helping identify new opportunities for developing renewable energy resources.

Since DOE restarted its Water Power Program in fiscal year 2008, the Program has made significant strides in advancing next-generation water power technologies that can extract energy from moving water, including waves and currents in oceans, rivers, and tidal areas; assessing existing resources; promoting deployment opportunities; and developing this resource in an environmentally responsible manner.

Fostering a domestic MHK industry requires strategic investments in research, development, testing, and demonstration to drive down the cost and improve the performance of the most promising and cost-competitive technologies. The Department plans to invest \$41.3 million in fiscal year 2014 to promote MHK technology development and testing in laboratory and open-water settings, while gathering the operational, environmental, and cost data needed to accelerate the responsible deployment and commercialization of MHK technologies.

Furthermore, like all energy development, MHK deployment requires ensuring that our water, ecological, and marine life resources are protected. I will address these broad areas in turn.

#### RESEARCH AND DEVELOPMENT

The levelized cost of energy (LCOE) of today's wave energy devices is between 61 and 77 cents per kilowatt-hour (¢/kWh), and is between 47 and 53 ¢/kWh for tidal stream energy devices.<sup>4</sup> The MHK subprogram goal is to achieve cost-competitiveness at local coastal hurdle rates, which is approximately 12 to 15 ¢/kWh by 2030. The Program has developed detailed cost models for six different MHK device designs using performance simulations and small-scale laboratory tests for validation. To build on these cost models and clearly identify cost reduction pathways, the Program is identifying research and development opportunities to reduce the LCOE for MHK devices, supporting a detailed, internal techno-economic assessment of MHK technologies and helping stakeholders identify research and development gaps to achieve cost-competitive energy rates by 2030. Using data from internal techno-economic MHK assessment, the Department has established baseline costs for the technology to better inform MHK RD&D activities.

Research activities enable the development of innovative technologies and improve the reliability and technology readiness of MHK systems. DOE currently supports systems and performance advancement projects to develop new drivetrain, generator and structural components as well as develop software that predicts ocean conditions and adjusts device settings accordingly to optimize power production. One example includes innovative components with cross-platform applicability, such as simplified drivetrain designs that will eliminate costly and unreliable gearboxes and hydraulics by utilizing permanent magnet and linear direct-drive generators. DOE also researches ways to improve the technology's survivability, like innovative corrosion resistant materials, such as composites, which can lower repairs and reduce operations and maintenance costs.

#### TESTING AND DEMONSTRATION

DOE has invested in three National Marine Renewable Energy Centers. These Centers are geographically diverse, offering testing sites for a wide range of MHK technology types in different water conditions and climates, to help validate technology performance and identify and address technology deficiencies early in the development cycle. Recently, the Northwest National Marine Renewable Energy Center, led jointly by Oregon State University and the University of Washington, launched the Ocean Sentinel, a mobile instrumentation buoy to support ocean testing that obtains critical technical and cost performance data for a variety of wave energy technologies.

Additionally, the Water Power Program is focused on making strategic investments in transformative technologies, including systems demonstration for advanced MHK industry projects like wave energy converter technologies. By supporting in-water demonstrations, the Program will have the opportunity to evaluate the entire process from demonstration inception to completion, validating construction, generation, and operating expenses and informing the investor community on the status

<sup>4</sup>"The Carbon Trust, Accelerating Marine Energy," July 2011: <http://www.carbontrust.com/resources/reports/technology/accelerating-marine-energy>

and progress of MHK systems. Between fiscal year 2011 and fiscal year 2013, the Program cost-shared the testing of 10 MHK devices in open-water environments, and the testing of 8 MHK devices in test tanks in controlled conditions. These demonstrations have greatly increased our knowledge and understanding of device performance and their interaction with the environment. This important demonstration work helps to advance the commercial readiness of full-scale MHK technologies, like the first-ever grid-connected tidal power device in the United States in Cobscook Bay, Maine, now delivering enough electricity to the utility grid to alone power 25 to 30 homes annually.

#### DEVELOPING MHK RESOURCES SUSTAINABLY

EERE's MHK subprogram pursues market acceleration and deployment activities that address key environmental and ecological uncertainties, which DOE believes currently represent the most significant barrier to rapid and efficient permitting and licensing of new demonstrations or commercial projects. In fiscal year 2014, DOE plans to invest \$5 million in activities that support a range of environmental studies and tool development to ensure that energy generated from MHK is not only renewable, but environmentally sustainable. This includes the development of instrumentation, associated processing tools, and integration of instrumentation packages for quickly and cost-effectively conducting environmental monitoring of MHK technologies. Additionally, DOE is an active member of the International Energy Agency's Ocean Energy Systems group and recently collaborated with international partners to create the Tethys database, which catalogues and shares environmental research and monitoring information from around the world to enable sustainable development and expansion of clean, renewable ocean and offshore wind power. For the past four years, DOE has also served as the convener of the Federal Renewable Ocean Energy Working Group to discuss issues of importance, including environmental considerations, amongst relevant federal agencies.

#### CONCLUSION

In conclusion, I would like to thank you for the opportunity to testify on S. 1419 and on DOE's work to advance MHK technologies. The Department's goals are to help build a viable domestic MHK industry and secure a supply of efficient clean energy from our water resources by supporting innovations enabling cutting-edge MHK technology, testing and demonstration of these technologies, and tools and analysis to ensure we develop our marine and hydrokinetic resources sustainably. I look forward to working with this Subcommittee and with Congress to ensure United States leadership in this industry and to enable the deployment of this source of clean energy.

Senator SCHATZ. Thank you very much.  
Mr. Katz.

#### **STATEMENT OF JOHN KATZ, DEPUTY ASSOCIATE GENERAL COUNSEL, FEDERAL ENERGY REGULATORY COMMISSION**

Mr. KATZ. Mr. Chairman, it's a pleasure to appear before you again. As a member of the staff of the Federal Energy Regulatory Commission my testimony represents my opinions alone and not necessarily those of the Chairman or of any Commissioner.

The bill I'm here to testify also as to S. 1419, the Marine and Hydrokinetic Renewable Energy Act, the first portions of the bill deal with the Department of Energy's development, support of development, activities for the marine and hydrokinetic industry to the extent that the bills calls for the Commission to consult with DOE. FERC staff is prepared and happy to do that.

The second portion of the bill deals with the development of test centers. As the Commission staff has discussed with you, DOE staff actually, with Dr. Batten as well, we recommend that such centers be under the aegis of DOE because if they're done as private entities then the Commission would have to—

Senator SCHATZ. Mr. Katz, excuse me. I'm being told that we need to take a brief recess so I can visit the Floor and cast my vote. I'll be back as soon as possible.

Thank you.  
[RECESS]

Senator BARRASSO [presiding]. I just visited with the Chairman downstairs. I was coming back from the vote. He was heading to the vote. He asked that we just please resume the testimony as things were and apologize for the interruption with votes like this.

But thank you all.

Mr. KATZ. Thank you, Senator.

I believe I was just in the middle of saying that with respect to the provisions of the bill that would authorize DOE to develop test centers, the Commission staff strongly recommends that those be under the aegis of DOE because if they're done by private entities those private entities would have to get involved in the process of obtaining a FERC license. Therefore it would be easier on them as if they were under the aegis of being a Federal facility since the Commission has no authorization to grant licenses for Federal facilities.

The final part of the bill that I wanted to address would authorize the Commission to issue pilot licenses for test projects. The Commission has already issued several licenses for such projects under its existing authority. But should Congress choose to further define that authority the Commission would be happy to proceed under Congress' direction.

With that I'm happy to answer any questions you might have.

[The prepared statement of Mr. Katz follows:]

PREPARED STATEMENT OF JOHN KATZ, DEPUTY ASSOCIATE GENERAL COUNSEL,  
FEDERAL ENERGY REGULATORY COMMISSION

Chairman Schatz, Ranking Member Lee, and Members of the Subcommittee:

My name is John Katz, Deputy Associate General Counsel for Energy Projects, Federal Energy Regulatory Commission. I appreciate the opportunity to appear before you to discuss S.1419, the Marine and Hydrokinetic Renewable Energy Act. As a member of the Commission's staff, the views I express in this testimony are my own, and not necessarily those of the Chairman or of any individual Commissioner.

I. BACKGROUND

Pursuant to Part I of the Federal Power Act (FPA), the Federal Energy Regulatory Commission authorizes and regulates non-federal hydropower projects. FPA section 4(e) provides that the Commission may issue licenses for hydropower project works located across, along, from, or in any of the streams over which Congress has jurisdiction under its commerce clause authority, and on any part of the public lands and reservations of the United States. FPA section 23(b) makes it unlawful (with exceptions not relevant here) for any person, state, or municipality, for the purpose of developing electric power, to construct hydropower project works on the navigable waters of the United States, on non-navigable waters over which Congress has Commerce Clause jurisdiction, on public lands or reservations, or using surplus water or power from any government dam, except pursuant to a license issued by the Commission.

Under the FPA, the Commission regulates over 1,600 hydropower projects at over 2,500 dams. Together, these projects represent 54 gigawatts of hydropower capacity, more than half of all the hydropower in the United States. Hydropower is an essential part of the Nation's energy mix and offers the benefits of an emission-free, renewable, domestic energy source with public and private capacity together totaling about nine percent of the U.S. electric generation capacity.

During the last decade, there has been increasing interest in developing projects using new technology that produces electricity utilizing waves or the flow of water

in ocean currents, tides, or inland waterways. These are referred to as marine and hydrokinetic projects. By early 2007, the Commission had received more than 50 applications for preliminary permits to study such projects, and had held a technical conference with respect to the development of these new technologies. The Commission then issued an interim policy statement with respect to its review of marine and hydrokinetic preliminary permit applications.

In 2008, Commission staff issued guidance on licensing marine and hydrokinetic pilot projects. The guidance discussed the issuance, under the Commission's existing authority and regulations, of five-year pilot licenses to enable developers to study and test new technology. Pilot project licenses would be for projects that were small, short-term, not located in environmentally sensitive areas, would be able to be shut down on short notice, and would be removed at the end of the pilot license term, unless a new license was granted at that time. Applicants would be required to consult with affected federal, state, and local resource agencies, Indian tribes, non-governmental agencies, and members of the public.

Since the issuance of the Commission policy statement and staff guidance, Commission staff has worked closely with project developers and other stakeholders to explore the development of marine and hydrokinetic projects. There are currently 11 preliminary permits in effect for marine and hydrokinetic projects. To date, the Commission has licensed six marine and hydrokinetic projects, three of which were pilot projects, and is reviewing one application for a pilot tidal project.

#### II. S.1419

Section 102 of S.1419 provides that the Secretary of Energy, in consultation with the Secretary of the Interior, the Secretary of Commerce, and the Commission, shall carry out a program of research, development, demonstration, and commercial application to expand marine and hydrokinetic renewable energy production. While the Commission is not authorized or funded to engage in research, development, or commercial application activities, Commission staff is prepared to assist the Secretary, as appropriate, in these matters.

Section 103 of S.1419 provides for the development, under the Secretary of Energy, of national marine renewable energy research, development, and demonstration centers. Commission staff has discussed such centers with staff at the Department of Energy and believes that the centers could provide important support for the development of marine and hydrokinetic technology. Because the FPA requires that projects developed by private entities, states, and municipalities that are located in the navigable waters be licensed by the Commission, Commission staff believes that a regime in which the test centers would be owned by the Department of Energy would be preferable, so that testing would not require Commission authorization.

Section 201 of S.1419 would amend the FPA to authorize the Commission to issue pilot project licenses under specified criteria. As noted, the Commission has already issued pilot project licenses and Commission staff has developed guidance with respect to such licenses, under the assumption that the FPA currently provides authority for the Commission to do so. No entity has to date suggested that these actions are beyond the scope of the FPA. However, it is up to Congress to determine whether the Commission should be provided with explicit statutory authority in this area. To the extent that section 201 establishes criteria for qualifying pilot projects, Commission staff recommends that project developers and other stakeholders be given the opportunity to present their views on these matters. In addition, Commission staff recommends providing some flexibility in the criteria, given the unknowns in developing a new industry.

I would be pleased to answer any questions you may have.

Senator BARRASSO. Thank you very much, Mr. Katz.

#### **STATEMENT OF ROBERT QUINT, SENIOR ADVISOR, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR**

Mr. QUINT. Thank you, Senator Barrasso and other members of the subcommittee. Thank you for the opportunity to testify on 7 bills before the subcommittee today.

I'm Bob Quint, Senior Advisor at the Bureau of Reclamation. My full written statements have been submitted for the record on all 7 bills.

Because of the number of bills and the limited time I will summarize my written statements here and be available for questions.

Taking them in order, S. 1771, the Crooked River Collaborative Water Security Act.

S. 1771 is the latest version of legislation that has carried over from the 112th Congress. S. 1771 would move a Wild and Scenic River's boundary that had been placed across the center line of Bowman Dam and place it a quarter mile downstream. The bill also allows for water supply and operational changes of the reservoir.

With some technical changes detailed in my written statement the Department would support S. 1771.

S. 1800, the Reclamation Transparency Act.

S. 1800 deals with information available on Reclamation's water and power infrastructure. As written the bill requires Reclamation to prepare biannual reports to Congress with detailed assessments of major repair and rehabilitation needs at each of the several thousand individual facilities within Reclamation's more than 180 projects. We understand the desire in Congress for more information on the state of Reclamation's infrastructure. However, Reclamation has several concerns with the bill as written among them the cost to implement it, the value of the end product and the difficulty of achieving a uniform level of detail for facilities that are hugely variable in their role and importance.

We would like to work with the sponsor and this subcommittee to provide additional information on our facilities and to offer amendments to the bill consistent with my written statement.

S. 1946, to amend the Safety of Dams Act.

S. 1946 amends the Reclamation's Safety of Dams Act to authorize such sums that are necessary for ongoing safety and corrective actions at Reclamation dams. Dam safety will be a permanent obligation of our agency and we do not foresee a time when this work will not require Federal funding. For that reason we believe that it's good policy to remove the ceiling for appropriations from this important program. The Department strongly supports this bill.

S. 1965, the East Bench Irrigation District Contract Extension.

S. 1965 renews a water service contract between Reclamation and the East Bench Irrigation District that is necessary due to the circumstances under current Montana State Law. Reclamation has supported Federal legislation to legislatively extend this contract before. We are glad to support S. 1965.

S. 2010/H.R. 1963, Conduit Hydropower Development Equity and Jobs Act.

S. 2010 builds on previous legislation meant to expand the number of facilities where Reclamation can permit non-Federal development of hydropower on existing facilities. Reclamation testified on H.R. 1963, a companion measure to S. 2010 last May before the House Water and Power Subcommittee. H.R. 1963 was amended by the House of Representatives and that bill is identical to the legislation before the subcommittee today, S. 2010.

With some technical amendments detailed in my testimony the Department supports S. 2010 and H.R. 1963.

S. 2019, the Secure Water Act Amendments of 2014.

S. 2019 would amend Section 1904(e) of the Secure Water Act raising the ceiling from 200 million to such sums that are necessary for each of the fiscal years 2015 through 2023. The bill also clarifies the Department's ability to plan for and address drought and makes Hawaii an eligible State for participation of the WaterSMART, water conservation grant program.

The Department strongly supports this bill.

Last, S. 2034, Title Transfer legislation.

The subcommittee has requested testimony on S. 2034, Reclamation Title Transfer Act of 2014. The Department has long recognized the value providing programmatic authority for the transfer of title for facilities that are non-controversial and typically single purpose. We believe S. 2034 would achieve this goal and we support the bill.

In summary the Department with a few changes in these bills and could potentially support passage of all 7 bills. Passage of these will afford Reclamation's mission of delivering water and power providing continuing benefits to the American West.

I'd just like to add on a personal note. I was just informed that my former, my new, soon to be former boss, Mike Connor, was just confirmed as Deputy Secretary of Interior. I applaud the Senate for their wisdom in doing that.

This concludes my statement. I'd be pleased to answer questions at the appropriate time. Thank you.

[The prepared statements of Mr. Quint follow:]

PREPARED STATEMENT OF ROBERT QUINT, SENIOR ADVISOR, BUREAU OF  
RECLAMATION, DEPARTMENT OF THE INTERIOR

S. 2034

Chairman Schatz and members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation. I am pleased to provide the views of the Department of the Interior on S. 2034, The Reclamation Title Transfer Act of 2014. While we support the intent of this proposal, we have not had the opportunity to conduct a thorough analysis of the bill, so we would appreciate the opportunity to work with the Committee to address any technical issues that we may identify. Today, I will share the Bureau of Reclamation's ongoing efforts to facilitate the transfer of title to Reclamation projects and facilities and some examples of technical considerations we have identified already.

S. 2034 would authorize the Secretary of the Interior to establish a program to identify and analyze the potential for public benefits from the transfer of eligible facilities out of Federal ownership. It would also authorize the Secretary to transfer title, without a further Act of Congress, to certain Reclamation facilities out of Federal ownership to qualifying entities that the legislation identifies as having the capacity to "manage the conveyed property for the same purposes that the property has been managed under Reclamation law."

The Department believes that S. 2034 is consistent with efforts that the Bureau of Reclamation currently has underway and meets the goals for improving the effectiveness, timeliness and efficiency of managing water resources facilities in the West.

Mr. Chairman, we see title transfer as an important tool for improving the management of water in the West. In many cases, because of the evolution of water resource management and business in the West, there is no longer a compelling public, national or Federal interest in some of the projects or project facilities that Reclamation owns, but which are operated by the entities that enjoy the benefits and bear the costs of operating those facilities. For these types of projects, title transfer is a win-win. For the water user, taking title would afford greater flexibility in how they carry out project operations and would enable them to avoid certain costs associated with reporting and compliance with Federal requirements. From our perspective, title transfer would allow Reclamation to refocus our limited resources on other high priority activities and relieves us of some liability as the owners of the project.

## BACKGROUND

In 1995, the Bureau of Reclamation began an effort to facilitate the transfer of title to Reclamation projects and facilities in a consistent and comprehensive way. Reclamation developed a process known as the Framework for the Transfer of Title—whereby interested non-Federal entities could work with and through Reclamation to identify and address all of the issues that would enable a title transfer to move forward. Once completed, Reclamation and the entity interested in taking title would work with the Congress to gain the necessary authorization for such a title transfer. As we gained experience, the process has evolved and improved. As we worked through various transfers, some were successful and some were not. Over that time period, we've learned important lessons and have modified the process to improve the efficiency and reduce the associated costs.

Since 1996, the Bureau of Reclamation has transferred title to twenty-seven (27) projects or parts of projects across the West—pursuant to various Acts of Congress. There are some additional transfers that are authorized and awaiting completion. In one case, a district receiving title is completing real estate surveys and preparing the quit claim deeds necessary to record the change of ownership with the county. There are two other authorized transfers where portions of the project were already transferred, but the entities receiving title decided to split the transfers up in order to accomplish other objectives prior to completing the transfer on a portion of the project that still remains in Federal ownership. Further, there is another transfer that is working through completing certain steps and activities which require compliance with various Federal laws including the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) as called for by the authorizing legislation.

Since each project is unique, each of the authorizing laws enacted has different terms. Each requires that different actions be taken prior to transfer, such as the completion of the process under NEPA, or agreements with State and local agencies over recreation or cultural resources management.

While Reclamation has had success with title transfer of projects and facilities, we remain concerned that the process takes too long and can be too costly. The number of new proposed transfers is declining, and it may be due in part to time and cost of the process. We believe that there may be several opportunities for mutual benefit that could come from the transfer of projects or facilities that are not being realized, and we see the goals of S. 2034 as helping in that regard.

#### *Comprehensive Review of Reclamation's Title Transfer Efforts*

Every few years, Reclamation steps back and reviews our title transfer efforts with an eye toward making the process more effective. In 2003, a Team lead by the Department of the Interior's Office of Policy Analysis undertook a comprehensive review of Reclamation's title transfer effort. The review looked at the process as a whole as well as specific individual transfers that were successfully completed and other transfers that did not move forward. This effort included a survey of Reclamation employees involved in title transfer, a workshop and numerous interviews with water users that both pursued title transfer and those that opted not to pursue title transfer. It also included interviews with stakeholders from states, local governments, the environmental community and congressional staff members who were involved in various legislative efforts related to individual transfers at the time. This effort was followed up by the Managing for Excellence Initiative, which was proposed in 2008; and we implemented many changes to make the process more efficient. However, we are still not satisfied that we are maximizing the benefits of title transfer.

At this point, I would like to share a number of important lessons that we learned in these efforts that are still relevant—and I hope these lessons inform the discussion surrounding this legislation.

#### *Each Project is Unique*

One of the early lessons that we learned, and that is reinforced with each new title transfer effort, is that each project and set of facilities is unique. Each project was authorized to address a particular set of circumstances, both hydrologic as well as economic. As such, a “cookie cutter” or “one size fits all approach” would not meet the needs of the water users, the customers, other stakeholders or Reclamation. That is not to say that there cannot be a set of criteria developed, but those would need to be flexible. We believe that S. 2034 acknowledges these circumstances.

#### *No Such Thing As a “Simple Project”*

Many Reclamation projects may appear to be “simple” title transfers or “simple” projects for title transfer because complex or controversial issues are absent. How-

ever, in our experience even the “simple” title transfers had unique complexities that were unknown when we started the process that must be identified and addressed. Certain types of projects tend to have complicating issues, such as older projects, projects with facilities that cover a relatively large geographic area, and particularly projects where significant amounts of land or built up structures exist. Land records associated with older projects may be missing or the quality of the information in existing records may be poor. Projects covering a wide geographical area have a large volume of land records which must be located, assembled, and reviewed.

#### *Develop Local Agreements Prior to the Legislative Process*

While Reclamation’s title transfer process has evolved, we believe that one central tenet of the process continues to hold true. Since each project is unique and has its own potentially complex circumstances, the analysis of the implications of that transfer should be completed and an agreement should be reached on the terms and conditions before seeking authorization of the transfer of projects and facilities. Further, we have had the most success when that analysis has been completed collaboratively with the relevant customers and stakeholders and those agreements were developed at the local level. This has led to innovative solutions that allowed the proposal to move forward.

Early on in the title transfer effort, some districts opted not to go through Reclamation’s locally negotiated process. Instead, they immediately approached their congressional representatives in hopes of getting legislation passed and the facilities transferred quickly. In most cases, this proved to be a slower route than those that went through Reclamation’s cooperative process. In many of these cases, there were issues or controversies related to the facilities that were not addressed at the local level between customers and stakeholders of the facilities. Instead, they were being negotiated through the legislative process. In some situations, where legislation was authorized prior to the analysis being completed, circumstances or problems were identified that required a second or third legislative proposal and Congressional action to address, thereby delaying the ultimate transfer even further.

In many recent cases—particularly those that have been successful—we have seen water districts and interested non-Federal entities work with Reclamation to complete all the necessary analysis and public involvement, and then reach an agreement prior to pursuing the legislative authorization from Congress. This has made the legislative process less controversial and has made implementation, once the transfer was authorized, less costly and more efficient. Two excellent examples are the American Falls Reservoir District #2 in Idaho, which was transferred in 2008, and the Yakima Tieton Irrigation District in Washington State, which was transferred in 2009. In both these cases, Reclamation worked closely with the districts, the states involved and other stakeholders to identify issues and concerns and to reach agreements to address them. By working with stakeholders to address issues and build consensus in advance of legislation, the Administration was able to enthusiastically support both bills in testimony before this Committee.

#### *Legislative Process*

Another source of delay and cost is the process and time needed to get the legislation authorizing the transfer completed. In some of the cases where we followed the established process—that is, the terms and conditions of the title transfer had been negotiated at the field level and there was consensus among all of the stakeholders—the legislative process still took a long time. In many cases the length of time was longer than the process of negotiating the title transfer agreement and completing compliance with the Federal and state laws, such as NEPA. In some cases, this process has taken 4–6 years or more and resulted in significant costs to the water users for advocating for their title transfer legislation. This delay and the costs associated with advocating for legislation has acted as a disincentive for the pursuit of title transfer.

#### *Administrative and Transaction Costs*

Because the Bureau of Reclamation does not currently have a title transfer program, costs to complete the process—including investigating financial, operational and economic issues and complying with NEPA and other Federal and State laws—cannot be budgeted or provided by Reclamation but must be paid for with funds being provided by the water users. In some cases, the legislation authorizing title transfer has authorized a reimbursement or offset to the valuation, but by and large, the entity interested in taking title must bear those initial costs without any promise that the process will result in title transfer. As such, many water users who would otherwise be interested in title transfer and whose projects would be a good

candidate do not choose to pursue title transfer, thereby losing a mutually beneficial opportunity to transfer facilities out of Federal ownership.

S. 2034

*Section 3(a)*

The Reclamation Title Transfer Act of 2014 proposes to address many of the issues identified above by authorizing the establishment of a program that would enable Reclamation to proactively identify and analyze the potential public benefits from the transfer out of federal ownership. Assuming funds are appropriated, this program would help avoid the uncertainties and conflicts that arise when determining how the transaction and administrative costs will be paid and avoid the water users having to up front all the costs associated with the early activities necessary to determine whether title transfer is an appropriate option. This is an important provision that we believe would improve Reclamation's flexibility for addressing the costs associated with title transfer and would provide an incentive for water users to seriously consider title transfer. . We do believe that water users who would benefit from title transfers should still assume the appropriate costs related to such transfers, but we view this section as consistent with that position in that it would provide additional flexibility for how and when such costs should be addressed.

*Section 3(b)*

This section authorizes the Secretary to convey all right title and interest in any eligible facilities without a further Act of Congress that meet certain eligibility criteria that are identified in Section 5. This provision would enable the Department to save significant amounts of time, as well as Federal and non-Federal resources, while ensuring that the Federal and public interests are protected.

We believe that the combination of these provisions of S. 2034 would provide incentives for Reclamation and water users to pursue title transfer and more importantly, would remove some of the barriers that currently act as road blocks for moving forward.

We laud and share the goals identified in S. 2034. Transferring title can result in increased efficiencies and other benefits that would be of significant importance to both the project beneficiaries as well as Reclamation. We see this proposal as a step in the right direction. Because of the limited time we've had to review this proposal, I don't have an exhaustive list of recommendations for you. In the near future we hope to identify and offer alternatives for any technical problems in the language of the bill that would otherwise delay implementation. We look forward to working with the Committee in this effort.

That concludes my statement. I would be happy to answer any questions.

S. 1771

Chairman Schatz and members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of the Department of the Interior (Department) on S. 1771, the Crooked River Collaborative Water Security Act of 2013. The provisions of S. 1771 address the Crooked River Wild and Scenic River designation along with water supply concerns relating to Reclamation's Crooked River Project.

The Department supports the goals of correcting the Wild and Scenic River boundary near Bowman Dam and improving Reclamation project operations, where possible, to further enhance water use and availability. We also recognize refinements made since similar companion legislation was heard in the House in June of last year. We believe that some of the provisions of S. 1771 will advance the goal of water security on the Crooked River, and we offer the following recommendations for improvements to the bill. If the changes summarized below are incorporated to the bill, the Department can support S. 1771.

S. 1771 includes seven sections which address: the Wild and Scenic River designation near Bowman Dam; water supply for the City of Prineville; first fill protection for water in Prineville Reservoir; operating requirements "for the benefit of downstream fish and wildlife"; repayment contract provisions for the Ochoco Irrigation District (District); requirements that Reclamation participate in "dry-year management planning meetings"; and savings clause language clarifying the bill's effect on existing law. This statement summarizes the Department's interest in the most significant provisions of each section.

An eight-mile segment of the Lower Crooked River near Prineville, Oregon was designated as a National Wild and Scenic River in 1988 with enactment of the Omnibus Oregon Wild and Scenic Rivers Act (Public Law 100-557). The Lower Crooked

River meanders through canyons of deeply eroded basalt and banks covered with riparian vegetation. A variety of wildlife including river otters, beaver, great blue herons and mule deer inhabit the corridor. A wide-range of recreation opportunities are available along the Lower Crooked River including native trout fishing, camping, hiking and boating.

When the Wild and Scenic River boundary was administratively finalized for this section of the Crooked River, the centerline of Bowman Dam was used as the upstream terminus of the designation. However, the placement of the beginning of the designation within this man-made feature is both counterintuitive and cumbersome to administer. Section 2 of S. 1771 addresses this by moving that upper limit of the designated river one-quarter mile downstream. The Department of the Interior supports the proposed modification of the boundary as a reasonable solution consistent with the original intent of the Wild and Scenic designation. The Department is willing to work with the Sponsor and the Committee to determine the exact placement of the new boundary. Clearly the dam and related facilities were never intended to be included within the wild and scenic river designation.

Section 3 of S. 1771 amends the Act of August 6, 1956 (70 Stat. 1058), by requiring releases to serve as mitigation for groundwater pumping by the City of Prineville. The Department does not oppose the concept of providing releases to mitigate for municipal use of groundwater. We believe the bill's language of "without further action by the Secretary. . ." and its references to applicable Bureau of Reclamation policies, directives and standards to be contradictory and subject to interpretation as to the need for NEPA compliance and a contract. We recommend deleting the words "Without further action by the Secretary of the Interior, beginning on the date of enactment of the Crooked River Collaborative Water Security Act of 2013" and replacing it with, "Upon passage of the Crooked River Collaborative Water Security Act of 2013, the Secretary of the Interior is authorized to contract with the City of Prineville for up to 5,100 acre-feet of water in Prineville Reservoir and upon receipt of required payments may release such water on an annual basis to serve as mitigation. . ."

An additional concern with S. 1771 is the bill's statement that "the Secretary may contract exclusively with the City of Prineville for additional quantities of water, at the request of the City of Prineville." This language would preferentially benefit the City of Prineville and appears to close the door to any potential future irrigation or municipal water contractors of the Crooked River Project (Project).

#### FIRST FILL STORAGE AND RELEASE

Section 4 of S. 1771 also proposes an entirely new addition to the 1956 Act. The proposed addition would provide existing contractors and others with a "first fill" priority basis, rather than the current situation where both contracted and uncontracted storage space in Prineville Reservoir fill simultaneously. While this provision is not likely to have any immediate effect, it is possible under the proposed first fill priority system that in very dry water years the last fill entity could be shorted. Also, the additional quantity of water reserved for the City of Prineville is not addressed in this section, and Reclamation interprets the bill such that any future quantities of water made available to the City (beyond the 5,100 acre feet) will not be subject to first fill protection and may affect the use of water for the benefit of downstream fish and wildlife.

#### STORAGE AND RELEASE OF REMAINING STORED WATER QUANTITIES

The Department supports the concept of providing some of the now uncontracted space in the reservoir for fish and wildlife purposes. However, the inserted Section 7(a) requirements to release all remaining stored water quantities for the benefit of downstream fish and wildlife will prevent Reclamation from issuing new contracts.

We note that the bill's language also inserts a Section 7(b) into the 1956 Act which would require that if a consultation under the Endangered Species Act or an order of a court requires releases of stored water from Prineville Reservoir for fish and wildlife, the Secretary shall use uncontracted stored water. Reclamation would interpret this provision to set a new precedent in legislatively prescribing operation of the Crooked River Project. Reclamation interprets this section as altering but not eliminating agency discretion with respect to contract water supplies, therefore, sufficient discretion would remain with respect to the operation of the Project to warrant consultation under Section 7(a)(2) of the Endangered Species Act. The limit of Reclamation's discretion is not entirely clear, and could be subject to contrary interpretations.

S. 1771 adds a Section 7 (c) to the 1956 Act, requiring the development of “annual release schedules” to maximize biological benefit for downstream fish and wildlife. This subsection also requires consideration of guidance provided on the annual release schedule by the Warm Springs Reservation of Oregon and the State of Oregon and an opportunity for comment and advice on the annual release schedules by the US Fish and Wildlife Service and the National Marine Fisheries Service. As in past versions of this bill, Reclamation notes a potential for conflict if the federal, state and tribal management priorities are not aligned. Likewise, the limitation of the use of the reservoir for downstream resources, could cause similar problems if a species were to be listed in or above the Reservoir. As drafted however, Reclamation would interpret the amended Section 7(c) as not to alter Reclamation’s obligations under Section 7(a)(2) of the Endangered Species Act.

Section 5 of S. 1771 would provide for early repayment of project construction costs by landowners within the District and the District’s participation in conserved water projects of the State of Oregon. The Department fully supports these objectives and has no concerns regarding corresponding language in the bill.

The Department also supports the McKay Creek Exchange Project which has been the subject of periodic discussions between the District and Reclamation and which would provide enhanced instream flows in McKay Creek in exchange for water from a portion of the uncontracted water supply from Prineville Reservoir.

The Department does not see the need for language in Section 6 of S. 1771 requiring that Reclamation participate in “Dry Year Management Planning” meetings and develop a Dry Year Management Plan. Reclamation already has standing authority to provide technical and planning assistance to state, local and tribal government entities under Title II of the Reclamation States Emergency Drought Relief Act (PL 102-250 as amended). This planning authority does not expire, and is not subject to a standing drought declaration being in place in the area of interest. The Drought Act authority is sufficiently broad to cover the topic areas proscribed in Section 6 of S. 1771, without creating a new Congressional reporting burden on the Department. However, if this language remains, we suggest deleting at the end of Section 6(c), “with the voluntary agreement of North Unit Irrigation District and other Bureau of Reclamation contract holders referred to in that paragraph, the Secretary may release that quantity of water for the benefit of downstream fish and wildlife as described in section 7 of that Act.” This language limits Reclamation’s authority and creates a burdensome requirement that could more efficiently be addressed by requiring entities to contact Reclamation prior to June 1 of any year or the water will be released downstream.

While the Department supports the goals of S. 1771, we believe that the bill would benefit from changes as outlined here. This concludes my written statement. I am pleased to answer questions at the appropriate time.

S. 1800

Chairman Schatz and members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of the Department of the Interior (Department) on S. 1800, the Bureau of Reclamation Transparency Act. As currently written, the Department does not support S. 1800 but would be pleased to work with the bill sponsors on refinements to the legislation to address the concerns described below.

Under Section 4 of S. 1800, the Secretary of the Interior would be required to submit biennial reports to Congress on ‘the efforts of the Bureau of Reclamation to manage all Reclamation facilities,’ including efforts to standardize and streamline data reporting and processes for managing Reclamation facilities. S. 1800 directs that the reports provide itemized lists of “major repair and rehabilitation needs” at all Reclamation facilities, showing estimated costs, and ranked via a categorical rating system to be developed through new regulations pursuant to Section 4(b)(3)(B) of the bill. Sensitive or classified information could be excluded from a required public version of the report, but that information would be required in the versions delivered to Congress. The Department has several concerns with this legislation as introduced, and believes that the preparation and publication of the reports in this bill would constitute a duplication of other existing efforts which will not improve the body of information available on Reclamation’s infrastructure, nor result in more effective application of available resources to address facility maintenance. Having said that, the Department is aware of the desire in Congress for more information on the status of Reclamation’s infrastructure, and in accordance with the Administration’s Open Data Policy and Executive Order, the Department is committed to openness and transparency of data, including Reclamation data on facility management. To that end we would appreciate the opportunity to work with the sponsors

on potential amendments to the bill that would provide Congress and the public additional information regarding Reclamation's infrastructure through augmentation of other existing reporting efforts.

Reclamation's annual budget requests include the best yearly representations of the appropriated funds needed for maintenance at Reclamation facilities. Reclamation's budget documents, delivered to Congress annually and posted online, are developed over a multi-step 18-month process that begins at the field office level where managers consider the condition of the facilities under their jurisdiction, safety considerations associated with facilities' condition, and—very importantly—the ability of operating partners to fund the work identified pursuant to the terms of their contract and requirements of Reclamation Law. Investments in major rehabilitations and replacements are analyzed and prioritized at the field, regional, and bureau levels based on criteria such as: Engineering Need; Risks and Consequences of Failure; Efficiency Opportunities; Financial Feasibility; and availability of Non-Federal Cost Share.

During this process, Reclamation categorizes the information that will go into its budget requests using its Programmatic Budget Structure (PBS). The PBS uses two of its five primary categories to show the budget request for Operations and Maintenance (O&M) activities: 1. Facility Operations, and 2. Facility Maintenance and Rehabilitation. It should be noted that in addition to the appropriated funds in these two budget categories, a generally equal amount of O&M activities are paid for directly by water and power users with their own funds or project revenues.

The Facility Operations category includes items and activities that are necessary to operate Reclamation facilities to produce authorized project benefits for water supplies, power, flood control, fish and wildlife, and recreation. This category includes not only facility operations by Reclamation at reserved works, but also Reclamation's oversight of the operations of facilities performed by water user entities at transferred works. Facility Operations includes all routine or preventive maintenance activities. Routine maintenance is defined as recurring daily, weekly, monthly, or annually, and most tasks performed by Reclamation maintenance staff are included in this category. Also included in this category are routine safety and occupational health items, including those for workplace safety inspection and hazard abatement. The amount budgeted under this category for each facility is the funding necessary to perform routine O&M activities. On an annual basis, each region, along with centralized program management staff, determines the appropriate budget level to support staffing and other resources necessary at each facility for continued operations to deliver authorized project benefits.

The second category, Facility Maintenance and Rehabilitation, addresses the needs over and above the resources in Facility Operations, and corresponds roughly to the concept of major rehabilitations and replacements. The Facility Maintenance and Rehabilitation category includes major and non-routine replacements and extraordinary maintenance of existing infrastructure. This category also includes activities to review and conduct condition assessments (facility O&M, dam safety and site security inspections), as well as funding necessary for the correction of dam safety deficiencies (dam safety modifications), the implementation of security upgrades, and building seismic safety retrofits. Consequently, most of the budgeted items under this category are related to site-specific facility needs.

After the field offices identify prioritized major rehabilitation and replacement activities in their jurisdiction that require appropriated funds, they are evaluated at the regional level where these are compared to the needs and priorities of other activities and facilities in that region. There are five regions within Reclamation. The regions' PBS allotments for Facility Maintenance and Rehabilitation each year are then evaluated at the next level of internal review, with Reclamation's Budget Review Committee (BRC) process. A given year's BRC is working in advance of a budget request two years into the future, and is comprised of senior management from across the agency, providing the maximum breadth of relevant experience and program knowledge. The region presents its priorities to the BRC, which evaluates the major rehabilitation and replacement needs and priorities against those of other regions in order to ensure that Facility Maintenance and Rehabilitation activities reflect Reclamation's greatest overall need and agency priorities. No urgent maintenance issues necessary to the safe operation of a facility are deferred in the budgeting or facility review processes. The end result is a budget request that has been prioritized and vetted across the organization, concurrent with input from the Department and Reclamation leadership.

To better understand upcoming needs, and for the purpose of reporting asset condition at a specific point in time to the Federal Real Property Profile to meet requirements of the Executive order 13327, "Federal Real Property Management", in a separate effort which informs the annual budget process, Reclamation develops

and annually updates estimates of major rehabilitation and replacement (MR&R) needs, including deferred maintenance, for its infrastructure looking out five years. As a result, these “MR&R needs” represent an outlook of Reclamation’s best estimate of identified extraordinary maintenance, repairs, rehabilitation, and replacement needs at a point in time looking forward five years, regardless of funding source, for all assets. The estimated total in 2011 amounted to \$2.6 billion over five years (fiscal years 2012-2016)<sup>1</sup>. It is important to note that a substantial portion of projected needs to address the rehabilitation of aging infrastructure (roughly \$1.2 billion of the \$2.6 billion estimate) will be financed directly by our water and power customers. Cost estimates associated with these identified needs range from “preliminary” to “appraisal/feasibility” level. Thus, these estimates should not be collectively assumed to be at one particular uniform level of detail. Variability in the MR&R estimates from year to year may be the result of additional information received from the estimating source (i.e., Reclamation field offices and non-federal operating entities), changes in field conditions, further evaluations conducted, and work priorities, thus impacting the inclusion or deletion of specific identified needs within a particular year, or from year to year.

As stated in prior testimony before this Subcommittee, one of the main challenges Reclamation faces in securing funding for the identified near-term needs as well as longer-term MR&R needs is the varying economic strength of our operating partners. Given the requirement under Reclamation Law for the repayment of maintenance costs either in the year incurred or over time, Reclamation must work in collaboration with our water and power partners that must repay these investments. For some of these partners, the cost-share requirements associated with MR&R work are simply beyond the financial capabilities of their beneficiaries. Like any organization tasked with constructing, operating, and maintaining a wide portfolio of assets, Reclamation has to prioritize its actions to maximize the benefits derived from its investment of both federal and non-federal funds. Over the past 10 years, funds requested for Facility Operations and Facility Maintenance and Rehabilitation have kept pace with or grown relative to Reclamation’s overall Water and Related Resources budget (graphic attached).<sup>\*</sup> Given the substantial economic and financial interest of Reclamation’s non-federal partners, the development of cost estimates for maintenance requirements on reserved and transferred works is both collaborative and dynamic. Reclamation must also balance its asset management responsibilities with other aspects of its mission to manage water and related resources in the West. We acknowledge there are tradeoffs associated with decisions to fund one identified need versus another, but Reclamation’s annual budget request reflects our best effort to balance those constantly evolving needs associated with all elements of our mission.

The requirements of S. 1800 would duplicate and draw resources away from the processes described above, and the bill makes no allowance for the valuable input from operating partners that is central to Reclamation’s asset management program. Based on arrangements originating with Section 6 of the Reclamation Act of 1902, over two-thirds of Reclamation’s facilities are managed by non-federal project beneficiaries. These operating entities provide valuable input to the formulation of Reclamation’s annual asset management activities. Reclamation believes the requirements of S. 1800 will complicate Reclamation’s and our operating entities’ budget processes, since the reporting requirements would make no allowance for operating partners’ budgeting and financing processes associated with most of the tasks that would be identified. Reclamation also believes that providing a new layer of reports separate and apart from the annual budget request process would create unnecessary difficulties, since budget requests for subsequent years would not be consistent with the maintenance snapshot provided by the reports under S. 1800. If possible, we would like to propose amendments to S. 1800 which would still provide additional information on the status of Reclamation’s infrastructure, but allow for the bill’s reporting requirements to better integrate with Reclamation’s existing budget formulation process and schedule and fully consider the needs and interests of our water and power contractors.

In conclusion, the Department of the Interior is aware of and appreciates the concerns expressed by some Members of Congress about the accessibility of data on Reclamation’s infrastructure. In accordance with the Administration’s Open Data Policy and Executive Order, we are working to improve the availability and accessibility of data on Reclamation’s infrastructure and would be happy to keep the committee informed of our progress in this area. In recent years, Reclamation has made

<sup>1</sup> [www.usbr.gov/assetmanagement/Asset%20Inventory/AssetManagementPlanFY2011FinalWithSignaturePageOnly.pdf](http://www.usbr.gov/assetmanagement/Asset%20Inventory/AssetManagementPlanFY2011FinalWithSignaturePageOnly.pdf)

<sup>\*</sup> Graphics have been retained in subcommittee files.

substantial progress in developing and improving estimates of MR&R needs for both reserved and transferred works, and has provided testimony at hearings of the Senate Energy and Natural Resources Committee on this topic, as well as responding in writing to several questions for the record. It is also worth noting that the Federal Government is making important strides in improving the accuracy, efficiency and level of data available on the federal real property portfolio. The Office of Management and Budget (OMB) established the Real Property Advisory Committee (RPAC) in 2011 to work across agencies to determine real property best practices, opportunities for short and long-term cost savings, and realigning real property inventories to agency mission and service delivery. We believe these processes should be allowed to work or be accounted for in the requirements of this bill before S. 1800 or similar legislation is enacted.

This concludes my written statement. I am pleased to answer questions at the appropriate time.

## S. 1965

Chairman Schatz and members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of the Department of the Interior (Department) on S. 1965, to amend the East Bench Irrigation District Water Contract Extension Act to permit the Secretary of the Interior to extend the contract for certain water services. The Department supports S. 1965.

Reclamation's Clark Canyon Dam and Reservoir are located in southwest Montana and supply irrigation water under contract to the East Bench Irrigation District (EBID). EBID's water service contract with Reclamation was first executed in October 1958 and expired on December 31, 2005. Pursuant to Section 1 of the Act of May 15, 1922 (42 Stat. 541), Section 46 of the Omnibus Adjustment Act of 1926 (44 Stat. 649), and Section 85-7-1957, Montana Code Annotated, execution of a new contract between the United States and any irrigation district requires confirmation by a Montana District court.

In 2006, EBID filed a petition with the Montana Fifth Judicial District Court seeking confirmation of the execution of their renewed contract with Reclamation. A hearing was convened on December 14, 2006, in Dillon, MT, and one objection to the confirmation was filed.

A part of the legal challenge to confirmation of the contract involves the proper place of use of the water, which is an element of a water right which the Montana Water Court has sole jurisdiction over. Therefore, the case was certified from the Montana District Court to the Montana Water Court.

Once the Montana Water Court addresses the proper place of use for the subject water right, it will send the case back to the Montana District Court for further proceedings on the various additional legal challenges to the contract. A decision by either the Montana Water Court or the Montana District Court may be appealed directly to the Montana Supreme Court, which is the court of last resort.

Prior year appropriations bills have extended the contracts for terms of up to two years. Most recently, in the 112th Congress, Public Law 112-139; 126 Stat. 390 extended the contract for four years (to December 31, 2013) or until the date on which a new long-term contract is executed. EBID remains concerned about losing their right to renew their 1958 contract if it is allowed to expire prior to securing court confirmation of the renewed 2006 Contract. For this reason they are pursuing extension of the 1958 contract.

Under current law, the 2006 contract is not binding on the United States until court confirmation is secured. A final decree from the court confirming the 2006 contract has not occurred. Therefore, EBID is seeking authority under S. 1965 to extend the 1958 contract. S. 1965 would extend the contract for six years beyond Public Law 112-139 for a total of ten years (to December 31, 2019) or until a new contract is executed and still defer to the court to take up the issue again at a time of its choosing. The Department believes that a 10 year extension under S. 1965 will allow adequate time for confirmation by the Montana Fifth Judicial District Court. The Department supports this legislation because it would allow water service to the EBID to continue and protects the right for contract renewal while the court confirmation process is given time to be completed.

This concludes my statement. Again, the Department supports S. 1965. I would be pleased to answer questions at the appropriate time.

## S. 2010 AND H.R. 1963

Chairman Schatz, members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of

the Department of the Interior (Department) on S. 2010, the Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act. The Department, with some technical amendments summarized in this statement, supports S. 2010, which amends the Water Conservation and Utilization Act (16 U.S.C. §§ 590y et seq.) to authorize the development of non-federal hydropower and issuance of leases of power privilege at projects constructed pursuant to the authority of the Water Conservation and Utilization Act (WCUA). In general, the Department supports the increase in the generation of clean, renewable hydroelectric power in existing canals and conduits. As noted in previous hearings, the Department has an aggressive sustainable hydropower agenda, which we continue to implement under existing authorities. My testimony today will summarize the Department's efforts to encourage the development of sustainable hydropower, provide an overview of the history of WCUA, and detail the areas in the bill where we believe improvements could be made.

#### DEPARTMENT'S HYDROPOWER EFFORTS

Before I share the Department's views on S. 2010, I want to highlight some of the activities underway at the Department to develop additional renewable hydropower capacity. In March 2011, the Department of the Interior and Department of Energy announced nearly \$17 million in funding over three years for research and development projects to advance hydropower technology. The funding included ten projects for a total of \$7.3 million to research, develop, and test low-head, small hydropower technologies that can be deployed at existing non-powered dams or constructed waterways. The funding will further the Administration's goal of meeting 80 percent of our electricity needs from clean energy sources by 2035.

In March 2010 the Department entered into a Hydropower Memorandum of Understanding (MOU)<sup>1</sup> with the Department of Energy, and the Army Corps of Engineers to study and promote opportunities to develop additional hydropower. In March 2011, the Department released the results of an internal study, the Hydropower Resource Assessment at Existing Reclamation Facilities, that estimated the Department could generate up to one million megawatt hours of electricity annually and create jobs by addressing hydropower capacity at 70 of its existing facilities. While this first phase, completed in 2011, focused primarily on Reclamation dams, the second phase focused on constructed Reclamation waterways such as canals and conduits. In March 2012, Reclamation completed the second phase of its investigation of hydropower development, Site Inventory and Hydropower Energy Assessment of Reclamation Owned Conduits, as referenced in the 2010 MOU. The two studies revealed that an additional 1.5 million megawatt-hours of renewable energy could be generated through hydropower at existing Reclamation sites.

Reclamation worked diligently with our stakeholders and the hydropower industry to improve our lease of power privilege (LOPP) processes, and this collaboration culminated in the release of an updated and improved LOPP directive and standard in September 2012. These new procedures better define roles, timelines and responsibilities that will allow us to better support and encourage sustainable hydropower development at Reclamation facilities. This directive and standard was revised earlier this month to incorporate new process requirements established by Public Law 113-24, Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act. New process requirements updated in the document include: LOPPs being offered first to irrigation districts or water user associations operating or receiving water from Reclamation transferred or reserved works and establishing timeframes for irrigation districts or water user associations to accept or reject the LOPP offer. The temporary revised procedures are out for public comment until March 28, 2014.

#### OVERVIEW OF HISTORY OF WCUA

The WCUA was enacted on August 11, 1939 (amended October 14, 1940) to provide assistance to people hard hit by drought in the Dust Bowl and other similar arid and semiarid areas of the United States through the construction and development of irrigation projects. WCUA leveraged the considerable labor available by the Work Project Administration and other federal agencies during the New Deal, which absent congressional authorization, were precluded from using appropriations for many of the requisite needs of irrigation projects. For example, the Work Project Administration and other federal agencies did not have the authority to purchase water rights, rights-of-way, heavy machinery, and the services required to design and construct engineering features, prepare legal documents, and administer projects. WCUA resolved this issue by authorizing the Bureau of Reclamation to use

<sup>1</sup> <http://www.usbr.gov/power/SignedHydropowerMOU.pdf>, 2010

appropriations to purchase rights-of-way, equipment and supplies, and for the payment of competent supervisory, technical, legal and administrative assistance, while the Work Project Administration and other federal agencies funded the costs of mechanics and laborers. Under WCUA, the Bureau of Reclamation retained the responsibility for the construction and administration of these projects. The Bureau of Reclamation has been authorized to construct 11 projects and three separate units under the WCUA<sup>2</sup>.

Reclamation is authorized to issue LOPP contracts on projects that were authorized under Reclamation law pursuant to Section 5 of the Town Sites and Power Development Act of 1906, 43 U.S.C. § 522, and Section 9(c) of the Reclamation Project Act of 1939, 43 U.S.C. § 485h(c). However, WCUA projects were not authorized pursuant to Reclamation law and the provisions of WCUA are only subject to Reclamation law where explicitly identified in the WCUA. The LOPP authority granted in Section 5 of the Town Sites and Power Development Act of 1906, 43 U.S.C. § 522, and Section 9(c) of the Reclamation Project Act of 1939, 43 U.S.C. § 485h(c) does not apply to WCUA projects since it is not identified in the WCUA, and therefore WCUA projects are not authorized to develop non-federal hydropower absent congressional action. The Mancos Project in southwestern Colorado is such a case where Congress authorized the non-federal development of hydropower on a WCUA project through project specific legislation (P.L. 103-434).

S. 2010

Reclamation testified on H.R. 1963, a companion measure to the legislation before the subcommittee today, last May before the House Water and Power Subcommittee. The legislation was amended by the House of Representatives, and that bill is identical to the legislation before the Subcommittee today, S. 2010. The Department would be pleased to work with the Subcommittee to further refine the legislation.

Section 2(c) of S. 2010 would specifically authorize Reclamation to develop or enter into LOPP contracts for the development of new hydropower on projects and facilities authorized by WCUA, consistent with the Reclamation Project Act of 1939. In accordance with federal Reclamation law, typically LOPP charges paid by Lessees are deposited in the Reclamation Fund as a credit to the affected project. However, WCUA projects were not funded by the Reclamation Fund, but rather the General Fund of the Treasury. To this point, the WCUA states that all receipts from WCUA project operations—including power—are to be covered into the Treasury, rather than the Reclamation Fund, to the credit of miscellaneous receipts. Therefore, if the intention of S. 2010 is for WCUA LOPP charges to credit the affected WCUA project, additional clarification is necessary in Section 2(g) of S. 2010 detailing where the charges will be covered and how they will be applied to the affected project. The Department looks forward to the opportunity to work with the sponsors to address this issue.

Sections 2(h), 2(i), 2(j), 2(k), and 2(m) are duplicative of Section 9(c) of the Reclamation Project Act of 1939, as amended by PL 113-24, Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act. If the 1939 Act is amended again, there will be two distinct LOPP processes, one for traditional Reclamation projects and one for WCUA projects, as prescribed in S. 2010. For that reason, the Department recommends deleting these duplicative areas of the bill. Reclamation would be happy to work with the Subcommittee to address these concerns.

Finally, Reclamation is concerned that the bill as written may be interpreted in such a way that the LOPP authorization granted is restricted to small conduit hydropower development and would not apply to all WCUA conduit development or dam development. For context, all WCUA conduit sites that show hydropower potential are under 5 MW and would qualify as “small conduit hydropower;” however, the majority of WCUA hydropower potential exists at WCUA dams. Therefore, if the intent of the bill is to “unlock” the WCUA for non-federal development through LOPP, the authorization needs to extend to all WCUA conduits and dams. As the bill is

<sup>2</sup>WCUA Projects: Mancos Project, Colorado; Buford-Trenton Project (North Dakota); Buffalo Rapids Project, Montana; Scofield Project, Utah; Intake Project, Montana; Mirage Flats Project, Nebraska; Missoula Valley Project, Montana; Mann Creek Project, Idaho (not eventually constructed under WCUA); Newton Project, Utah; Rapid Valley Project, South Dakota; Balmorhea Project, Texas. The Eden Project, Wyoming, was originally considered under the WCUA but was constructed under separate authority. In addition, three units were authorized pursuant to WCUA authority. Each unit is part of a Reclamation project that was not altogether authorized by the WCUA. The three units include: Dodson Pumping Unit, Milk River Project, Montana; Post Falls Unit, Rathdrum Prairie Project, Idaho; and the Woodside Unit, Bitterroot Valley Project, Montana (no construction has been undertaken).

written, it is unclear if the authorization extends to all WCUA conduits and dams. Reclamation would be happy to work with the Subcommittee to address this concern.

In conclusion, as stated at previous hydropower hearings before this subcommittee, Reclamation will continue to review and assess potential new hydropower projects that provide a high economic return for the nation, are energy efficient, and can be accomplished in accordance with protections for fish and wildlife, the environment, or recreation. As the nation's second largest hydropower producer, Reclamation strongly believes in the past, present and bright future of this important electricity resource.

Thank you for the opportunity to discuss S. 2010. This concludes my written statement, and I am pleased to answer questions at the appropriate time.

S. 2019

Chairman Schatz and members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). Thank you for the opportunity to provide the views of the Department of the Interior (Department) on S. 2019. The bill would raise the authorization ceiling for water and energy conservation grants under the Secure Water Act of 2009 (42 USC 10364(e)), clarify that activities related to drought are authorized under the program, and revise the program's eligibility to include the State of Hawaii as discussed below. The Department supports this bill.

Reclamation owns and operates water projects that promote and sustain economic development within the 17 Western States. The mission of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. Since it was established in 1902, Reclamation has constructed more than 600 dams and reservoirs including Hoover Dam on the Colorado River and Grand Coulee on the Columbia River. Reclamation is the largest wholesaler of water in the country, delivering water to more than 31 million people, and providing one out of five western farmers with irrigation water for 10 million acres of farmland across the United States. Reclamation is also the second largest producer of hydroelectric power in the United States, and provides significant amounts of renewable energy to customers throughout the West.

On February 10, 2010, Secretary Ken Salazar signed a Secretarial order establishing the Department's WaterSMART Initiative, which implements the Secure Water Act. The "SMART" in WaterSMART stands for "Sustain and Manage America's Resources for Tomorrow." The WaterSMART Program includes WaterSMART Grants, Reclamation's Basin Studies, Landscape Conservation Cooperatives, West-Wide Climate Risk Assessments, the Title XVI Water Reclamation and Recycling program, the Cooperative Watershed Management Program, the Water Conservation Field Service Program, USGS's Water Availability and Use Assessments, and the WaterSMART Clearinghouse. Through the WaterSMART Program, the Department works with states, tribes, local governments, and non-governmental organizations to secure and stretch water supplies for use by existing and future generations to benefit people, the economy, and the environment and will identify measures needed to address climate change and future demands.

WaterSMART activities are the most effective means the Department of the Interior has to assist state and local water providers and users address volatility of supplies, economic security, and create resilience in the face of climate change. WaterSMART allows the Department to provide incentives and tools to achieve sustainable supplies, while supporting water managers who make their own decisions about what programs and activities will be the best and most practical fit in their particular watersheds.

WaterSMART Grants are directly aligned with the Department's Priority Goal for Water Conservation: to enable capability to increase the available water supply to 730,000 acre-feet of water savings per year by September 2013 and to a cumulative goal of 790,000 acre-feet by September 2014. Reclamation has met the September 2013 goal and is on track to meet the 2014 target: together, projects funded through WaterSMART and Reclamation's other water conservation activities from 2010 through 2013 are expected to result in over 734,000 acre-feet of water savings per year. This would not have been possible without the ingenuity and resourcefulness of our water and power customers who apply for and implement WaterSMART's water and energy efficiency grant projects at the district level. The projects funded by the WaterSMART program not only play a major role in helping minimize the effects of drought on the environment and agriculture and urban communities, but also contributes to drought resiliency.

WaterSMART also acknowledges the nexus between energy and water use. In addition to saving water, WaterSMART Grant projects from 2010-2013 are expected by their sponsors to save over 45 million kilowatt-hours annually—enough power for 3,900 households—and additional savings are expected in the future. Additional milestones are described in the program's three-year progress report, online at <http://www.usbr.gov/WaterSMART>.

Reclamation is committed to continuing WaterSMART, and it is anticipated that the program will exhaust its authorized appropriations for WaterSMART Grants. Therefore, in order to continue use of this highly valuable and continually oversubscribed program, which is significantly contributing to drought resiliency in the West, an increase in the authorization ceiling will be needed. S. 2019 would amend Section 9504(e) of the Secure Water Act, raising the ceiling from \$200 million to an authorization to be appropriated such sums as are necessary to carry out this section for each of fiscal years 2015 through 2023. A ceiling raise is consistent with part of the Appropriations language section of Reclamation's FY 2014 budget request. A ceiling raise to \$250 million, as was included in the budget request, would ensure that these important water management improvements could continue temporarily but would not likely allow for funding beyond 2016. For that reason, Reclamation supports the language in S. 2019 to authorize funding for the program through 2023.

Section 2 of S. 2019 would make clear that Section 9504(a) authorizes Reclamation to provide financial assistance to plan for or address the impacts of drought. Reclamation shares the sponsor's view that activities related to drought are appropriately addressed under this section and appreciates the clarification of this authority.

Section 2 of S. 2019 would also revise the eligibility language in the Secure Water Act to allow entities located in Hawaii to be eligible for WaterSMART grant funding opportunities. WaterSMART Grants funding opportunity announcements have been limited to the States and U.S. Territories identified under 43 U.S.C. § 391. With a number of exceptions, Reclamation's primary mission has generally been constrained to the 17 continental Western States, which all share an arid climate and a well-established history of prior appropriations water rights doctrines. One such exception is the State of Hawaii, which shares many of the same features as the U.S. Territories, and also already participates in several Reclamation programs such as the Title XVI program, limited application of the Reclamation States Emergency Drought Relief Program, and water resource studies authorized under P.L. 106-566 and P.L. 102-575. However, Reclamation notes that we do not support adding additional states to the WaterSMART program at this time, as the piece-meal incorporation of additional states would be a significant expansion of Reclamation's mission when the agency is already struggling to fulfill its commitments within its traditional and currently authorized area of operations. For these reasons, the Department believes that this expansion of authority should be limited to the State of Hawaii.

Finally, Section 3 of S. 2019 would extend the authority of the Secretary to provide grants to State water resource agencies. This authority ran out in 2013 and the Department supports the language in Section 3 that extends the grant program in Section 9508(c) for another decade for such sums as may be necessary to remain available until expended. The valuable partnership with State water resource agencies is a critical national asset for determining water availability nationwide.

In conclusion, the Department is committed to continuing the WaterSMART Program, as the Federal government has a responsibility to provide leadership and tools to address the increasing and widespread challenges of imbalance between supply and demand. Sustainable water supplies are the underpinning of a stable economic base, employment continuity, and smart growth. We can provide incentives to encourage water conservation and reuse, leadership in new technology to increase usable supplies, and assistance for ecosystem restoration efforts that increase the certainty of water supplies for the future. All of these efforts depend on partnerships with local utilities, states, tribes, and others.

This concludes my statement. Again, the Department supports S. 2019. I would be pleased to answer questions at the appropriate time.

Senator BARRASSO. Thank you very much. Let me see if the vote—it looks like the vote is still going on. But I think he was up by like about 95 to nothing, somewhere in that range at the time I left. But they were waiting on the Chairman to make the final decision.

Thank you.

I appreciate all of you being here.

If I could just start with some questions until the Chairman arrives.

I'll start with Mr. Quint, if we could just talk a little bit.

Congress recently enacted Public Law 113-24, the Bureau of Reclamation's Small Conduit Hydropower Development Act. I introduced this along with Representative Scott Tipton in the House. We did it to amend the Reclamation Project Act of 1939 to authorize the development of small conduit hydropower at Reclamation project facilities.

Now there are a handful of projects, Reclamation projects, which were originally authorized under the Water Conservation Utilization Act which were not included in the hydropower authorization. I think maybe, a couple projects, 4 in Montana and a couple in Idaho, couple in Utah. I think one in Colorado, Idaho, Nebraska or two in Idaho, one in Nebraska, one in South Dakota. Does the Administration support authorizing this hydropower development at these facilities and maybe you want to discuss that a little bit?

Mr. QUINT. Yes, we do. We, in our testimony, we say we do support that with a few minor changes. There's 3 small issues that we feel could be or needs to be corrected to just make it crystal clear what's going on there.

There's some issues with where the money would be credited back to.

There's some issues of the similar language in the 1939 act that we wanted to make sure it was consistent with and didn't provide two different ways for lease of power privilege.

There's also some issues with to make sure that it would cover both conduits and dams. As currently written we feel it's not quite concise enough to cover dams where a majority of the hydropower would be.

Senator BARRASSO. In your written testimony you stated that you support the augmentation of other existing reporting efforts by the Bureau. In CRS written testimony that Reclamation operates a facility maintenance and rehabilitation program that identifies schedules and prioritizes the needs of its reserved works but that the reviews are typically are not made public. So when they do this not made public and the Bureau, according to CRS, also conducts periodic maintenance reviews at transferred works through its associated facility's review of operations and maintenance examinations program. But again, the results are typically not made public.

It would seem that most of the data called for in this bill is already available it—to Reclamation in some form or another. Is that true?

Mr. QUINT. That's correct.

Senator BARRASSO. Why would providing this information to Congress in say a readable spreadsheet not be augmenting your existing efforts?

Mr. QUINT. We're working toward trying to make all the data coming from the various sources a little more understandable, readable because we get data from many of our transferred water works operating entities and a lot of our power customers and things like that. So the data we get in, although we can understand

it, know what it says, isn't consistent for someone that's trying to look at project by project type things.

We're working to get that fixed. We, as a matter of fact, have some, a redline version of S. 1800 we'd like to submit to your staff to maybe meet our needs and your needs at the same time.

Senator BARRASSO. In the written testimony you state that the bill that the two of us brought here today to this committee, I think you say, "constituted duplication of other existing efforts which will not improve the body of information available on Reclamation's infrastructure nor result in a more effective application of available resources to address facility maintenance."

I think, respectfully, speaking for myself, I disagree with that statement. The Chairman can speak for himself, but let me tell you why I put this bill together. I really were looking for a readable breakdown of the total maintenance backlogs from my home State.

Not received the information. Been given hundred pages of documents that are full of graphs and charts with a lot of what seems like bureaucratic talk that a seasoned engineer might have even difficulty comprehending. You're, obviously, you're agreeing.

I've also been trying to get a simple spreadsheet as to how your agency sees, says you have a maintenance backlog of anywhere from 2.5 billion to 3 billion. There's a pretty big gap there. Instead I'm told that each region does their own thing with calculating their backlog. Trying to make sense of it is like comparing apples to oranges.

So since I've raised this issue in July of last year and hadn't gotten what I requested at that point either. So according to your testimony information in a useful format to Congress already exists. If these documents exist then I'm just requesting you provide them to my office by tomorrow morning so that we'd have those.

If you can't do that then I think that the written statement that, you know, that you made rings hollow as to whether it's really available.

Mr. QUINT. OK.

Senator BARRASSO. So should I expect it tomorrow or shall we?

Mr. QUINT. I can't assure you that we have that in our hands to get up with you tomorrow. But I will assure you I will look into it and get it to you as soon as possible.

Senator BARRASSO. Thank you.

Thank you, Mr. Chairman.

Senator SCHATZ [presiding]. Thank you, Senator Barrasso.

Mr. Quint, you said you are not quite ready with a readable spreadsheet of, sort of, comprehensible spreadsheet for the purpose of us exercising our oversight responsibility. What's your time-frame?

Mr. QUINT. We estimate that it's probably going to be about 18 months to 2 years to get that all put together so it is understandable and readable. We do supply data currently as part of our annual budget submission. We do have data in our annual asset management plan that is posted on the website. We also keep track of all the maintenance and requirements in all our facilities and a look ahead with each of our projects as part of their 5 year plan.

So all that data is available, but it's just not in one consolidated area. That's what we're working to do right now.

Senator SCHATZ. So there are two parts to this.

One is to actually do the consolidation and the other is to establish a process through which you can start to aggregate the data and make it more understandable. I can accept that once you create the tool that it may take a lot of time to sift through the data and to, sort of, match up apples to apples from an accounting and programmatic management standpoint.

What I don't understand is that it could possibly take 18 months to develop the tool and for the committee to understand how it is that you're going to, sort of, wrangle this to the ground. Can you make a distinction between the development of the tool to enable us to exercise our oversight responsibility and the actual sifting of the information?

Mr. QUINT. I'll try to explain it in my terms and hopefully that's something that will help.

Senator SCHATZ. Go ahead.

Mr. QUINT. Yes, all that data on the thousands of projects, it's exactly what Senator Barrasso held up there. Much of that data is buried and part of that document for each of those 5 year plans for each of those facilities out there. So it's a matter of us going through, sifting through, getting that data, putting it in a consistent format.

Some of those, for some of our transferred works projects, aren't very sophisticated to be honest with you. So we need to make sure that those estimates are current. They're correct. They are up to date. So that is part of the process.

On some of our more, I'll say sophisticated districts and things, the data is there it's just a matter of putting it in the right format and getting it into the consolidated report.

Senator SCHATZ. Can you give us, since this is likely the last time that we're going to be in this context to have this discussion. Can you give us a, you said you're going to be providing the committee with a redline recommendation for our consideration? Can you give us your preliminary thinking on what you're going to be recommending to the committee as a possible set of amendments?

Mr. QUINT. What we would like to do is we have some existing processes as part of our budget formulation process, part of our system of gathering this data currently. We would like to try to marry up your legislation with our current processes so there's not duplicative efforts.

Senator SCHATZ. What's your level of confidence that it's going to satisfy Senator Barrasso and myself in terms of our basic, common sense desire to be able to answer a question to a constituent?

How much is done? How much is pending? What's our backlog? What's being spent? Just to have a basic understanding and therefore, control over the budget here?

Mr. QUINT. My smart aleck answer would be 100 percent, but probably realistically about 75 percent.

I understand what your concerns have been in the past. I think it gets there. But I can't anticipate whether there's some issues that we are not quite understanding. We'll get there.

But I will commit we'll work with you to make sure it meets your needs and our needs.

Senator SCHATZ. So one final question with respect to this issue.

What I want to make sure that we do together with the Bureau is to develop a, not just a sort of policy tool, but also a management tool that works for you which is to say, I don't want you to just satisfy the subcommittee. I want you to actually that the whole point of this is so that we have better management at the Bureau and better control over projects and better understanding of what needs to be done and what needs to be funded.

So I just want to encourage you to actually be developing using the latest technology, using the latest best practices, to be developing a tool that works for you, certainly that works for the committee. But I could foresee a relatively inefficient process on your side that satisfied the committee because that's job one. But really the overall objective here is to make sure that money is spent wisely and efficaciously.

So we want to just encourage you to do this, you know, measure twice and cut once.

Mr. QUINT. That's absolutely what we're trying to do here is trying to use our current processes and marry it up with your bill to make sure that we're being as efficient as possible.

Senator SCHATZ. OK. Thank you very much.

We'll thank the first group of testifiers and we'll move on to the second batch of witnesses and introduce them.

The first is Charles Stern, a specialist in Natural Resource Policy from the Congressional Research Service.

Andy Duyck, the Chair of the Washington County Commission.

Belinda Batten, the Director of the Northwest National Marine Renewable Energy Center at Oregon State University.

We thank you for making the trip from the West Coast. Your written testimony will be included in the record so please take about 5 minutes to summarize.

Mr. Stern, we'll start with you.

**STATEMENT OF CHARLES V. STERN, SPECIALIST IN NATURAL RESOURCES POLICY, CONGRESSIONAL RESEARCH SERVICE**

Mr. STERN. Thank you, Chairman Schatz and Senator Barrasso. My name is Charles Stern and I'm specialist in Natural Resources Policy at the Congressional Research Service.

Thank you for inviting CRS to testify on S. 1800, the Bureau of Reclamation Transparency Act.

In brief, S. 1800 would expand the Bureau of Reclamation's asset management reporting to require several new components. It would require that Reclamation annually report to Congress estimated costs for repair needs at its facilities and provide a categorical ranking for these needs.

In serving the U.S. Congress on a non-partisan and objective basis, CRS takes no position on this legislation but it's been asked by this subcommittee to provide background and analysis of the legislation's potential effects. CRS remains available to assist the subcommittee in its consideration of this legislation and related issues.

Two considerations frame my remarks on S. 1800.

First, a broad discussion of the distribution of management responsibilities across different types of Reclamation facilities.

Second, Reclamation's current reporting process for repair and rehabilitation needs on these facilities.

I will briefly discuss each of these things before moving on to discuss the bill itself.

First, distribution of management responsibilities.

Reclamation is unique among Federal water resource agencies in that it does not manage much of the infrastructure that it owns. In fact about two-thirds of the infrastructure owned by Reclamation has been transferred to local project sponsors for operations and maintenance. Reclamation conducts periodic maintenance reviews at these facilities which are referred to as transferred works. The results of these examinations are typically not made public.

The remainder of Reclamation's assets are reserved works or infrastructure that is owned and operated by the Bureau. Most of these projects are large, multipurpose assets. Reclamation's process for overseeing their operations and maintenance is generally more involved than that for transferred works. Reclamation has a program that identifies, schedules and prioritizes the needs of its reserved works, but again, the results of these reviews are not centrally compiled in a public report.

The patchwork management structure of Reclamation facilities complicates reporting on needed upgrades for these assets. In recent years Reclamation has initiated new reporting on its asset management. This included, among other things, a major review of its infrastructure management that concluded in 2008 as well as annual asset management reports.

The later reports have, in the past, provided a high level summary of Reclamation's infrastructure management efforts including discussion of how it tracks and plans for management activities, estimates of maintenance requirements at regional/national levels and the policy tools available to address these issues. However, they have not included a list of facility specific repair needs and associated estimates. As I noted in my July 2013 testimony before this committee, some agencies publish needs assessments that include project level repair and upgrade estimates, although these agencies differ from Reclamation in several important ways.

Reclamation also reports on the conditions of its facilities through various mechanisms. However, again, this information is not standardized or available across Reclamation's infrastructure types in any one document.

S. 1800 would make changes to Reclamation's existing reporting process. It would authorize Reclamation to complete an asset management report, presumably similar to the existing report, and updated every 2 years thereafter.

Perhaps most prominently Section 4(b) of the bill would require that the report include additional items in the form of an itemized list of repair needs at each project and a rating for each item. The requirements would apply to both reserve works and transferred works. That is, all Reclamation owned infrastructure including that operated and maintained by local sponsors would be subject to these changes.

S. 1800 does not directly address the management of projects by Reclamation or its local cooperators. Rather its focus is on what information is publicly available about these facilities and in what

format. The bill provides the Administration with some flexibility to determine how it would implement the new requirements.

However, the extent to which they would fit into existing processes or necessitate new ones may be a matter of debate.

Similarly, it is unclear whether requiring project repair estimates and ratings would create new cost for Reclamation.

Some may raise concerns about whether Reclamation's repair estimates or ratings could result in increased operations and maintenance costs being passed on to users. The extent to which such a scenario would actually be the case may be a function of how Reclamation would interpret and implement the bill.

Finally, some may also question how much of this information that would be required under this legislation is already available in existing sources. While some of this information appears to be available, it is possible that a more in depth review of the needs at other facilities, especially transferred works could be interpreted to be required under the legislation.

This concludes my statement. I would be happy to answer any questions you may have at the appropriate time.

[The prepared statement of Mr. Stern follows:]

PREPARED STATEMENT OF CHARLES V. STERN, SPECIALIST IN NATURAL RESOURCES  
POLICY FOR THE CONGRESSIONAL RESEARCH SERVICE

Chairman Schatz, Ranking Member Lee, and members of the subcommittee, my name is Charles Stern. I am a Specialist in Natural Resources Policy at the Congressional Research Service (CRS). Thank you for inviting CRS to testify on S. 1800, The Bureau of Reclamation Transparency Act.

In brief, this legislation would require that the Bureau of Reclamation's (Reclamation) asset management reporting be expanded to include several new components. Specifically, it would require that Reclamation annually report to Congress estimated costs for repair needs and a categorical rating for major repair and rehabilitation needs of Reclamation's facilities. Reclamation currently makes some information available on its infrastructure management activities; the proposed new requirements are directed to be incorporated into those processes.

In serving the U.S. Congress on a non-partisan and objective basis, CRS takes no position on this legislation but has been asked by the Subcommittee to provide background and analysis of the legislation's potential effects. The statements presented in this testimony are based on an analysis of the legislation within the time available. CRS remains available to assist the Subcommittee in its consideration of this legislation, related issues, and potential concerns among affected stakeholders.

OVERVIEW OF RECLAMATION'S INFRASTRUCTURE MANAGEMENT AND REPORTING

The Bureau of Reclamation is one of the two principal agencies charged with constructing and maintaining the federal government's largest investments in water infrastructure, the other being the U.S. Army Corps of Engineers. Other agencies and federal entities have played roles in water resource development. S. 1800's requirements would apply only to the Bureau of Reclamation; thus it is the focus of my testimony.

The Bureau of Reclamation's assets are concentrated in the 17 western states and include dams, canals, pipelines, hydropower facilities, and related infrastructure. Some of these facilities were constructed as far back as Reclamation's original authorization in 1902, and most of them are more than 60 years old. In previous hearings (including those before this committee), concerns have been raised about the perceived deterioration of Reclamation's infrastructure and the information (or lack thereof) on these conditions. In short, S. 1800 would require that Reclamation make available to Congress and the public additional information about the condition and estimated cost of repairing Reclamation-owned infrastructure.

Two important considerations frame my remarks on S. 1800: First, a broad discussion of the distribution of management responsibilities across different types of Reclamation facilities. Second, Reclamation's current process for reporting on repair and

rehabilitation needs of these facilities. I will briefly discuss each of these things before moving on to discuss the bill itself.

First, I will discuss distribution of management responsibilities. As stated above, the majority of Reclamation's water resources facilities are more than 60 years old, and a system of shared responsibilities to plan, construct, finance, operate, maintain, and repair this infrastructure has emerged over time. Reclamation is unique among federal water resource agencies in that it does not manage much of the infrastructure that it owns. In fact, about two-thirds of the infrastructure owned by Reclamation has been transferred to local project sponsors for operations and maintenance. While Reclamation technically owns these assets (which are referred to as "transferred works"), it is not responsible for day to day maintenance at the projects. The bureau conducts periodic maintenance reviews at transferred works through its Associated Facilities Review of Operations and Maintenance Examinations program. However, the results of these examinations are typically not made public.

Separately, "reserved works" are the other major type of infrastructure that is owned and operated by Reclamation and this classification makes up the remainder of the bureau's assets. Most of these projects entail large, multipurpose assets that are owned and operated by Reclamation, and Reclamation's process of overseeing their operations and maintenance is generally more involved than that used for transferred works. Reclamation operates a Facility Maintenance and Rehabilitation Program that identifies, schedules and prioritizes the needs of its reserved works, but again, the results of these reviews are typically not made public.

The patchwork management structure of Reclamation facilities makes reporting on needed upgrades for these assets complicated. In recent years Reclamation has undertaken efforts to improve this reporting. These efforts have included, among other things, a major review of its infrastructure management that concluded in 2008, as well as annual asset management reports. The 2008 review was conducted in response to a 2006 National Research Council Report and resulted in a number of changes to Reclamation's infrastructure management. The annual asset management reports have provided a high-level summary of Reclamation's infrastructure management efforts, including discussion of how the bureau tracks and plans for management activities, aggregated estimates of maintenance requirements at regional and national levels, and some of the policy tools available to address these issues.

Reports and public documents issued by Reclamation generally have not included a list of facility-specific repair needs and associated estimates. However, Reclamation has estimated as recently as 2012 that costs for needed repairs and upgrades throughout the West were approximately \$2.5 (although project level estimates that make up this total are not readily available). As I noted in my July 2013 testimony before this committee, some agencies, such as the Environmental Protection Agency and the Department of Transportation, publish "needs assessments" that include project level estimates for needed repairs and upgrades, although it should be noted that these agencies and the infrastructure they service are different than Reclamation. In any case, the availability of estimates for individual Reclamation facilities varies, and are generally not compiled or regularly updated in a centralized, public report.

Similarly, to varying degrees, Reclamation also reports its efforts to categorize the conditions of these facilities. Reclamation internally tracks and rates the condition of its dams and also utilizes a "Facility Reliability Rating" to categorize the condition of reserved works. Reclamation has in recent years also undertaken a program to categorize the condition of urban canals that may be vulnerable to full or partial failure. However, this information is not standardized or available across Reclamation's infrastructure types, nor is it regularly reported on.

#### CRS ANALYSIS OF S. 1800

S. 1800 would make several changes to Reclamation's existing reporting process. It would authorize Reclamation to complete an asset management report, presumably similar to the existing report (which has to date been produced under general authorities). This report would be published and made publicly available within 2 years of enactment, and updated every two years thereafter. Perhaps most prominently, Section 4(b) of the bill would require that the report include an itemized list of repair needs at each project. This list would include both a cost estimate for repair needs at Reclamation facilities and a rating for each item. The inclusion of the new ratings and repair estimates would apply to both reserved and transferred works, respectively. That is, all Reclamation-owned infrastructure, including that operated and maintained by local sponsors, would be subject to the new require-

ments. The bill would provide an exception to the public reporting requirements for sensitive or classified information, but would require that this information still must be made available to Congress.

S. 1800 does not appear to address directly the management of projects by Reclamation or its local cooperators. Rather, its focus is on what information is made available to Congress and the general public about Reclamation facilities, and in what format. S. 1800 provides the Administration with some flexibility to determine how it would implement the bill; however, the extent to which the new requirements in the legislation would fit into existing processes or necessitate new ones may be a matter of debate. Similarly, it is unclear whether the bill's requirements would create new costs for Reclamation, such as costs resulting from the assessment and publishing of project repair estimates and/or ratings in the new report. Some may also raise concerns about whether Reclamation's repair estimates or ratings could result in increased operations and maintenance costs being assessed on users. The extent to which such a scenario would actually be the case may be a function of how Reclamation would interpret and implement the bill.

Finally, some may also question how much of the information that would be required by the legislation is currently available in existing sources (such as through Reclamation's Associated Facilities Review of Operations and Maintenance Examinations program and its Facility Maintenance and Rehabilitation Program). While some of this information appears to be available within Reclamation, it is possible that a more in-depth review of the needs at other facilities, especially transferred works, could be interpreted to be required under the legislation. However, CRS is unable to say the extent to which this is the case.

This concludes my statement. I would be happy to answer any questions you may have at the appropriate time.

Senator SCHATZ. Thank you very much.  
Mr. Duyck.

**STATEMENT OF ANDY DUYCK, CHAIRMAN, WASHINGTON COUNTY, OREGON BOARD OF COMMISSIONERS, CHAIRMAN, CLEAN WATER SERVICES, BOARD OF DIRECTORS**

Mr. DUYCK. Thank you, Chairman Schatz and Senator Barrasso and distinguished members of the committee for the opportunity to testify before you on Senate, on S. 1946.

My name is Andy Duyck. I'm the Chairman of the Washington County Board of Commissioners as well as the Chair of the Board of Directors for Clean Water Services, a waste water resources management utility, more than 542,000 residents in Washington County.

I'd like to start by thanking Senator Wyden for his leadership on this matter and many other matters of importance to Oregonians.

S. 1946 will ensure that the Bureau of Reclamation's Safety of Dams program has the funding necessary to address critical public safety needs within Reclamation's inventory of 476 dams and dikes across 17 States including Scoggins Dam in Washington County, Oregon.

As a repayment contractor on Reclamation's Scoggins Dam, Clean Water Services has been working closely with Reclamation's Safety of Dams program to address significant seismic safety concerns at this Federal facility. Scoggins Dam, which forms Hagg Lake, supports nearly 250,000 jobs. It provides drinking water for more than 400,000 residents and it provides irrigation for 17,000 acres of crop land.

In addition it sustains water quality in the Tualatin River to protect fish and wildlife habitat.

In 2009 Reclamation completed a safety evaluation of existing dams analysis on Scoggins Dam and issued a decision document in 2010 with a finding that and I quote, the seismic hazard at Scog-

gins Dam quite possibly presents the most severe or at least among the most severe earthquake loadings within Reclamation's inventory of dams."

In order for Reclamation to budget for the necessary safety improvements Reclamation must be granted the funding authority to move forward. Major employers, water managers and the population at risk below these facilities have an expectation that the Federal authorities will diligently pursue repairs to protect public safety and ensure a secure and reliable source of water.

As Senator Wyden so succinctly said in his comments to major Oregon industry leaders last August, the uncertainty of this project is taking a toll on economic development. We thank the Senator and the committee for helping remove this cloud of uncertainty, just as Oregon and the Nation's economy begins to recover. S. 1946 would ensure that dam safety improvements are not delayed awaiting an incremental increase in the cost ceiling for the Safety of Dams program. While extremely helpful increase in the cost ceiling alone will not fully address the public need at Scoggins Dam and possibly other Reclamation facilities.

Concurrent with safety concerns the water supply needs of our region must be addressed. In 2004 Congress authorized the Tualatin Basin Water Supply study and authorized a 2.9 million dollar study alternatives to meet the long term water needs of the region. After nearly a decade of analysis, expansion of Hagg Lake has been identified as a central component for meeting the long term water supply need.

The integration of Reclamation's Safety of Dams improvements with our region's need to expand this facility would reduce costs and leverage our shared investments in order to protect public safety and secure the water supply and meet the long term needs of our community. From the perspective of a non-Federal sponsor and the people of Oregon, it makes little sense to invest hundreds of millions of dollars to secure the dam without simultaneously allowing for an increased water supply. The sustained and recurring droughts in Oregon and other Western States underscore the need to address, not only the threat of earthquakes, but also the threat of water shortages.

In order to move forward with the joint project we need authority allowing repayment contractors, the non-Federal sponsors of these Reclamation facilities, to simultaneously take action to increase storage benefit when economically and environmentally feasible. Under existing law Reclamation cannot plan for nor accept funds from a non-Federal sponsor for such improvements once a facility is in the Safety of Dams process.

We look forward to working with Congress toward the enactment of this legislation and that will not only immediately benefit a producing area of jobs in the State of Oregon, but also Reclamation dams that require safety improvements. The safety, security and reliability of the Nation's water supply is central to our economic health and security.

So thank you for your attention to this legislation. I'd be happy to answer any questions.

[The prepared statement of Mr. Duyck follows:]

PREPARED STATEMENT OF ANDY DUYCK, CHAIRMAN, WASHINGTON COUNTY, OREGON  
BOARD OF COMMISSIONERS, CHAIRMAN, CLEAN WATER SERVICES, BOARD OF DIRECTORS

Thank you Chairwoman Landrieu, Ranking Member Murkowski, Senator Wyden and distinguished Members of the Committee for the opportunity to provide you with testimony in support of S. 1946, a bill to modify the authorization of appropriations for the Bureau of Reclamation's Safety of Dams Program. My name is Andy Duyck, and I am the Chairman of the Washington County Commission, as well as the Chairman of the Board of Directors for Clean Water Services, the water resources management utility for more than 542,000 residents of Washington County. This testimony is submitted on behalf of Washington County and Clean Water Services. I am also submitting a set of letters from a broad-based coalition of Oregon economic, environmental, business, agricultural and municipal interests in support of this bill.

I would like to start by thanking Senator Wyden for his leadership on this matter and on many other matters of importance to Oregonians. S. 1946 will ensure the Bureau of Reclamation's Safety of Dams Program has the funding necessary to address critical public safety needs within Reclamation's inventory of 476 dams and dikes across 17 states, including Scoggins Dam in Washington County, Oregon. This bill will help Reclamation reduce risk; protect lives, homes and property; and will provide economic certainty for the farmers, municipalities and businesses that rely on safe, secure and reliable water and power delivered from Reclamation facilities across the western United States.

Clean Water Services, Washington County and leaders throughout our region thank the Committee for considering legislation to modify the authorization of appropriations for this critical public safety program. As a repayment contractor on Reclamation's Scoggins Dam, Clean Water Services has been working closely with Reclamation's Safety of Dams program to address significant seismic safety concerns at this federal facility. Scoggins Dam, which forms Hagg Lake, supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat.

In 2009, Reclamation completed a Safety Evaluation of Existing Dams analysis on Scoggins Dam and issued a Decision Document in 2010 finding that:

"The seismic hazard at Scoggins Dam quite possibly presents the most severe, or at least among the most severe, earthquake loadings within Reclamation's inventory of dams."

As a result of this finding, Reclamation moved forward with an expedited Corrective Action Study to identify necessary structural modifications to the dam that would address the seismic issues. Accordingly, the President's fiscal year 2014 budget request to Congress included Scoggins Dam on a list of facilities scheduled for preconstruction activities. In order for Reclamation to budget for these priority safety improvements, Reclamation must be granted the funding authority to move forward. Major employers, water managers and the population at risk below these facilities have an expectation that the federal authorities will diligently pursue repairs to protect public safety and ensure secure and reliable sources of water.

As Senator Wyden so succinctly said in his comments to major Oregon industry leaders last August, "the uncertainty [of this project] is taking a toll on economic development." We thank the Senator and the committee for helping remove this cloud of uncertainty just as Oregon and the nation's economy begins to recover.

S. 1946 would provide a more efficient path for dam safety improvements across the country by providing Reclamation with renewed authority to work with local entities to plan, schedule, budget and construct priority dam safety improvements. Like other authorization programs, Congress will maintain its fiduciary authority for the Safety of Dams program, but local communities and Reclamation would no longer be burdened by the need to increase the program's arbitrary cost ceiling every several years.

While extremely helpful, modification of the authorization for appropriations for the Safety of Dams program will not fully address the public need at Scoggins Dam and possibly other Reclamation facilities. Concurrent with safety concerns, the water supply needs of our region must be addressed. In 2004, Congress authorized the Tualatin Basin Water Supply Project Study and authorized \$2.9 million to study alternatives to meet the long-term water needs of the region. The Tualatin Basin Water Supply Project is a basin-wide, integrated water resource management project that will diversify our water supply; help ensure we are able to respond to

anticipated climate change and drought cycles; and meet the 50-year water supply needs for:

- Water quality and critical habitat improvements in the Tualatin River and its tributaries
- Cities, industry and economic development; and
- Agriculture

After nearly a decade of analysis, expansion of Hagg Lake has been identified as a central component for meeting the long-term water needs of our region.

The integration of Reclamation's Safety of Dams improvements with our region's need to expand this facility would reduce costs and leverage our shared investments in order to protect public safety; secure our primary water supply and meet the long-term needs of our community.

From the perspective of the non-federal sponsor and the people of Oregon, it makes little sense to invest hundreds of millions of dollars to secure the dam without simultaneously allowing for increased water supply. The sustained and recurring droughts in Oregon and other western states underscore the need to address not only the threat of earthquakes but also the threat of water shortages.

In order to move forward with a joint project, we need authority allowing repayment contractors—the non-federal sponsors of these Reclamation facilities—to simultaneously take action to increase the storage benefit when economically and environmentally feasible. Under existing law, Reclamation cannot plan for nor accept funds from a non-federal sponsor for such improvements once a facility is in the Safety of Dams process. While such improvements might not be feasible or desired in every instance, Reclamation should have the flexibility to work with non-federal sponsors who seek both safety and water supply improvements.

The authority we seek would not increase costs to the Safety of Dams program nor obligate federal taxpayers in any way to pay for water supply improvements. We recognize and accept our obligation to pay these costs for additional storage capacity. But authorization is needed now to fully address the public need for safety and future water supply.

We greatly appreciate the thorough study and commitment of Reclamation resources to assess the safety of Scoggins Dam. We are working collaboratively with Reclamation to develop a feasible strategy for ensuring the safety of the dam at the least cost to taxpayers and the residents of Washington County. Our plans to expand the storage capacity of the dam have been on hold for five years while the safety of the dam was evaluated. S. 1946 would ensure that safety improvements are not further delayed awaiting an incremental increase in the cost ceiling for the Safety of Dams program. We look forward to working with Congress toward the enactment of this legislation that will not only immediately benefit a key job producing area of the State of Oregon but also other Reclamation dams that require safety improvements.

The safety, security and reliability of the nation's water supply is central to our economic health and security. The resiliency of water infrastructure is more important than ever as we face the challenge of recurring droughts in Oregon and throughout the West. Our collaboration with Reclamation at Scoggins Dam will help our region secure our primary water source and plan for the future. On behalf of economic, agricultural, environmental and municipal interests in our region, I'd like to enter letters of support for S. 1946 into the record from the following stakeholders:

- Oregon Governor John Kitzhaber
- Washington County
- Clean Water Services
- City of Hillsboro
- City of Beaverton
- City of Forest Grove
- City of Tigard
- City of Tualatin
- Tualatin Valley Water District
- Joint Water Commission
- Tualatin Valley Irrigation District
- Oregon Water Resources Congress
- Intel Corporation
- Greater Hillsboro Chamber of Commerce
- Westside Economic Alliance
- Oregon Business Association
- Portland General Electric

- Portland Metro Homebuilders Association
- Tualatin Riverkeepers
- Tualatin River Watershed Council

Thank you for your attention to this legislation. I would be happy to answer any questions.

Senator SCHATZ. Thank you very much, Mr. Duyck.  
Dr. Batten.

**STATEMENT OF BELINDA A. BATTEN, DIRECTOR, NORTHWEST NATIONAL MARINE RENEWABLE ENERGY CENTER, OREGON STATE UNIVERSITY**

Ms. BATTEN. Mr. Chairman, it is my pleasure and honor to appear before you today to discuss the importance of S. 1419. I wish to thank Senator Wyden and Senator Murkowski and their staffs for their work on S. 1419 and long time efforts to create a marine hydrokinetic industry in the United States.

I would also like to express my appreciation to the members of the DOE Water Power team, who are integral to the success of our projects.

I'm a professor of mechanical engineering at Oregon State University and the Director of the Northwest National Marine Renewable Energy Center, which I'll call NNMREC because it's quite a mouthful.

The United States is blessed with an abundant energy resource from the ocean waves and currents. In addition to the estimates provided earlier by Mr. Carr, DOE estimates that Oregon, Washington and California can meet up to 20 percent of their electricity requirements from wave energy. That Alaska and Hawaii can meet nearly all of their power loads from marine energy technologies. Clearly this is a potential renewable energy resource that is worthy of additional investments by the U.S. Federal Government.

NNMREC is a DOE center with the mission of advancing understanding of marine energy technologies. Senator Schatz, there's a center in your State as well.

NNMREC is a collaboration between Oregon State University and the University of Washington and was established in 2008. Our programmatic strength derives from our integrated research, development and testing activities collaborating with private sector industry partners and the national laboratories.

NNMREC served as a one stop shop for technology developers, regulatory and research agencies and community stakeholders who are interested in marine energy. We're developing the work force for this emerging renewable energy sector and have placed more than 20 graduates in industrial positions since 2009.

NNMREC has developed world class test facilities for wave energy devices. In 2012 we established a non grid connected facility in Newport, Oregon and tested the WET-NZ wave energy converter. With support from DOE and non Federal sources of cost match, NNMREC is now developing a site that will serve as the United States utilities field grid connected test facility for wave energy.

Since inception NNMREC has tested 7 different devices in its scaled laboratory facilities at Oregon State and 3 devices in open

water environments. Developers rely on our testing facilities to prove and advance their technologies.

To give you a picture of our collaboration with industry I'll focus on one example.

In 2004 Green Light Energy, a wind developer, visited Oregon State with the interest in starting a wave energy company by licensing Oregon State's intellectual property. They formed Columbia Power Technologies based in Corvallis, Oregon. Since then we've worked collaboratively on research to advance their device.

We've assisted them with testing in our wave tanks as they've advanced through their engineering development spirals. We supported an open water test of their device in Puget Sound. Earlier this week Columbia announced that the manufacturing order for their power generator had been issued and it will be tested at the National Renewable Energy Lab.

Columbia Power is just one of the private sector technology developers that NNMREC has supported. This example demonstrates how the collaboration between NNMREC, the DOE Water Power Program and the national labs is working to shorten the time and cost to commercialization for U.S. based MHK companies.

Unfortunately technology development is not the only hurdle facing this industry. Much of my time during the last year and a half has been devoted to developing the first U.S. grid connecting testing facility for a variety of utility scale wave energy converters and arrays. This facility is being developed to provide the industry with a premier test site in the United States analogous to the European Marine Energy Center in Scotland that has been operational for 10 years.

It has been reported that the existence of that testing facility contributes \$16 million per year to the local economy and that it supports hundreds of jobs. By establishing a comparable testing center in the United States we can grow the MHK industry that will provide new economic opportunities, high wage jobs and a clean energy source to coastal communities.

I see firsthand the challenges that the marine renewables industry faces with respect to funding and regulatory processes. We have been working on permitting activities for over a year and have spent approximately \$500 thousand. We anticipate spending another \$1 million to \$1.5 million and that it will require at least two more years until we have our permits and licenses in hand. All of this cost and effort has been expended to establish a non commercial testing facility for our prototypes.

The reauthorization of the DOE Water Power Program through S. 1419 is essential to providing the continued funding the industry needs. The regulatory changes provided in S. 1419 will provide an avenue for promising new companies to advance through the necessary testing stages more quickly. This bill will enable NNMREC to continue to support developers as illustrated in my example about Columbia Power.

Ocean energy can play a significant role in our Nation's renewable energy portfolio. With the right support the U.S. MHK industry can compete internationally. I ask this committee to consider this measure and positively refer it to the full Senate for eventual passage.

I will be glad to respond to any questions that you may have about NNMREC or the MHK industry. Thank you for your time. [The prepared statement of Ms. Batten follows:]

PREPARED STATEMENT OF BELINDA A. BATTEN, DIRECTOR, NORTHWEST NATIONAL MARINE RENEWABLE ENERGY CENTER, OREGON STATE UNIVERSITY

Senator Landrieu and members of the Subcommittee, it is my pleasure and honor to appear before you today to discuss the importance of S. 1419, the Marine and Hydrokinetic Renewable Energy Act of 2013. First, I offer my congratulations to you, Senator Landrieu, for your ascension to committee chair. I also want to thank my Senator from Oregon, Ron Wyden, as well as Senator Murkowski, along with their staffs, for the excellent work on S. 1419 and long time support of efforts to create a marine hydrokinetic (MHK) industry in the United States. Finally, I would also like to express my appreciation for the members of the Department of Energy's Water Power team who are integral to the success of our projects.

I am a professor of Mechanical Engineering at Oregon State University and Director of the Northwest National Marine Renewable Energy Center (NNMREC). Prior to this appointment, I served as the Head of the School of Mechanical, Industrial, and Manufacturing Engineering at Oregon State University. Previous to that, I was the Program Manager for Dynamics and Control at the Air Force Office of Scientific Research. I have served on the US Air Force Scientific Advisory Board, and I currently serve on the board of the Oregon Wave Energy Trust.

The United States is blessed with abundant MHK renewable resources from ocean waves and currents. For the continental United States, the potential MHK resource, dominated primarily by ocean waves, is estimated between 13 and 19 percent of current electricity demand. DOE estimates that Oregon, Washington and California can meet up to twenty percent of their electricity requirements from wave energy converters, and Alaska and Hawaii can meet nearly all of their power loads from MHK technologies. Clearly, this is a potential renewable energy resource worthy of additional investments by the U.S. Federal Government.

NNMREC is a competitively designated U.S. Department of Energy (DOE) Center with the mission of advancing understanding of MHK technologies. NNMREC, a collaboration between Oregon State University and the University of Washington, was established in 2008 through a competitive DOE Water Power Program Funding Opportunity Announcement. Our programmatic strength derives from our integrated research, development and testing activities, collaborating with private sector industry partners and the national laboratories. NNMREC has historically focused on wave and tidal current energy technologies, and has expanded into off-shore wind. NNMREC serves as a "one stop shop" for technology developers; federal, state and local regulatory and resource agencies; and community stakeholders interested in marine energy. We are developing the workforce for this emerging renewable energy sector, and have placed more than twenty graduates in industrial positions since 2009.

NNMREC has developed world-class test facilities, under the "brand" Pacific Marine Energy Center (PMEC). In 2012, NNMREC established the PMEC North Energy Test Site (PMEC-NETS), a non-grid connected facility in Newport, Oregon, and tested the WET-NZ wave energy converter. With support from DOE and other non-federal sources of cost match, NNMREC is now developing the PMEC South Energy Test Site (PMEC-SETS) to serve as the United States' utility scale grid connected test facility. At this facility, we will test commercial scale wave energy converters and arrays.

Our faculty and students have also supported scaled wave energy converter testing in our wave tank facilities at OSU's Hinsdale Wave Research Lab, in Puget Sound and in Lake Washington, as well as utility scale tidal current energy projects. Since inception, NNMREC has tested seven different devices in its scaled laboratory facilities at OSU, and three wave energy devices in open water environments. Device developers rely on our testing facilities to prove and advance their technologies.

NNMREC has become globally recognized for research, development and testing in marine renewable energy. Faculty and students collaborate with developers on specific device related projects. To give you a picture of our collaboration with industry, I will focus on one example. In 2004, Greenlight Energy, a wind developer, visited OSU with interest in starting a wave energy company, spring-boarding off licensing OSU's intellectual property. They formed Columbia Power Technologies (CPT), based in Corvallis, Oregon. In 2007, Columbia Power and Oregon State University worked together to develop SeaBeav I, a prototype point absorber wave energy device with a novel direct-drive linear generator. This work was continued in

2008 with Navy and Columbia Power funding, and culminated in the successful ocean testing of the L10 point absorber device. Based on the lessons learned from the successful testing, Columbia Power determined a direct-drive rotary generator design was more appropriate than the linear design for utility scale conversion.

In 2009 Columbia Power tested a 1:33 scale prototype of their new direct-drive rotary system in collaboration with NNMREC researchers in OSU's Tsunami Wave Basin. This effort expanded the next year with the testing of a 1:15 scale device in the OSU's Large Wave Flume, along with 1:33 scale prototype array testing in the Tsunami Wave Basin, one of the first testing of its kind in the US.

In 2011 Columbia Power worked with NNMREC and OSU researchers to develop and successfully test a 1:7 scale prototype in Puget Sound. This 13 month testing was very successful, and Columbia Power is continuing forward with a full-scale design. In addition, Columbia Power and NNMREC have recently developed active mooring control systems to enable flexible and accelerated wave tank testing.

At all points in their research, development and testing, CPT staff have been actively engaged with NNMREC faculty and students. Over the years OSU has provided CPT with several of our graduating students to fill out their engineering staff, and with several undergraduate student interns. The ongoing collaboration has accelerated research and product development toward grid-scale implementation.

Earlier this week CPT announced that the manufacturing order for its power generator has been issued to Siemens Industry; the generator will be utilized in CPT's full-scale power take-off (PTO) test project. The PTO will be tested on the new 5MW dynamometer at the National Renewable Energy Laboratory. This land-based test allows the safe, rapid and economical simulation of the full range of ocean conditions.

Columbia Power Technologies is just one of the private sector technology developers that NNMREC has supported over the five plus years of its existence, and this example demonstrates how the collaboration between NNMREC, the DOE Water Power Program and the National Labs is working to shorten the time and cost to commercialization for U.S. based MHK companies. Unfortunately, technology development is not the only hurdle facing this industry or these private sector companies.

Much of my time during the last year and a half has been devoted to developing PMEC-SETS which will serve as the first US grid connected testing facility for a variety of utility scale wave energy converters and arrays. This facility is being developed to provide the industry with a premier test site in the United States, analogous to the European Marine Energy Center (EMEC) in Orkney, Scotland that has been operational for 10 years. It has been reported that the existence of EMEC contributes \$16 million per year to the local economy and supports hundreds of jobs throughout the research and development supply chain. Members of the European Union have spent almost \$1 billion over the past ten years on MHK development and have made this technology a priority. By establishing a comparable testing center in the United States, we can grow a MHK industry that will provide new economic opportunities, high wage jobs and a clean energy source to coastal communities.

Through my efforts to develop PMEC-SETS, I see first hand the challenges that the marine renewables industry faces with respect to funding and regulatory processes to advance their technologies. We have been working on permitting activities for PMEC-SETS for over a year, and have spent approximately \$500,000. We anticipate spending another \$1—1.5M and that it will require at least two more years until we have our permits and licenses in hand. All this cost and effort has been expended to establish a non-commercial testing facility for prototype devices. Clearly, something is not working if this is the best we can do as a government to support the private sector in developing new renewable energy technologies.

The reauthorization of the Department of Energy's Water Power Program through S. 1419 is essential to providing the continued funding that this industry needs at this stage of its development. This is particularly true when you keep in mind that funding from the DOE Water Power Program is the one key mechanism to support U.S. technology developers competing against overseas companies that receive a suite of subsidies. The reality is that most MHK companies are not yet in a position to receive the tax benefits enjoyed by more mature conventional and renewable energy technologies. In addition, the regulatory changes proposed in S. 1419 will provide an avenue for promising new MHK companies and their technologies to advance through the necessary testing stages more quickly. This industry requires targeted investments and permitting efficiencies like those that are included in S. 1419.

These investments and permitting efficiencies are essential to developing the MHK energy sector that has the potential to deliver reliable power to our coastal

communities with significant, positive economic impact. NNMREC has received over \$10M in funds from DOE to date, and another \$10M in non-federal matching funds, mostly from the States of Oregon and Washington. This bill will enable NNMREC to continue to support developers as illustrated in my example with Columbia Power Technologies.

Ocean energy can play a significant role in our nation's renewable energy portfolio. With the right support, the United States' MHK industry can be competitive internationally. I am pleased to offer my support for S. 1419. I ask this committee to consider the measure and positively refer it to the full Senate for its eventual passage. I will be glad to respond to any questions that you may have about NNMREC's activities or the MHK industry.

Thank you.

Senator SCHATZ. Thank you very much, Dr. Batten.

Senator BARRASSO.

Senator BARRASSO. Thank you, Mr. Chairman.

Mr. Stern, if I could ask a couple things I was thinking about as you testified?

Now the Bureau of Reclamation has mentioned that it has concerns with the prospect of integrating maintenance backlog information from different Bureau project types. You specifically mentioned the word types of projects, such as reserved and transferred works, as would be required under our bill. Based on your knowledge of the Bureau of Reclamation would it be possible to integrate the relevant data across different infrastructure types into a single report?

Mr. STERN. Senator Barrasso, the bill as currently written, as you know, leaves a number of the alimation issues associated with the bill up to the Bureau of Reclamation to determine how it would go about integrating these things into the existing budget.

I don't think that we at CRS have sufficient information on what information Reclamation has internally and how they would go about implementing this bill to say whether or not it would, for instance, have the potential to duplicate existing processes. But what I could say is that the bill certainly doesn't mandate that, you know, this work into existing Reclamation budget processes it could possibly be a different process all together.

Senator BARRASSO. Would something like the assignment of safety ratings under the bill have the potential to undermine Reclamation's annual budget process as some claim and why or why not?

Mr. STERN. I wouldn't comment on whether it would potentially undermine the bill's or undermine their existing budget processes. But again, the bill provides the flexibility for Reclamation to incorporate the safety ratings into the annual budget process. But it doesn't require that Reclamation incorporate that or replace the annual budget process with those ratings.

Senator BARRASSO. Could you elaborate a little bit on the figures that the Bureau has provided Congress in the past related to its needed infrastructure upgrades? Do you know what the current status is of those totals?

Mr. STERN. As I mentioned in my written testimony, 2.6 billion is the most recent figure for Reclamation's overall maintenance backlog that they've publicly cited. Back in 2008 I think it was as high as 3 billion and then some Recovery Act projects helped to decrease that total.

Since 2012 we haven't seen any updates of that number. So that's the most recent thing that we have. That was the last time that Reclamation actually published an asset management report.

Senator BARRASSO. Yes. So what do think would be the potential affect of S. 1800's requirements for project level maintenance estimates on Reclamation's previous, you know, estimates?

Mr. STERN. Certainly the broader estimates would probably change, could change at any number of directions. For some projects they would probably go up and for some projects they would go down. But since we haven't seen the specific project level estimates, it's hard to comment further than that.

Senator BARRASSO. In your testimony I wanted to ask you a question. You mentioned that whether additional costs would be passed on to project users would be up to the Bureau of Reclamation. Could you tell us what you mean by that?

Mr. STERN. Again, the bill provides a fair amount of flexibility in its implementation. All it requires is that Reclamation come up with these estimates. It doesn't require that the cost actually be passed on to users. But it doesn't bar Reclamation from passing these costs on to users as well.

Previous legislation, I think in 2008, the Omnibus Lands bill, actually said that Reclamation should use the data from the urban canal inspections to inform, you know, potential new actions by users. That's not the case with this bill.

Senator BARRASSO. Thank you.

Thank you, Mr. Chairman.

Senator SCHATZ. Thank you very much, Senator Barrasso.

Dr. Batten, thank you very much for your testimony. Thank you for your work on this important issue.

Can you just give us a sense for how close we are to commercialization? I think part of that, obviously, is connecting to the grid, but it's also a cost question. So what's your sense of how far we are from R and D to commercialization at small scale and then wide scale adoption?

Ms. BATTEN. Senator, I think the answer to your question depends a lot on what kind of investment we get from the Federal Government.

If you look at what happened with wind 30 years ago we were well on the way to commercialize the industry and then funding went away and Europe developed the devices. Now we have it back.

I think what we're going to see in this country if we have the fortitude and patience to continue to invest is that if we can realize this utility scale test facility then we will see small arrays of devices going into places where there's high cost of energy, places like your State, places like the State of Alaska, where communities right now are dependent upon very expensive diesel. If that were to happen we might see some small arrays of devices in those waters within the next 5 years.

Senator SCHATZ. What is the—can you describe the technology? Obviously there are different categories of ocean power here. As you know off the west side of the big island of Hawaii we have an ocean thermal energy conversion facility. At the Kaneohe Marine Corps Air Station there's a marine hydro power which is to say

they're turning turbines for electrons. There are different categories of ocean power.

Can you quickly go through them and then talk about which ones you think are the most commercially viable, which ones are the game changers and which ones are further off?

Ms. BATTEN. One of the challenges with wave energy is that we don't have a good sense of what the device should look like. It will be driven by the levelized cost of energy.

Whereas with tidal turbines we could leverage a lot of the information we knew about wind energy. There's almost every different kind of device you could think of for wave energy depending on what somebody had this great idea about how the ocean goes up and down and back and forth. That's one of the reasons for a test facility.

So there are some devices called point absorbers that are essentially like a buoy that goes up and down with the heave of the ocean.

Then there are devices that will go back and forth with the surge of the ocean.

There's devices that will have floats that rise and fall as the waves go underneath them.

There are a device that's looking at Hawaii relies on air being compressed through a turbine as the ocean waves go through.

Senator SCHATZ. So we just don't know yet. That's the purpose of further testing.

Ms. BATTEN. We don't know. That's exactly the purpose of the further testing is to see which devices are most reliable and survivable in various wave environments and what kind of energy the various devices produce.

Senator SCHATZ. Very briefly, could you tell me about power quality when it comes to ocean energy? Are we moving toward this being firm power? Is this going to be intermittent energy? Where does this fit in the spectrum?

Ms. BATTEN. We have electrical engineers at Oregon State who are working on those questions. I think they're busy working on how to produce well conditioned power. If you go to the European Marine Energy Center you'll see them working on these kinds of technologies that their electricity is being put on to the grid and they have been able to show with different kinds of devices how to put them on to the grid in an effective way.

Senator SCHATZ. I would assume that, to the extent that it's tidal energy, it's predictable and therefore maybe not quite firm, but dispatchable. Is that about right?

Ms. BATTEN. Yes, that's fair.

Even wave energy, which we may not think about off the top of our head, is predictable 84 hours in advance. So that's a fairly predictable resource that's always there. It doesn't rise and fall like the wind or go away at night like the sun.

Senator SCHATZ. I've been told that there's a diminishment of actual wave action if there is a wave power project offshore. Is that true?

Ms. BATTEN. It depends on how many devices you would have together. That's another project that's been—that we're busy working

on at Oregon State University is to predict how much the waves would be diminished for particular devices in an array.

Senator SCHATZ. For the record that would be a deal breaker in Hawaii.

Ms. BATTEN. I could understand. It would be in Oregon too, though you may not think about it, we have a large surfing community that would be outraged.

Senator SCHATZ. I understand.

Thank you very much.

Just a quick question for Mr. Duyck. Thanks for your testimony.

I agree that S. 1946 is an important piece of legislation. I thank you for your support of it.

Do you see any need to amend the Safety of Dams program beyond lifting the appropriation ceiling and if so, what recommendations might you have?

Mr. DUYCK. It's really a two pronged approach.

The first is to secure our primary source of water against earthquake damage. That's what S. 1946 starts to address.

But then we will need the authority or Reclamation will need the authority to work on a joint project with non Federal partners. That's where the new dollars come in that will actually speed up the project and make it less expensive for the increased capacity.

So, thank you.

Senator SCHATZ. Thank you very much.

In closing I'd like to highlight the fact that the committee has received letters of support for S. 2019 from the following organizations, the Western States Water Council, the Theodore Roosevelt Conservation Partnership, the American Planning Association and the National Water Resources Association.

We thank these organizations for their support and have submitted their letters for the record.

The testimony and written submissions from today's witnesses will be made a part of the official hearing record.

We will also keep the record open for a period of 2 weeks to receive additional statements.

We thank the testifiers and the staff.

This hearing is adjourned.

[Whereupon, at 3:40 p.m., the hearing was adjourned.]

## APPENDIXES

---

### APPENDIX I

#### Responses to Additional Questions

---

##### RESPONSES OF MIKE CARR TO QUESTIONS FROM SENATOR SCHATZ

*Question 1.* Mr. Carr, discussion surrounding the recent expiration of the production tax credit has mostly focused on the effect of the expiration on the wind industry. We often forget that marine and hydrokinetic renewable energy projects were also eligible for the PTC. Recognizing that MHK is largely in a pre-commercial phase, I wonder if you have thoughts on how the presence or absence of this tax credit will affect the economics of getting these projects built. In other words, how important is the PTC to marine and hydrokinetic renewable projects?

Answer. The President's FY 2015 Budget Request supports making permanent and expanding the Production Tax Credit in order to provide a strong, consistent incentive to encourage investment in a variety of renewable energy technologies. As the nascent MHK industry grows in the short-term, production incentives such as the PTC could drive continued growth in the industry. MHK receives 1.1 cents per kilowatt hour through the PTC; certain other renewables such as wind and geothermal receive 2.3 cents per kilowatt hour. DOE currently estimates the cost of MHK technology at 60 cents per kilowatt hour. Our primary focus is continuing robust R&D, which is the most important aspect of driving MHK technology down the cost curve to make it more competitive in localized electricity markets.

*Question 2.* Mr. Carr, why is DOE's R&D budget for MHK so small? Given its potential mid to long term, why does it get a small fraction of the amount of DOE funding other renewables receive?

Answer. EERE is taking MHK research, development and demonstration seriously, and does believe it has an important role in the Administration's "all of the above" energy strategy moving forward. Given the relatively low technical maturity of devices and the nascent state of the industry, significant technological research and development is necessary to drive MHK down the cost curve towards competitiveness with localized electricity markets. As DOE currently estimates the cost of MHK to be \$.60/kWh, the technology is more than 4 times more expensive than where it needs to be to be competitive. This makes MHK R&D a longer-term technology.

In FY 2015, the Department's Budget Request reflects a more equitable split across MHK and hydropower. The \$30.5 million requested in FY 2015 for MHK allows the Water Power Program to continue its ongoing efforts to advance water power technologies and accelerate their market adoption. For example, the FY 2015 Request supports continued MHK applied research and development and testing of innovative component technologies designed specifically for the challenges of the marine environment, and testing and research to address key environmental uncertainties that arise within the rapidly developing industry, among other activities. In summary, the Department's Budget Request provides the priority and funding stability necessary to continue making progress in marine and hydrokinetic technologies.

##### RESPONSES OF MIKE CARR TO QUESTIONS FROM SENATOR WYDEN

*Question 3.* I am disappointed, but not surprised that the Department's testimony has no official position on the legislation. The same was true with regard to Dr. Danielson's testimony on our critical minerals legislation. So let me ask you the question this way—do you agree that the folks at OSU and the University of Washington and their colleagues around the country are making progress on what could

be a very promising set of renewable energy technologies and that they ought to be encouraged to continue?

Answer. DOE's National Marine Renewable Energy Centers are expected to play a role in technology advancement in the future, and prior DOE investments in their capabilities have positioned the centers to compete for DOE funding opportunity announcements. For example, the Northwest National Marine Renewable Energy Center (NNMREC) just last year was selected to negotiate for an award of \$750,000 through a new competitive DOE Funding Opportunity Announcement (FOA). Additionally, the NNMREC and other centers are expected to remain competitive for future DOE FOAs, such as the 3-year, \$4 million Marine and Hydrokinetic (MHK) Research and Development University Consortium FOA (announced on April 10, 2014), which aims to leverage field R&D expertise to advance U.S. MHK technology, while developing intellectual capital for a globally-competitive workforce.

To date, OSU, the University of Washington, and their colleagues have contributed to MHK technology advancement by optimizing MHK system and component designs, demonstrating and evaluating technology innovations, developing testing instrumentation, and reducing siting risks by reducing resource characterization uncertainty and informing improved regulatory processes.

Continued university research, development, demonstration, and testing—such as those activities that have been performed at or in conjunction with the NMRECs—are clearly important to DOE's mission of developing cost-competitive MHK technologies. The Department believes the work at OSU and the University of Washington (like scaled wave energy converter device testing in both laboratory and intermediate sites, and other R&D activities) has advanced this mission and has played a valuable role in advancing the nascent U.S. MHK industry.

*Question 4.* Over the past decade, through both Democratic and Republican Administrations, congressional authorizing and appropriations committees have worked to maintain a Federal commitment to both conventional and wave energy technologies. As I discussed with Assistant Secretary Danielson a couple of weeks ago when he appeared before the Committee, Congress appropriated funds for wave energy in the FY2014 Omnibus Appropriations Act, but the Department has not been following through to ensure that those funds make their way to the U.S. research community. Can you assure us that those funds are, in fact, going to be making it to our research centers?

Answer. The Department thanks the Senator and the Committee for their strong leadership and support of MHK research, development, testing, and demonstration.

DOE can assure Congress that several competitive funding opportunities will be announced so that the funding will be moved out to the research community, which includes universities.

#### RESPONSE OF MIKE CARR TO QUESTION FROM SENATOR MURKOWSKI

*Question 5.* Since 2005 Congress has been on record supporting research and development of MHK technology. We have appropriated a bit more than \$200 million in the past decade on MHK development, but the United Kingdom has spent three and one-half times more, and the European nations collectively have spent five times more than America on marine technology. The recent omnibus appropriations bill for FY14 allotted \$41.3 million for MHK funding but contained report language directing that no funding is to be made available for the deep-tank wave testing facility. Does the Department support such a restriction? Aren't we in danger of wasting the money we've already spent for the Oregon marine center if we discontinue this aid? How much will it cost DOE if we move to replicate the research and device verification facilities that have already been built at the Oregon facility at some new academic center or even at the national labs?

Answer. To date, the Department of Energy has not funded any deep-tank wave testing facility. Following Congressional intent in the explanatory statement accompanying the FY 2014 Omnibus Appropriations Act, the Department will not provide funding support for a deep tank test facility in FY2014. Funding for a deep-tank wave testing facility is also not requested in the FY15 budget. The Department will not replicate any existing research and device verification facilities, including any facilities that might exist at DOE NMRECs.

#### RESPONSE OF MIKE CARR TO QUESTION FROM SENATOR LEE

*Question 6.* The National Research Council (NRC) of the National Academy of Sciences released a report last May prepared at DOE's request that contains conclusions on the limited application of MHK resources. [See excerpts pasted below along with a link to the entire study.] Please comment on this report's conclusions and

how they square with the continued federal funding and support for MHK technology, which is further expanded in S. 1419.

Answer. With 50% of the U.S. population living within 50 miles of coastlines, there is significant potential to provide clean, renewable electricity to coastal communities and cities using MHK technologies. Based on the various resource assessments reviewed in the NRC report that were sponsored by the U.S. Department of Energy, the technical resource potential for United States wave, tidal, current, and riverine hydrokinetic resources is estimated to be between 1,300 and 1,800 TWh/year, which would be more than one-fourth of U.S. electricity consumption if fully captured. While the NRC report noted that there were several areas where improvements could be made across the assessments, it did not dispute the overall magnitude of the technical resource potential across the country.

Technical resource potential is the portion of a theoretical resource that can be captured using a specific technology (usually the current state-of-the-art). Practical resource potential is the portion of the technical resource that is available when other constraints—such as economic, environmental, and regulatory considerations—are factored in. The NRC report did note that additional analysis is needed if an accurate evaluation of the practical resource potential at specific sites is desired.

The NRC report also noted that DOE should improve public access to results and data generation through the resource assessments for the purposes of allowing other groups to continue analyses of practical resource potential. To that end, the Department has published all the MHK resource assessment reports and maps online at <http://energy.gov/eere/water/marine-and-hydrokinetic-resource-assessment-and-characterization> and is centralizing information from all of the assessments in the Geospatial Renewable Energy Atlas at the National Renewable Energy Laboratory.

---

RESPONSES OF ROBERT QUINT TO QUESTIONS FROM SENATOR SCHATZ

*Question 1.* Mr. Quint, S.2019 removes the authorized appropriations cap for the Bureau of Reclamation WaterSMART grants program. Can you discuss the impacts to Western states if Congress does not act to raise or remove the spending cap this fiscal year?

Answer. WaterSMART allows the Department to provide incentives and tools to achieve sustainable supplies, while supporting water managers who make their own decisions about what programs and activities will be the best and most practical fit in their particular watersheds. Reclamation estimates that the authorized appropriations ceiling will be reached in FY 2015. If Congress does not raise or remove the spending cap this fiscal year, Western states stand to lose use of this highly valuable and widely utilized program, which is significantly contributing to drought resiliency in the West.

*Question 2.* Drought and water scarcity are a serious issue in many parts of the country right now. Yet a comprehensive and current national assessment of water resources does not exist. Can you talk about the benefits of having a better understanding of regional and national water availability and use? And please give some perspective on the barriers to completing such a national assessment.

Answer. The U.S. Geological Survey (USGS) responds that a better understanding of regional and national water availability and use is critical to the Nation. The type of information derived from a national water assessment provides the Federal government with information to make informed decisions regarding Federal investments in water resources infrastructure. Programs within the Bureau of Reclamation, the Department of Agriculture, the Department of Energy, the Army Corps of Engineers, the Environmental Protection Agency, and the National Oceanic and Atmospheric Administration, to name just a few, rely on an understanding of the Nation's water availability and use in conducting their missions. These programs invest hundreds of millions of dollars each year toward protecting and sustaining the Nation's water supply. These programs continue to depend upon up-to-date data and information about our water resources and an accurate assessment of future demands for water, and the National Water Availability and Use Assessment is designed to provide that type of hydrologic information in an on-going fashion on a national level.

In addition, our Federal government relies upon information concerning water availability and use to enact laws, develop and implement regulations, and set and carry out policies pertaining to water resources. We need to ensure that our laws, regulations, and policies are directed at the most pressing water-related issues and designed to produce the most beneficial effects with respect to our water resources. A National Water Availability and Use Assessment will provide the technical infor-

mation needed to make water-related decisions and achieve the best possible outcomes.

Finally, our society makes decisions on investments every day that need to be guided by this type of information. The energy industry makes an investment in constructing new generating facilities and must know if there is enough water to satisfy the cooling demands; the manufacturing industries invest in new factories which need water, and they must know if the locations they are selecting can provide the supply; and a city needs to plan for its next 50 years of growth and must understand the trends in water use and supply. These are critical and costly decisions which require a sound base of understanding in water availability and use.

The Bureau of Reclamation and the USGS are both involved in Federal inter-agency efforts to integrate and make accessible existing water availability and use data. USGS participates in the Integrated Water Resource Science and Services (IWRSS) effort together with the Army Corps of Engineers and NOAA's National Weather Service. Both agencies are active in the work of the White House Office of Science and Technology Policy to create a comprehensive data base of Federal water data as part of the President's Climate Data Initiative.

The USGS perceives five major barriers to completing a national assessment of freshwater availability and use: challenges in gathering information from other Federal agencies involved in water availability, a fragmented approach to State water resources information management, inadequate resources, lack of interoperability, and various institutional barriers.

*Question 3.* In your written testimony, you mention the energy-water nexus, something I am very interested in. Can you please shed some light on how WaterSMART relates to the energy water nexus?

*Answer.* Clearly there is a strong connection between energy and water. As the second largest producer of hydropower, Reclamation has an interest in the conservation of both. Through the WaterSMART Program, Reclamation provides cost-shared grants to States, tribes, and other entities for projects that achieve water efficiency improvements, and proposals that not only address water conservation but also explore the use of renewable energy. Other energy efficiency improvements receive additional consideration during the selection process. Projects funded to date have included incorporation of new hydroelectric turbines on canals and conduits, installing automated systems on facilities to increase energy efficiency, and constructing storm water recharge systems to take advantage of local water, thus minimizing the need to pump water from distant sources. Sponsors of WaterSMART grant projects are asked to explain how their proposed water efficiency improvements can be expected to lead to energy savings as well, and the methods used to estimate energy savings are shared with other water managers as they plan future improvements.

*Question 4.* Mr. Quint, I'd like to ask you a question about the title transfer bill that I introduced earlier this week. We know the Bureau is interested in conveying title of some of its facilities to project beneficiaries, but I wonder if you can discuss the level of interest on the part of potential recipients, and also explain why title transfer is often a good option for the recipients as well.

*Answer.* Reclamation has fielded many inquiries from water districts about the possibility of title transfer and since 1995, has transferred title to 27 projects or parts of projects. To proactively engage with a larger number of water districts to identify and evaluate the potential public benefits of title transfer, including more efficient management of water and water-related facilities, Sec. 3 of S. 2034 establishes a title transfer program. Title transfer can increase operational flexibility and can potentially remove obligations—such as certain reporting and permitting requirements that exist by virtue of the fact that the facilities are owned by the United States. We also see title transfer as a tool for assisting water users to address long term maintenance needs associated with an aging infrastructure. In many cases, the entities that operate the projects would like to undertake major maintenance efforts that, by law, are their responsibility. However, they cannot borrow the needed capital because they do not actually own the facilities and therefore do not have sufficient collateral. Taking title gives them the flexibility to pursue financing opportunities that would otherwise not be available.

*Question 5.* The title transfer bill gives the Bureau of Reclamation authority to convey titles of certain eligible facilities to willing project operators, also referred to as project beneficiaries. As I discussed earlier, currently an act of Congress is required to transfer these titles. This bill is aimed at uncomplicated projects where all parties are able to reach agreement on the terms of the transfer. If this bill were to become law, what would you see as Congress's role for more complex projects, such as those involving preference power rates or other complicating factors?

*Answer.* S. 2034 creates a second track for pursuing title transfer from that which we already pursue. The inclusion of project power in some cases may add a level

of complexity to the title transfer process, which may not be appropriate for the type of non-controversial title transfers envisioned in S. 2034. Therefore, projects with complicating factors would continue through the same process as they do today, where we develop a unique title transfer agreement and work with Congress to authorize that transfer. That is the same process as we use today and it would be available under this program.

*Question 6.* Mr. Quint, I am pleased to see that the Department supports S. 1946. My question is what, if any, external reviews or audits of the Dam Safety program have taken place and what are those findings?

*Answer.* Reclamation's Dam Safety Program has been reviewed annually since 1997 by an external independent review panel. Their general conclusions have been that the program is comprehensive, well organized and in conformance with Federal Guidance and that it contributes to the establishment of best practices for the industry.

#### RESPONSE OF ROBERT QUINT TO QUESTION FROM SENATOR WYDEN

*Question 7.* Mr. Quint, the Crooked River bill aims to strike the balance between competing demands for a scarce resource: water from the Crooked River. There are concerns that some groups will have more influence than others on how water is actually allocated. How does the Bureau interpret the bill's language that directs the Bureau to work with the Confederated Tribes of the Warm Springs and the State of Oregon for guidance on the annual release schedule? Would the Tribe be able to dictate to the Bureau how water is released as a co-manager of the resource?

*Answer.* Reclamation believes the provisions of Section 7 create potential conflict if the federal, state and tribal management priorities for Crooked River flows from Bowman Dam are not aligned every year. Likewise, the repeated reference to downstream fish and wildlife benefits appears to create restricted discretion to address in-reservoir or upstream fish and wildlife needs. As drafted, we do not believe the bill would enable the tribe to "dictate" how water is released. As noted in our testimony, the bill alters but does not eliminate Reclamation's discretion in operating the dam; however the change in discretion is not entirely clear.

#### RESPONSES OF ROBERT QUINT TO QUESTIONS FROM SENATOR MURKOWSKI

##### ON S. 1771

*Question 8.* To your knowledge, could there be any other alternatives to augmenting water supplies to the City of Prineville other than Prineville reservoir?

*Answer.* Prineville Reservoir is the only Reclamation reservoir option for the City of Prineville. We have not been involved with or are aware of any efforts by the City to consider alternative water supplies.

*Question 9.* What type of an analysis would you say needs to be carried out to assess the impacts (if any) on current water consumers of withdrawing 5,100 acre-feet of water from the Bowman Dam for the City of Prineville?

*Answer.* Issuing a contract to the City of Prineville would normally require an analysis of all anticipated impacts of the proposed action conducted as part of the National Environmental Protection Act (NEPA) compliance process. It is possible that S.1771's proposed contract with the City of Prineville for 5100 acre-feet of storage would be covered by a categorical exclusion; however, it may require an environmental assessment.

##### ON S. 1800

*Question 10.* Can you please describe what exactly is being done currently to assess and estimate future needed repairs to BOR's assets? What are the associated costs? How would the proposed new assessment address missing information?

*Answer.* Reclamation's annual budget request provides Congress with the best representation of the appropriated funds needed for identified maintenance activities at Reclamation's facilities. However, concurrent with the budget request, there is a significant amount of maintenance that is funded "off budget" with Reclamation's water and power customers, pursuant to advance funding agreements. While this process has worked well to provide for continued reliability of Reclamation's infrastructure, we recognize that Congress would like more information on how Reclamation assesses and estimates future repair needs. To that end, we have provided to Senator Barrasso's office a redline set of edits to S. 1800, consistent with Reclamation's testimony, which we believe would improve implementation of the bill while streamlining the data gathering required by the legislation within Reclamation's existing budget and asset management processes. This effort is anticipated to

improve the data collected from our water and power customers, which is integral to a comprehensive representation of our asset management responsibilities. Reclamation has initiated an activity that will achieve the objectives stated above and is consistent with the redline version of S. 1800 provided.

*Question 11.* The bill calls for a very detailed analysis of all project plans and associated costs of major repairs and rehabilitation of BOR facilities. CRS testified that Reclamation operates a Facility Maintenance and Rehabilitation Program that identifies, schedules, and prioritizes the needs of its reserved works but that the reviews are typically not made public. The Bureau, according to CRS, also conducts periodic maintenance reviews at transferred works through its Associated Facilities Review of Operations and Maintenance Examinations program but again, these results are typically not made public. It would seem then, that most of the data called for in this bill is already available to Reclamation in some form. Do you agree? If not, please explain.

*Answer.* It is true that a wide variety of information exists specific to maintenance needs at Reclamation facilities through review activities and other processes; however, the reviews alone do not provide detailed project plans with schedules and associated costs. In addition, there are various program-specific approaches used for determining priorities and funding needs (e.g., dam safety modification work, power facility O&M financing, reserved works O&M, transferred works O&M, etc.) which are effective, and explainable to affected Reclamation water and power customers, but which do not lend themselves to being combined into a single document that represents future major rehabilitation and replacement (MR&R) needs. The data from these sources is extremely variable in its level of refinement, and is utilized at widely varying levels of detail. As such, a single document that can clearly explain the prioritization of maintenance work on all Reclamation assets does not exist and cannot be created accurately with the data currently available. In view of this, January 2014, Reclamation began a process to streamline its collection, compilation and analysis of this data. We expect this process to take the next 18 to 24 months to complete, and it will require the active engagement of our stakeholders who operate two-thirds of Reclamation's water and power infrastructure and are essentially responsible for the funding and accomplishment of maintenance needs at these facilities.

ON S. 1946

*Question 12.* Some call for better planning when it comes to assessing the needs for future repairs of BOR assets (for example, as proposed by S. 1800, which is on today's agenda).

a. First, what is currently being done to assess these needs?

b. Second, will providing the Bureau with unfettered discretion to allocate as much funds as needed to address future infrastructure repairs lead to funds being expended on non-essential activities or other potential unnecessary expenditures? How would BoR ensure that federal dollars are being spent wisely?

*Answer.* (a) Assessment of needs for future dam safety work is conducted pursuant to the Safety Evaluations of Existing Dams line item in Reclamation's annual budget request. Performance monitoring, on-site examinations, field data investigations, and technical studies are performed on an ongoing or recurring basis for all 370 Reclamation dams covered by the program.

*Answer.* (b) Reclamation has established a risk-informed decision making process to meet the objectives and stay within the intent of the Safety of Dams Act. Risk-informed procedures are used to assess the safety of Reclamation structures, to aid in making decisions to protect the public from the potential consequences of dam failure, to assist in prioritizing the allocation of expenditures, and to support justification for risk reduction actions where needed. The Safety of Dams Act requires Congressional approval for individual modification projects and that will not change if S. 1946 is enacted.

ON S. 1965

*Question 13.* Do you foresee any contractual issues/problems with extending the East Bench Irrigation District's water service contract with the Bureau by 10 years versus the previous several extensions, all of which were for a period of only four years? Do you think there could be any potential adverse effects on other users of that specific Clark Canyon Dam and Reservoir water supply?

*Answer.* No, Reclamation does not foresee any contractual problems or potential adverse effects with extending the East Bench Irrigation District's water service contract by 10 years. S. 1965 would extend the contract for six years beyond Public

Law 112-139 for a total of ten years (to December 31, 2019) or until the new contract is confirmed and still defer to the court to take up the issue again at a time of its choosing. The Department believes that a 10-year extension under S. 1965 will allow adequate time for confirmation of the new contract by the Montana Fifth Judicial District Court.

ON S. 2010/H.R. 1963

*Question 14.* As you know, Congress recently enacted Public Law 113-24, the Bureau of Reclamation Small Conduit Hydropower Development Act, to amend the Reclamation Project Act of 1939 to authorize the development of small conduit hydropower at Reclamation project facilities. However, a handful of Reclamation projects, which were originally authorized under the Water Conservation and Utilization Act (WCUA), were not included in the hydropower authorization. These include four projects in Montana, two in Idaho, two in Utah, and one each in Colorado, Idaho, Nebraska and South Dakota. Does the Administration support authorizing hydropower development at these facilities?

Answer. Yes, Public Law 113-24 amends the Reclamation Project Act of 1939 to authorize all Reclamation conduit facilities for non-federal hydroelectric development through a Lease of Power Privilege (LOPP). Note that Reclamation conduit facilities were eligible for non-federal development prior to the enactment of Public Law 113-24 through either the LOPP or FERC licensing process.

WCUA projects are not subject to Public Law 113-24, because WCUA projects were not authorized pursuant to Reclamation law, including the Reclamation Project Act of 1939, as amended. WCUA projects are only subject to Reclamation law where explicitly identified in the WCUA, and the development of non-federal hydropower found in the Reclamation Project Act of 1939, as amended, is not explicitly identified in the WCUA.

Current language in the WCUA prohibits non-federal development by requiring the United States to retain all revenues derived from the development of hydropower facilities at WCUA projects. S.2010/HR 1963 would allow non-federal entities to construct non-federal hydropower facilities at WCUA projects and retain revenues derived from such non-federal hydropower facilities.

The Administration supports authorizing Reclamation to enter into LOPP contracts for the development of new non-federal hydropower on WCUA projects, provided that such non-federal hydropower developments do not impair the purposes for which the WCUA projects were initially constructed, as specified in the Reclamation Project Act of 1939, as amended.

*Question 15.* It was brought to my attention that charges paid by LOPP lessees as applicable to this bill need to be credited to the U.S. Treasury and not to the BOR fund, as stated in the current version of this bill. Can you please clarify this point?

Answer. Initial construction costs for Reclamation projects were typically financed by the Reclamation Fund. In accordance with federal Reclamation law, LOPP charges paid by non-federal hydropower developers are covered into the Reclamation Fund as a credit to the account of the Reclamation project from which the power is derived. In contrast, initial construction costs for WCUA were typically financed by the General Fund of Treasury rather than the Reclamation Fund. If LOPP charges derived from non-federal hydropower development at WCUA projects are placed into the Reclamation Fund, then Reclamation does not have a mechanism to transfer those credits to the appropriate WCUA project account in the General Fund of the Treasury. Therefore, if the intention of S. 2010 is to credit LOPP charges from WCUA projects to the affected WCUA project account in the General Fund of the Treasury, additional clarification is necessary in Section 2(g) of S. 2010 detailing where the charges will be covered and how they will be applied to the affected WCUA project account in the General Fund of the Treasury.

ON S. 2019

*Question 16.* calls for unrestricted spending on WaterSMART grants and related USGS grants. Both programs under current law are authorized at a combined level of \$215 million. In this climate of necessary spending cuts, do you believe we need to authorize unlimited spending for these grants through fiscal year 2023?

Answer. S. 2019 removes the cost ceiling for WaterSMART grants and related USGS grants. Under S. 2019, Congress would continue to control the annual funding for these programs, as they remain subject to Congressional appropriations. The Department is committed to continuing the WaterSMART Program, as the Federal Government has a responsibility to provide leadership and tools to address the challenges of imbalance between supply and demand.

ON S. 2034

*Question 17.* The goal of S. 2034 is to streamline the title transfer of Reclamation projects and facilities and reduce costs. I understand that S. 2034 is really designed to address the “easy” title transfers and not the more complicated projects that have a power component. Please describe how the authority created by S. 2034 would impact projects and facilities with project power. If a district has project power, would they be barred under S. 2034 from pursuing a title transfer? I assume that such projects would still need Congressional authorization before such a title transfer could occur.

Answer. If a district has project power, they would not be barred under S. 2034 from pursuing a title transfer. The program created under S. 2034 creates a second track for pursuing title transfer from that which Reclamation already pursues. If S. 2034 were to become law, the track that Reclamation follows will be determined based upon the unique characteristics of the facilities and the legal and financial arrangements that exist. The inclusion of project power in some cases may add a level of complexity to the title transfer process, which may not be appropriate for the type of non-controversial title transfers envisioned in S. 2034. Therefore, those transfers would continue through the same process as they do today, where Reclamation works with parties to develop a unique title transfer agreement and work with Congress to authorize that transfer. That is the same process as used today and it would continue to be available under this program.

*Question 18.* Can you please describe the current process by which reclamation projects or facilities are being transferred to non-Federal ownership? Also, please discuss the advantages and disadvantages, if any, associated with granting the BOR complete authority to execute such ownership transfers? Issues of interest include:

- c. Impacts of losing congressional oversight associated with the title transfer process;
- d. Impacts on Federal revenues; and
- e. Implications of increased non-Federal ownership of what previously were regarded as public assets.

Answer. The current process by which Reclamation facilities are transferred to non-federal ownership begins at the field level and requires Congressional authorization to complete. Reclamation has a set of standard procedures and processes for title transfers that are consistent across the organization. That process and the criteria that all Reclamation offices follow are articulated in the Framework for the Transfer of Title—Bureau of Reclamation Projects, which was originally developed in 1995 and was updated in 2004. The document is available to districts and any members of the public interested in learning about or pursuing a Reclamation title transfer. Since each project is unique—with their own specific legislative authorities, stakeholders and issues—Reclamation has learned that while the steps are all consistent, the structure of the title transfer agreement must be tailored to meet the unique circumstances and needs of the project or facilities in question. In response to the question of losing “Congressional oversight” of the title transfer process, it is important to point out that the legislation under consideration by the Committee is targeted at non-controversial projects, with requirements for criteria and determinations shared with the public, meant to ensure that any title transfer approved under the bill be consistent with all applicable laws, be in the financial interest of the United States, and have no significant opposition, among other requirements. That said, Reclamation does not foresee any immediately adverse implications for Congressional oversight, public participation, use of projects, or federal revenues associated with legislation as currently written.

RESPONSE OF ROBERT QUINT TO QUESTION FROM SENATOR RISCH

ON S. 2034

*Question 19.* If a water district has “project power” generation resources and hopes to pursue title transfer opportunities in the future, what clarifying process would an irrigation district follow in light of S. 2034, in pursuing a title transfer?

Answer. If a water district has project power and wishes to pursue a title transfer, that transfer would continue through the same process it would today if S. 2034 were enacted into law. The program created under S. 2034 creates a second track for pursuing title transfer from that which Reclamation already pursues. The track that Reclamation follows under S. 2034 would be determined based upon the unique characteristics of the facilities and the legal and financial arrangements that exist. The inclusion of project power may add a level of complexity to the title transfer process, which may not be appropriate for the type of non-controversial title trans-

fers envisioned in S. 2034. Therefore, those transfers would continue through the same process as they do today, where we develop a unique title transfer agreement and work with Congress to authorize that transfer. That is the same process as Reclamation uses today and it would continue to be available under this program.

RESPONSE OF JOHN KATZ TO QUESTION FROM SENATOR SCHATZ

*Question 1.* Mr. Katz, can you describe in more detail how the FERC MHK licensing process instituted in 2008 has been working? I know that an increasing number of preliminary permits have been issued for various projects.

Answer. Since 2008, the Commission has issued a significant number of preliminary permits for marine hydrokinetic (MHK) projects. However, the number of permits has declined in recent years such that there are currently only six permits in effect. As is typical for all preliminary permits, a relatively small number have resulted in development applications. To date, the Commission has authorized seven MHK projects, four of which were pilot projects. My impression is that stakeholders, including federal and state resource agencies, Indian tribes, and non-governmental organizations, are generally supportive of appropriately-sited MHK projects, and have been willing partners in the licensing process.

RESPONSES OF JOHN KATZ TO QUESTIONS FROM SENATOR MURKOWSKI

*Question 2.* In your testimony, you note that FERC already has a MHK pilot process that allows for five-year pilot licenses to enable developers to study and test new technology. S. 1419 would instead provide FERC with the authority to issue 10-year pilot licenses, along with a potential 5-year extension. Is a longer time frame envisioned under this bill for these projects preferable?

Answer. Although the Commission staff white paper suggested that a five-year license term might be appropriate for pilot projects, the Commission has the authority to issue licenses for longer terms. For example, the Commission recently issued a 10-year pilot project license to the Public Utility District No. 1 of Snohomish County, Washington, for a hydrokinetic project to be located in Puget Sound. The Commission also issued a 10-year pilot license to Verdant Power LLC for a hydrokinetic project located in the East River in New York, and an 8-year license to ORPC Maine, LLC for a project in Cobscook Bay, Maine.

*Question 3.* S. 1419 provides FERC with the authority to act as the lead agency to coordinate all applicable federal authorizations and to comply with NEPA. The bill also directs FERC to establish schedule goals for federal, state, and local agencies. What are your thoughts on these provisions? Will this additional authority be helpful to the Commission in approving MHK pilot licenses in a timely manner?

Answer. The coordination of federal authorizations and NEPA compliance, as well as the establishment of schedules, are helpful in the expeditious processing of hydropower applications. However, to the extent that the Commission has no authority to enforce those schedules, it is not possible to ensure that they are met.

RESPONSES OF JOHN KATZ TO QUESTIONS FROM SENATOR LEE

*Question 4a.* My understanding is that the FCC invited FERC to participate in an inter-agency working group to ensure that deployment of MHK does not, among other things, adversely impact communications infrastructure. One specific concern expressed by FCC is that there is insufficient guidance to determine the proper separation distance between hydrokinetic energy projects and submarine telecommunications cables. [April 22, 2013 FCC letter to FERC].

What is the status of FERC's participation in the inter-agency process to develop guidance and industry standards on separation with critical telecommunications cables?

Answer. A senior member of the Commission's staff is participating in the FCC's Communications Security, Reliability, and Interoperability Council (CSRIC) as well as CSRIC's Working Group 8, which covers submarine cable routing and landing.

*Question 4b.* Does adequate expert guidance in the inter-agency framework exist to determine appropriate separation? If not, how does FERC plan to augment its knowledge in this area?

Answer. CSRIC's Submarine Cable Routing and Landing Working Group is currently exploring various issues, including relevant marine activities, potential conflicts and risks, existing worldwide spatial standards and recommendations, and legal and permitting requirements, but has not yet developed recommendations on the separation between submarine telecommunications cables and other marine infrastructure or activities. Pending such recommendations, which will need to go

from the Subgroup to the CSRIC and then to the FCC, Commission staff will consult with the FCC and other affected stakeholders on a case-by-case basis. For example, in the proceeding leading to the recent issuance of a license to Public Utility District No. 1 of Snohomish County, Washington, for a hydrokinetic project to be located in Puget Sound, the FCC stated that it did not oppose the licensing of the project with the proposed minimum separation distance between an existing under-sea cable and the proposed project as long as the Commission is able to ensure that Snohomish PUD adheres to the safety and separation distance representations it has made. The license issued by the Commission included a number of safety measures designed to ensure that the project could be constructed and operated without interfering with the cable.

*Question 4c.* How does FERC's participation in the inter-agency process impact pending MHK applications that may raise cable protection concerns?

Answer. Knowledge obtained through the inter-agency process should assist Commission staff in processing MHK applications that raise cable protection concerns.

---

RESPONSES OF BELINDA A. BATTEN TO QUESTIONS FROM SENATOR MURKOWSKI

ON S. 1419.—GENERAL

*Question 1.* Your institution has developed an excellent working relationship with private companies in the wave energy industry. I understand that a company, Resolute Marine, is trying to advance a wave project that could dramatically cut the cost of power in Yakutat, Alaska. Can you talk about what you have been able to accomplish in advancing a marine energy industry and where you think the industry may be headed?

Answer. Our center, the Northwest National Marine Renewable Energy Center (NNMREC), has worked to advance the marine energy industry through partnerships in research, development and testing. On the R&D side, we have teamed with several developers on projects advancing some particular aspect of their device. With regard to testing, we have assisted developers in our laboratory wave tank facilities at Oregon State, and have supported scaled testing in the open waters of Puget Sound and Lake Washington near Seattle, Washington in conjunction with our NNMREC partner University of Washington. We have developed a non-grid connected test facility in Newport, Oregon to serve deep water devices, and are developing a deep water grid connected facility with four berths that will accommodate individual devices, or small arrays (3—5) of devices in each berth. Several developers of shallow water devices are looking to test at Camp Rilea in Warrenton Oregon, and Resolute Marine is one of these companies. This location is owned by the Oregon Military Department (OMD). In an effort to provide a “one-stop shop” for developers interested in testing, NNMREC is investigating ways that we can partner with OMD to provide consistent support to the developers of shallow and mid-water devices that might test at Camp Riles, as well as to developers that test with NNMREC at the deep water facility.

I expect that once developers have tested their devices in an open water site so that they are confident about their operational systems, maintenance schedules, and environmental effects, they are likely to turn to the states of Alaska, Hawaii, and islands such as Guam to develop early stage “community scale” energy production facilities. The cost of energy differential that these devices might provide in communities that are currently dependent on expensive diesel will likely provide the impetus that this burgeoning industry needs to prove and advance their technologies and lead toward commercialization of the MHK industry. Once marine energy has been demonstrated its benefit in community scale deployments and developers can further reduce the cost of energy through engineering advances, I expect we will see commercial deployments on the west coast where wave energy can contribute to stable baseline energy loads.

ON S. 1419.—TESTING CENTERS

*Question 2.* Your testimony notes the achievements of the Oregon State MHK test facilities. What level of funding must you have to keep your center afloat in the near and long term? Why do you believe the university deserves tax payer support? And if we fail to allow the OSU marine testing facility to stay afloat, what will happen to the fledging marine hydrokinetic industry in your opinion?

Answer. Access to abundant and affordable energy is a key foundation of our nation's economic success. All forms of energy, renewable or conventional, mature or emerging, continue to receive some form of support from the federal government.

While MHK devices are still in the developmental stage, DOE's vision is that fifteen percent of U.S. electricity demand will be met by 2030 with water power technologies. For that to happen, it will require additional resources to be provided to the DOE Water Power program, which supports leading-edge research, development, demonstration and deployment efforts for innovative MHK, hydropower and pumped storage technologies. The program invests in high-risk, early-stage technologies that, due to market considerations, the private sector is unable to address on its own. Increased federal support will hasten deployment of advanced water power technologies and also give confidence to investors and help attract private capital. This is particularly true when considering that funding from the DOE Water Power program is the one key mechanism to support U.S. technology developers competing against overseas companies that receive a suite of subsidies. The reality is that most MHK companies are not yet in a position to receive the tax benefits enjoyed by more mature conventional and renewable energy technologies.

With regard to NNMREC, there are two components of funding necessary to keep our center afloat: research funding and testing funding. In the short term, both types of funding will need to be provided by the federal government, as the industry is not to the point where private investors can expect a return on their investment. The industry is still in its infancy. Currently, NNMREC's central research funding needs are approximately \$1 million per year, and testing facilities operational and administrative costs are about \$300k per year. In the longer term, as testing becomes fully operational, the latter costs will become absorbed into user fees—and will likely increase due to additional services and staffing that will be required. I anticipate that some level of research funding will be required from federal sources for several years to come. This expectation is based in part on information from the European Marine Energy Center (EMEC) in Scotland. EMEC is the premier wave and tidal testing facility in the world, and has just founded a research arm. As I understand it, this research arm is funded in part through testing fees, although the primary sources are public research funds.

The university deserves tax payer support because we are serving to advance the industry for the public good. In addition to providing an energy technology that can be significantly cheaper for communities dependent on expensive diesel, as I discussed above, the taxpayers can expect to reap significant economic development from this industry. EMEC reports that more than \$16 million (US) is brought to the economy of Orkney, Scotland each year through its test facility. The jobs created are numbered at more than 220. As the industry grows, new supply chain industries will grow in the communities that have marine energy installations. The return on investment to the taxpayer should well compensate for the initial investment in the industry.

Unfortunately, the United States is falling behind in the race to capture the rich energy potential of our oceans. Many countries, especially those in Europe, have already deployed viable, operating, power generating technologies using the emission-free power of ocean waves, currents, and tidal forces. Early funding support, along with development of full-scale device testing centers (still unavailable here in the United States), demonstrates that the significant technological advances and competitive advantages in this industry are taking place in Europe and elsewhere. The U.S. is far behind in acknowledging the importance of these technologies.

Finally, if we fail to construct NNMREC's grid connected test facility, we can expect the U.S. based companies attempting to commercialize their devices to continue to struggle, much as we saw happen in wind energy 30 years ago. The European countries that have been investing in the industry will reap the benefits, and we will see marine energy developers that are analogs of the companies such as Vestas selling their devices to the US when we eventually decide to adopt marine energy. The economic benefit I discussed above will not be reaped. The economic development that this industry could provide to the US through the fledging companies such as Resolute Marine, ORPC, Verdant Power, and Columbia Power Technologies, will be lost.

#### ON S. 1419.—FUTURE

*Question 3.* Some believe that MHK is just too far from being proven technology to really help generate renewable energy for the country. According to DOE, its goal is to reduce the costs of MHK developments by 2030. Where do you feel the technology is and when might it be ready for commercial deployment? Can that happen realistically before 2030? As someone who has been working with the industry for years now, what in your view should Congress be doing to speed up that marine hydrokinetic energy development timetable?

Answer. Marine renewable energy has the potential to become a major source of electricity for the United States, and its growth could be substantially supported through increased and focused funding for the DOE Water Power Program. Federal commitment to creating a robust U.S. marine renewables industry will advance our national economic goals by creating high-quality employment in coastal communities, long-term production in shipyards, development of fleets of vessels for deployment and servicing, and strengthening the thousands of businesses that make up the U.S. industrial supply chain. The establishment and nurturing of a U.S.-based marine renewable industry would secure our nation's place in developing offshore renewable energy systems, thereby ensuring that the United States is an exporter, not an importer, of these technologies.

Just as the wind and solar industries have enjoyed significant DOE funding for over three decades (which has resulted in the maturation, cost competitiveness and rapid deployment of these technologies in recent years), the nascent MHK energy industry is requesting similar federal assistance to develop promising technologies that are on the verge of commercial viability. Expanded efforts by DOE to capture our nation's rich domestic water power resources through advanced MHK and hydropower technologies will give confidence to investors and help attract private capital in a broad range of job-creating industries, including in the heavy industrial and maritime sectors, and has the potential to employ a substantial skilled workforce.

The answer to this question depends upon what one means by commercial development. With the right support, we could see "commercial development" in towns in Alaska within five years. There are devices that have tested in Europe that are could be deployed within that timeframe. If we get US devices in the water to test, they may be advanced enough to join their European counterparts, or to follow quickly on their heels.

Reauthorization of DOE's Water Power program through S. 1419 is essential to speeding up the MHK deployment timetable. S. 1419 provides continued technology funding that this industry needs at this stage of its development. In addition, the regulatory changes proposed in S. 1419 by you and Senator Wyden will provide an avenue for promising new MHK companies and their technologies to advance through the necessary testing stages more quickly. This industry requires targeted investments and permitting efficiencies like those that are included in S. 1419. Assuming that Congress can come together to pass S. 1419, and timely funding is provided to complete NNMREC's grid connected test facility and sufficient funding is provided to developers to test their devices in the open water environment, then the 2030 time frame for commercial development is a conservative estimate.

---

CLEAN WATER SERVICES,  
Hillsboro, OR, March 26, 2014.

Hon. BRIAN SCHATZ,  
Chair, Subcommittee on Water and Power, U.S. Senate, 304 Dirksen Building,  
Washington, DC.

DEAR MR. CHAIRMAN:

Thank you for this opportunity to respond to a question posed by Senator Lisa Murkowski regarding S. 1946. I appreciate the Senator's question about assessing the repair needs of Bureau of Reclamation facilities and the concern that eliminating the authorized ceiling for the Safety of Dams program could result in non-essential or potentially unnecessary expenditures. More specifically, the Senator's question was as follows:

*Question 1.* Some call for better planning when it comes to assessing the needs for future repairs of BOR assets (for example, as proposed by S. 1800, which is on today's agenda).

- *First, what is currently being done to assess these needs?*
- *Second, will providing the Bureau with unfettered discretion to allocate as much funds as needed to address future infrastructure repairs lead to funds being expended on non-essential activities or other potential unnecessary expenditures? How would BoR ensure that federal dollars are being spent wisely?*

Answer. Clean Water Services and Washington County, Oregon share the concern that federal and local resources be expended wisely on Reclamation facility improvements. The Scoggins Dam project has been through a lengthy analysis and rigorous review process. S. 1946 does not propose to alter that process, but rather would eliminate potential delays in dam safety improvements awaiting Congressional action to periodically increase the arbitrary cost ceiling limit for the Safety of Dams

program. The study, review and priority categorization process would remain unchanged. In fact the improved planning process called for in S. 1800 would require that all Reclamation facilities be rated consistent with the Safety of Dams' uniform categorization system.

Unnecessary expenditures would continue to be avoided because of the rigor required in the Safety of Dam process, including Congressional and Office of Management and Budget review of all safety of dam modification reports and Congress's continued fiduciary authority over the appropriations process. Repayment contractors also have a vested interest in ensuring that only essential activities are funded because the contractors have a cost-sharing obligation under the existing program. In 2004, Congress directed Reclamation (P.L. 108-439) to improve the notification and engagement of project beneficiaries during a safety modification, including providing repayment contractors the opportunity to consult with the Bureau on the planning, design and construction of the proposed modifications. Furthermore P.L. 108-439 directed the Secretary to consider cost containment measures recommended by the project beneficiaries that have elected to consult with Reclamation on a modification. We recommend retaining the existing structure and encouraging the Bureau of Reclamation to exercise the greatest degree of flexibility in evaluating and mitigating dam safety concerns.

Thank you again for conducting the hearing last month on S. 1946. I would be happy to answer any additional questions, and I look forward to working with you as the legislation progresses through the legislative process.

Sincerely,

ANDY DUYCK,

*Chairman Clean Water Services Board of Directors/Washington County  
Commissioners.*

---

RESPONSES OF CHARLES V. STERN TO QUESTIONS FROM SENATOR MURKOWSKI

*Question 1.* Can you please describe what exactly is being done currently to assess and estimate future needed repairs to BOR's assets? What are the associated costs? How would the proposed new assessment address missing information?

Answer. The Bureau of Reclamation (or Reclamation) operates multiple programs that analyze and assess future repair needs at Reclamation facilities. As discussed in my written testimony, Reclamation has previously stated that the focus of these programs differs depending on the type of infrastructure. For infrastructure that has been transferred to local project sponsors (typically referred to as "transferred works"), Reclamation conducts periodic maintenance reviews but typically does not conduct in-depth reviews of expected future maintenance needs, since maintenance for this infrastructure is the responsibility of the local project sponsors. For projects that are owned and operated by Reclamation (referred to as "reserved works"), Reclamation identifies and schedules future maintenance needs and has in the past expressed more confidence in its estimates of expected future needs at these facilities. Previously, Reclamation has provided an overall estimate of repair needs at reserved and transferred works, but has also stated that these totals are not actionable in a management context. These total estimated repair needs were most recently estimated by Reclamation to be \$2.6 billion over the next five years.

Since the data on which Reclamation bases its estimates are not publicly available, it is difficult to comment on the rigor and accuracy of these estimates, including the consistency of the underlying data collected by Reclamation across infrastructure types. The proposed new assessment in S. 1800 would require that Reclamation conduct an assessment of its maintenance needs across all facility types and make this information available to the public. Depending on the status and quality of the data currently used internally by Reclamation, S. 1800 may or may not result in significant new data on Reclamation facilities being collected. Regardless of the status and quality of Reclamation's current internal data, the requirement that estimates be made publicly available would be a new development.

*Question 2.* The bill calls for a very detailed analysis of all project plans and associated costs of major repairs and rehabilitation of BOR facilities. CRS testified that Reclamation operates a Facility Maintenance and Rehabilitation Program that identifies, schedules, and prioritizes the needs of its reserved works but that the reviews are typically not made public. The Bureau, according to CRS, also conducts periodic maintenance reviews at transferred works through its Associated Facilities Review of Operations and Maintenance Examinations program but again, these results are typically not made public. It would seem then, that most of the data called for in this bill is already available to Reclamation in some form. Do you agree? If not, please explain.

Answer. At least some of the information required by S. 1800 appears already to be collected internally by Reclamation. However, as stated in my answer to question 1, it is difficult to comment further since this data is not available for CRS review. While it appears that Reclamation tracks information through its facilities review programs for reserved and transferred works, respectively, this information may or may not satisfy the requirements of S. 1800. For instance, the legislation requires that Reclamation include an itemized list of repair estimates for every project. It is not possible to say whether such a list is available for current Reclamation estimates and if it is, whether this information is methodologically consistent.

## APPENDIX II

### Additional Material Submitted for the Record

---

STATEMENT OF DAN KEPPEL, EXECUTIVE DIRECTOR, FAMILY FARM ALLIANCE,  
KLAMATH FALLS, OR

Thank you for holding this hearing today, where you will consider several bills that will give federal agencies additional tools to deal with water shortages due to drought, such as the one currently impacting California and other Western states. On behalf of the Family Farm Alliance (Alliance), I am pleased to present this testimony that addresses five of the bills you will consider at today's hearing. Our organization advocates for family farmers, ranchers, irrigation districts, and allied industries in seventeen Western states. The Alliance is focused on one mission—To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. Our members include irrigation districts and water agencies that are responsible for the operation and maintenance of some of the Bureau of Reclamation's largest and most complex facilities. Several of our members have worked with the federal government over the past two decades to address issues that are the subject of all five bills considered today.

The Alliance fully supports S. 1946, a bill to amend the Reclamation Safety of Dams Act of 1978 to modify the authorization of appropriations; S. 2019, SECURE Water Amendments Act of 2014; and S. 1963, the Bureau of Reclamation Conduit Hydropower Development Equity and Jobs Act. We support the intent of S. 1800, the Bureau of Reclamation Transparency Act; and S. 2034, The Reclamation Title Transfer Act of 2014 but have concerns that we believe need to be addressed before we can fully support these bills. These matters are further discussed below.

#### S. 1946—RECLAMATION SAFETY OF DAMS ACT

S. 1946 would amend the Reclamation Safety of Dams Act of 1978 by removing spending caps for construction projects to improve the safety of Bureau of Reclamation dams. Safety of Dams (SOD) legislation has consistently been a top legislative priority for the Family Farm Alliance in the past two decades, and the Alliance ten years ago successfully advocated for the inclusion of important “place at the table” language in SOD legislation that saves the government and project beneficiaries significant dollars by opening the process and allowing irrigators to participate in SOD planning, design, and construction decision making processes. Safety of Dams corrections are an essential public safety issue. The Family Farm Alliance supports S. 1946 and we urge the Senate to pass this bill.

#### S. 2019, SECURE WATER AMENDMENTS ACT OF 2014

S. 2019 would reauthorize and refine the 2009 Secure Water Act to raise the budget ceiling on Bureau of Reclamation WaterSMART Program water efficiency grants and add the State of Hawaii to the list of grant eligible recipients.

Congress in 2009 approved the SECURE Water Act (signed into law by President Obama in March 2009 as P.L. 111-11, Title IX, Subtitle F) creating federal inter-agency programs to assess the effects of climate change on water supplies, develop strategies and technologies to address potential water shortages and increase the collection of data on current and future water supply availability. The Family Farm Alliance strongly supported the SECURE Water Act in part because it provides water managers with highly beneficial “on-the-ground” solutions to infrastructure problems exacerbated by climate change. SECURE authorized the Secretary of the Interior to provide cost-shared grants for planning, designing, or constructing improvements to water infrastructure that conserve water, provide management improvements, and promote increased efficiencies. This expands opportunities for the types of projects currently funded through the Bureau of Reclamation's WaterSMART Grant Program, from which many Family Farm Alliance members

have benefited. These projects provide for improved water management, enhanced supplies, water conservation, and greater efficiencies, thereby stretching dwindling water supplies, all in partnership with the Bureau of Reclamation.

The Alliance supports S. 2019 because it raises the budget ceiling on a program that is over-subscribed. We urge a “yes” vote on this legislation.

S. 1963, BUREAU OF RECLAMATION CONDUIT HYDROPOWER DEVELOPMENT EQUITY AND JOBS ACT

S. 1963—already passed by the House of Representatives in December 2013—would allow for certain irrigation districts and other nonfederal hydropower developers to use a streamlined permitting process to build small hydropower projects on 11 specific Reclamation canals, conduits and ditches.

S. 1963 is similar to another hydropower bill (H.R. 678) that overwhelmingly passed the House and Senate and was signed into law by President Obama in August 2013. S. 1963 seeks to jumpstart conduit (canals, pipes and ditches) hydropower development at eleven Bureau of Reclamation projects. The bill specifically removes statutory impediments by authorizing non-federal hydropower development at these conduits and providing the administrative and regulatory reforms necessary to foster such development.

Many Family Farm Alliance members operate existing irrigation canals and ditch systems that may provide opportunities to develop in-canal, low-head hydroelectric projects that have tremendous potential for producing significant amounts of renewable energy with virtually no negative environmental impacts. There are many other benefits associated with developing projects of this type. Historic irrigation structures can be retained while the system is updated with modern clean-energy producing technologies. Increased revenues from the sale of this renewable energy can result in a new source of funding for operating, maintaining, and rehabilitating our aging water delivery infrastructure at lower costs to farmers.

If passed, S. 1963 would complete the policy of promoting the development of clean, renewable hydropower at all Reclamation conduits at no cost to federal taxpayers, while providing additional renewable power supplies to the grid and lowering energy costs for consumers. H.R. 678 applied to hundreds of Reclamation facilities that are covered under the authorities of the Reclamation Project Act of 1939. S. 1963 applies to the remaining Reclamation facilities, all of which are governed under the different and more complex authorities of the Water Conservation and Utilization Act (WCUA) of 1939.

The Family Farm Alliance supports S. 1963, which we believe will reduce costs to foster more conduit hydropower at federal facilities and empower local water districts to develop this generation.

S. 2034, THE RECLAMATION TITLE TRANSFER ACT OF 2014

S. 2034 seeks to authorize the Secretary of the Interior to establish a program to facilitate the transfer to non-federal ownership of appropriate Reclamation projects or facilities by providing title transfer authority to the Secretary. The Family Farm Alliance believes title transfers are a positive means of strengthening the reliability of critical water resources at the local level. In addition, they help reduce federal costs and liability, and allow for a better allocation of limited federal resources. Thus, we support the concept advanced in S. 2034, although we have specific concerns that we would like to see addressed before we can fully support the bill.

Over the past 15 years, the Alliance has worked closely with the Bureau of Reclamation on both individual title transfers and on title transfer policy. Since 1996, more than two dozen Reclamation projects have been transferred or authorized to be transferred to local entities. Those local agencies are usually the irrigation or water district that has fulfilled its obligation to pay for construction of the project. We have found that other irrigation districts are interested in acquiring title to Reclamation facilities. Experience throughout the West demonstrates that when title and control of projects is assumed by local interests, the projects are run more cost effectively and are better maintained due to the availability of additional secured financing. In addition, some local districts want to acquire title to their own water distribution works, to which the federal government holds title because federal funds—long since repaid—were used to help build them.

Despite the benefits, local water agencies are typically discouraged from pursuing title transfers because the process is expensive and slow. Environmental impact analyses can be time-consuming, even for uncomplicated projects that will continue to be operated in the same manner as they always have been. Moreover, every title

transfer requires an act of Congress to accomplish, regardless of whether the project covers 10 acres or 100,000 acres.

S. 2034 seeks to facilitate the transfer of fairly uncomplicated facilities to promote more efficient management of water and water-related facilities. We believe the bill can be further strengthened by addressing the following concerns:

1. Section 4, “Compliance with Environmental and Historic Preservation Laws” includes provisions that likely are responsible for most of the difficulties our members have endured when trying to transfer title. Compliance with the National Historic Preservation Act (NHPA) can be extremely time consuming and challenging, but there is likely not much that can be done about that in this legislation. However, National Environmental Policy Act (NEPA) compliance could be streamlined through this bill by including a section encouraging Reclamation to use all tools necessary to facilitate existing NEPA processes, including but not limited to the use of categorical exclusions, if appropriate.

2. Section 7, “Benefits” would preclude transferred projects from being able to continue to receive project power benefits. Some projects have been transferred with the express provision that allows for project power benefits to be retained at pre-title transfer rates. If not allowed in some circumstances, the cost of project operations would not be economical and lead to the potential failure of the project. We believe the legislation should give more flexibility to the Secretary to allow these federal benefits to be analyzed and to continue if they are in the best interest of the U.S. in moving the transfer forward (e.g. compare the benefit to the U.S. of reduced liability through title transfer vs. the cost of some future level continued project power benefits).

We are committed to working with Subcommittee staff, Reclamation, and other water users to see how we can work out some sort of solution to these concerns as the bill moves through the Senate.

#### S. 1800, THE BUREAU OF RECLAMATION TRANSPARENCY ACT

Repairing and modernizing the West’s aging infrastructure is a challenge critical to the Bureau of Reclamation and the water users served by Reclamation’s aging facilities. Family Farm Alliance leadership worked extensively with Reclamation and the Congress over the past decade in seeking to find solutions with the Office of Management and Budget to discuss approaches to help finance aging federal infrastructure, including providing loan guarantee incentives and, perhaps, setting up a construction loan account associated with the Reclamation Fund.

S. 1800 would require Reclamation to publicly report on its repair needs every other year. The Alliance certainly supports the transparency and reporting requirements intended with this legislation.

However, we do believe that this bill would have unintended consequences for our member Reclamation project water users. We have shared this bill with our members, some of whom believe that transferred works should not be subjected to the reporting requirements of this bill, as the local non-federal entities are 100% responsible for maintaining and replacing these facilities at their expense. Also, the bill would require completion of a report that would describe the efforts of Reclamation to manage all its facilities, standardize and streamline data reporting and processes across regions, and expand on the information otherwise provided in Asset Management Reports. Fortunately, the costs of preparing the report would be considered non-reimbursable project costs. Unfortunately, this provision would cause significant increased liability for nonfederal water contractors and could place Reclamation in a position of having to limit or cease water delivery operations of a federally owned facility if such ratings were applied and the maintenance/rehabilitation activity was delayed or not implemented at all due to lack of resources.

As the Committee is probably aware, a large portion of the costs of maintaining, replacing, and rehabilitating these federal water facilities (reserved works) falls on the non-federal project water and power contractors, and as such, publicly portraying these facilities as somehow not current on maintenance or replacement could actually accelerate the work on these projects to a point that may not be currently affordable to the non-federal entities on the hook for paying, in advance, these costs. The lack of any federal financing tools is a key contributor to this inability to afford such projects on an accelerated basis. We believe that a better approach would be for Congress to require that Reclamation work collaboratively and transparently with their project water and power contractors to establish planned maintenance, replacement and rehabilitation work over a ten or fifteen year framework that could be reported to Congress on a regular basis. This way, project water and

power contractors can plan for long-term financing for their share of the costs of the work to be performed in a much more business-like and organized manner.

The Family Farm Alliance and other Western water interests stand poised to work with the authors of S. 1800 to help create a Transparency Act our family farmers and ranchers will embrace.

Thank you for this opportunity to provide input on these matters, which are very important to our membership. If you have any questions about this letter, I encourage you or your staff to contact me at (541)-892-6244.

*February 25, 2014.*

Hon. MIKE SCHATZ,  
*Chairman, Senate Energy and Natural Resources Water and Power Subcommittee,  
304 Dirksen Senate Building, Washington, DC,*

Hon. MIKE LEE,  
*Ranking Member, Senate Energy and Natural Resources Water and Power Subcommittee, 304 Dirksen Senate Building Washington, DC.*

DEAR CHAIRMAN SCHATZ AND RANKING MEMBER LEE:

We are writing in support of S. 1771, the "Crooked River Collaborative Water Security Act," and to encourage the Committee to quickly approve this legislation.

For nearly five years, we have collaborated with local, state and federal agencies, the Confederated Tribes of Warm Springs, local and national environmental groups, and others in support of legislation to enhance economic and environmental values associated with Oregon's Crooked River. This legislation reflects our diligent efforts. Once enacted, this comprehensive bill would remove several federal barriers preventing our community from realizing the full potential of the Bureau of Reclamation's Bowman Dam and Prineville Reservoir. Key provisions would provide water supply certainty for local farmers and ranchers, the City of Prineville, and the environment. The construction of a new, small hydropower facility below Bowman Dam would also become possible. Our community supports the development of such a facility, and in fact is willing to independently advance the project.

All of these provisions are carefully balanced with one another. For example, it is essential to guarantee the water supply for local farm and ranch families who are such an important part of our community's heritage. More importantly, these families provide jobs, support numerous businesses in this region, and are a dynamic and reliable contributor to Oregon's economy. Additionally, the release of water for the City, which will enable the City to secure groundwater mitigation credits from the State of Oregon for additional groundwater pumping, will bolster Prineville's supplies for its residents and for businesses like Apple and Facebook. Important language regarding "carryover water" and other provisions are part of the foundation for the new authorization for the Secretary to release "uncontracted" water for downstream fisheries purposes. The State, Tribes, and conservation interests have assured us that the release of some of these uncontracted water supplies, as well as the new water supplies for the McKay Creek lands, will significantly enhance instream habitat for steelhead and other fisheries. These provisions represent a prudent and thorough balancing of needs and interests among local, state and federal interests, and many stakeholders.

The Crooked River Collaborative Water Security Act (S. 1771) would establish a new set of operational criteria for the project, and we've been asked repeatedly about one of them. The authorization for the Secretary to release uncontracted water supplies to benefit downstream fisheries has raised questions, by the general public and others, of whether shortages may occur more frequently, in greater severity, or for longer durations than may occur today—resulting in harm to agricultural water supplies or recreation.

We believe this is a possibility, but one that can be responsibly managed. It's helpful to begin with a brief explanation of the project's well-documented history and operations. The Bureau of Reclamation annually stores up to 148,000 acre-feet of water in the reservoir. Sixteen different parties, including local irrigation districts and small family farm and ranch families, hold contracts with Reclamation for 68,000 acre-feet of water. Occasionally, North Unit Irrigation District purchases water from the project under a supplemental contract. The rest of the stored water is used for recreation, and is then either released into the Crooked River or maintained in the reservoir for the following water year. The uncontracted supplies have historically served as a buffer against drought and provided valuable recreational opportunities. Today, the project has ample water supplies for agriculture, recreation, and even releases of water that benefit fish and wildlife.

Since 1974, for example, the Bureau of Reclamation has aimed to maintain at least 95,000 acre-feet of water in the reservoir through Labor Day to ensure a full supply of water for agriculture, and to ensure a safe and enjoyable recreation experience during this popular weekend. Reclamation has been able to do so nearly 75 percent of the time during this period. This is helpful because once the reservoir drops below this amount, two of the five boat ramps are unusable. It is important to note that this period covers the driest conditions on record for this region (1988-1992).

Our support for the legislation, including the new management of the uncontracted water supplies, is based on our understanding that the legislation responsibly addresses the issue of potential shortages. Several provisions, including Section 6-First Fill Storage and Release, include key protections for agricultural water supplies, the City of Prineville, and fisheries releases associated with the McKay Creek Water Rights Switch. Additionally, Section 6-Dry Year Management Planning and Voluntary Releases establishes a planning process for Reclamation to work with diverse interests, including recreation, on a long-term plan to address future dry conditions. Finally, we understand the intent of the legislation is to ensure that the project's operations, based on a multi-year management plan, would not be compromised but enhanced to achieve the project's full potential.

As set forth in an August 2012 letter from Oregon Governor John Kitzhaber addressing this issue, we understand the State of Oregon and Confederated Tribes of Warm Springs, in their new advisory capacities, are committed to responsibly balancing their recommendations to Reclamation regarding the release of "uncontracted" water to ensure that recreation values are not compromised in the long-term. We also plan to collaborate with the State and the Tribes to mitigate any potential long-term impacts to the reservoir, whether they are to recreation, cultural resources, or other values. The extension of existing boat ramps is one suggestion that clearly merits further discussion with all of our partners in support of the legislation. Our commitment is to ensure a safe and enjoyable recreation experience for all of the families who use this popular reservoir for boating, fishing, swimming, and other activities.

We appreciate the Subcommittee's review of the Crooked River Collaborative Water Security Act and encourage the full Committee to mark-up this legislation as soon as possible. Please feel free to contact any of us regarding this legislation or our perspective on its individual elements.

Sincerely,

BETTY ROPPE,  
*Mayor of Prineville,*  
BRIAN BARNEY,  
*Chairman, OID,*  
MARTIN RICHARDS,  
*Chairman, NUID,*  
MIKE MCCABE,  
*Judge, Crook County.*

---

STATEMENT OF DAVID MORYC, SENIOR DIRECTOR, RIVER PROTECTION AMERICAN RIVERS

On behalf of American Rivers and our 200,000 members, supporters and volunteers we write to express our support for S. 1771, the Crooked River Collaborative Water Security Act of 2103. By bringing irrigators and conservationists together this bill represents a uniquely collaborative solution to the age-old challenge of water use in the Wild and Scenic Crooked River watershed. With the support of the City of Prineville, irrigation districts, the Confederated Tribe of the Warm Springs, and conservation groups this bill represents a balanced approach, providing certainty for water users while keeping more water in the Wild and Scenic Crooked River to improve recreation and habitat for trout.

Among other benefits for fisheries habitat, the bill:

- Gives clear authority and direction to store and release water for fish and wildlife purposes that will protect and enhance the Wild and Scenic Crooked River downstream of Bowman Dam.
- Gives state and tribal officials more authority and flexibility to manage releases and target them for the benefit of downstream fish and wildlife resources.
- Provides greater certainty for the management of the Crooked River for the City of Prineville, irrigation districts, the Confederated Tribes of the Warm Springs and fish and wildlife management agencies.

- Supports year-round flows in the Crooked River by authorizing release of mitigation water for the City of Prineville, regardless of whether it is needed by the City for mitigation purposes, thereby ensuring an additional 5,100 acre feet of flows annually through the Crooked River.
- Provides a path forward to reduce or eliminate water diversions from McKay Creek, a tributary of the Crooked that provides critical habitat for steelhead below the dam. By reducing or eliminating surface diversions from this key tributary, this bill helps to ensure that McKay Creek will be ready once again to support steelhead and native trout.
- Creates new opportunities for voluntary measures to improve fish flows and habitat by providing opportunities for instream leasing, water conservation and other voluntary water sharing agreements.
- Supports opportunity for future development of responsible hydropower at Bowman Dam.
- Establishes a clear path forward for development of collaborative solutions to improve river conditions in dry years.

The Crooked River Collaborative Water Security Act of 2103 is a balanced approach to water management and represents a hard fought agreement among diverse stakeholders. We deeply appreciate the effort that you and your staff have dedicated to this important issue and look forward to working with you and Rep. Greg Walden as this bill moves through the legislative process.

TROUT UNLIMITED,  
*Seattle, WA, February 27, 2014.*

Hon. JEFF MERKLEY,  
*Senator, 313 Hart Senate Office Building, Washington, DC,*

Hon. RON WYDEN,  
*Senator, 221 Dirksen Senate Office Building, Washington, DC.*

Re: S. 1771—The Crooked River Collaborative Water Security Act of 2013

DEAR SENATOR MERKLEY AND SENATOR WYDEN:

Trout Unlimited supports S. 1771—a bill designed to improve water management at Bowman Dam and provide more dependable flows for fish and wildlife habitat in the Crooked River basin. This bill encourages pragmatic, creative solutions and partnerships to restore Crooked River fisheries, including steelhead. The bill improves water supply certainty for the City of Prineville and local irrigators, and sets the stage for hydropower development at Bowman Dam, while at the same time creating new opportunities for improved flows for fish and wildlife in the Crooked River downstream.

Among other benefits, the bill:

- Gives clear authority and direction to store and release water for downstream fish and wildlife purposes.
- Gives state and tribal officials more authority and flexibility to manage releases and target them for the benefit of downstream fish and wildlife resources.
- Supports year-round flows in the Crooked River by allocating 5,100 acre feet of mitigation water to the City of Prineville and providing for annual release of that water through the Crooked River.
- Provides a path forward to restore stream flow to McKay Creek—a critical tributary for populations of wild steelhead below Bowman Dam by shifting water use away from surface diversions and toward stored supplies at Prineville Reservoir. By reducing or eliminating surface diversions from this key tributary and providing for out of stream water needs through allocation of stored amounts, this bill helps to ensure that McKay Creek will be ready once again to support returning populations of steelhead and trout.
- Creates new opportunities for voluntary measures to improve fish flows and habitat by promoting opportunities for instream leasing, water conservation and other voluntary water sharing agreements.
- Supports opportunity for future development of hydropower at Bowman Dam.
- Establishes a clear path forward for development of collaborative solutions to improve river conditions in dry years.

The western states have a long history of water shortage and over-allocations. In a situation that is nearly unheard of in the West, Prineville Reservoir behind Bowman Dam holds nearly 80,000 acre-feet of unallocated water. This situation presents a unique opportunity to improve conditions downstream fisheries while continuing

to meet existing irrigation demand and support economic development opportunities for the City of Prineville.

Since the completion of Bowman Dam in the 1960s, there have been multiple attempts to reach agreement on expanded water management at Prineville Reservoir—S. 1771 represents the carefully balanced solution that will break this decades old log-jam. Working together, local stakeholders are making huge strides to restore salmon and steelhead to the Crooked River basin. These native fish have inestimable value for anglers, local communities, and our recreation economy and quality of life. Moving this legislation forward is a key element in a broader picture of partnership and restoration efforts underway on the Crooked River and in the larger Deschutes Basin.

Trout Unlimited strongly supports S. 1771 and we thank Sens. Merkley, Wyden and Rep. Walden for their leadership in promoting collaborative solutions for the Crooked River.

Sincerely,

KATE MILLER,  
*Western Energy and Water Counsel,*  
STEVE MOYER,  
*Vice President for Government Affairs.*

---

STATEMENT OF JASON JORDAN, DIRECTOR OF POLICY & COMMUNICATIONS, AMERICAN  
PLANNING ASSOCIATION

The American Planning Association would like to thank you for your thoughtful leadership on helping the nation's communities plan more effectively for drought and long-term water policy. APA is pleased support your legislation reauthorizing and updating the Secure Water Act, S. 2019. Your legislation would strengthen the work of local and regional planning aimed at addressing drought. These plans, which often incorporate a range of critical water resource issues, are a critical tool in dealing with this growing challenge.

APA provides leadership in the development of vital communities by advocating excellence in community planning, promoting citizen empowerment, and providing the tools and support to meet the challenges of local growth and change. Issues of drought have been an increasingly important part of the work of APA's Hazards Planning Research Center. In partnership with the National Integrated Drought Information Center, APA has just published a new report on planning and drought.

Bolstering the resiliency of communities to extreme weather and natural hazards is vital to the nation's economy and the health of local residents. The federal government is uniquely situation to provide communities with vital data, new research and best practices in more effectively managing water resources. Your legislation is an important step forward and would make the federal government a more effective partner in working with states and local communities on drought and water hazard mitigation.

APA thanks you for your leadership and looks forward to working with you on this important issue.

---

STATEMENT OF ROBERT W. JOHNSON, EXECUTIVE VICE PRESIDENT, NATIONAL WATER  
RESOURCES ASSOCIATION

On behalf of the Board of Directors and the members of the National Water Resources Association (NWRA), I write in support of S. 2019, the SECURE Water Amendments Act of 2014. The NWRA is a nonprofit federation made up of agricultural and municipal water providers, state associations, and individuals dedicated to the conservation, enhancement and efficient management of our nation's most important natural resource, water. Our members provide clean water to millions of individuals, as well as families, agricultural producers and other businesses throughout the western United States.

Meeting the growing demand for water in the West is an important charge. Access to a safe and reliable supply of water is a necessary component for job growth and economic stability. The NWRA believes that the federal government should complement the ability of state and local governments to better manage their water supplies by providing increased funding for storage opportunities, water conservation, drought mitigation and assistance, and recycled water projects and programs.

S. 2019, the SECURE Water Amendments Act of 2014, will help meet the nation's water needs by extending the authorization and funding level for important grant programs within the Bureau of Reclamation. These cost share programs effectively

leverage money by combining non-federal funds with federal grant money. In recent years grants have helped fund projects in: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, Oklahoma, Oregon, Texas, Utah and Washington State. These projects have worked to conserve water on Tribal lands, expand ground water storage opportunities, and conduct important infrastructure work such as canal lining and headgate improvements. The SECURE Water Amendments Act of 2014 also clarifies that grant funds can be used for drought preparation and mitigation. In addition, S. 2019 extends the authorization for the United States Geological Survey to continue nationwide data gathering efforts focused on water usage and availability.

On behalf of NWRA's members I thank you for your attention to the critical water supply issues facing our nation, and for supporting our members as they continue to be stewards of our nation's water supply and a critical part of the economy.

STATEMENT OF PHILLIP C. WARD, CHAIRMAN, WESTERN STATES WATER COUNCIL

On behalf of the Western States Water Council, representing the eighteen western governors on water policy issues, I am writing to comment on the SECURE Water Amendments Act of 2014 (S. 2019) for the record. These comments are based on the Council's October 8, 2013 letter to then-Chairman Ron Wyden and Ranking Member Lisa Murkowski expressing our continued support for implementation of the SECURE Water Act (Position #357).\*

Congress passed the SECURE Water Act in 2009 to authorize a number of important programs that support the states' primary responsibility to manage the nation's water resources. The Act's authorized activities provide much needed support that states and other non-federal entities in the West use to provide adequate and safe supplies of water for human health, the economy, and the environment, as well as enhancing public safety. However, many of these programs are unfunded or underfunded. Thus, reauthorization and appropriations are needed for these programs to fulfill their intended purposes.

As introduced, S. 2019 would address the Council's concerns by extending the authorization for two important SECURE Water Act programs, namely the Bureau of Reclamation's WaterSMART Grants Program and the U.S. Geological Survey's (USGS) National Water Availability and Use Assessment Grant Program.

A. WATERSMART GRANTS PROGRAM

The WaterSMART Grants Program provides cost-shared funding to states, tribes, and other entities on a competitive basis to address crucial water supply issues, stretch limited water supplies, and improve water management. Water managers have used this funding to improve their systems' operations and make more efficient use of limited supplies, which helps in responding to the severe and prolonged drought conditions that continue to impact much of the West. For example, from 2010-2012, the program leveraged non-federal investments by a two-to-one ratio to help conserve more than 616,000 acre-feet of water in the West.

The WaterSMART Grants Program's current authorized spending is expected to expire later this year and S. 2019 would ensure that Reclamation can continue assisting states in their water conservation efforts by reauthorizing the program through 2023. Failure to do so would greatly diminish Reclamation's ability to partner with states and local communities to increase water efficiency in the West, threatening a range of economic and environmental interests, even as unprecedented drought afflicts many areas. Consequently, the Council strongly supports reauthorization of the WaterSMART Grants Program.

B. NATIONAL WATER AVAILABILITY AND USE ASSESSMENT GRANT PROGRAM

The availability of water data is critical for planning and timely responses to droughts, flooding, and other extreme weather events. In particular, a lack of timely and accurate data on water use and availability places human life, health, welfare, property and environmental and natural resources at a considerably greater risk of loss. Unfortunately, erosion of the federal investment over the years has led to the discontinuance, disrepair, or obsolescence of vital data systems and programs needed to inform water resources management across the country.

The SECURE Water Act authorized the National Water Availability and Use Assessment as part of a suite of activities aimed at enhancing the Department of the Interior's water data efforts. The Assessment is a USGS program aimed at pro-

\*Document has been retained in subcommittee files.

viding better information on water resources budgets in the U.S., identifying trends in use and availability, helping forecast water availability for future needs, and maintaining a national inventory of water uses. Since states have the primary responsibility for gathering and managing data about water use, the SECURE Water Act authorized USGS to provide grants to state water management agencies to assist in acquiring locally-generated water data to be integrated with national datasets. However, USGS' requests for such grants have not been funded and its program authority expired with fiscal year 2013.

S. 2019 would reauthorize the Assessment's grant program through 2023 allowing for continuing support for state efforts to gather and analyze water data in a consistent manner. The Council supports reauthorization of this program. The Council also notes that its Water Data Exchange (WaDE) initiative has created the architecture for sharing information between states and with federal agencies, which will support this federal effort.

We commend the Subcommittee for its work in addressing important water needs in the West. We also look forward to working with the Subcommittee and the Congress to continue to improve western water management.

---

STATEMENT OF THE CHAIRMAN, TRIBAL COUNCIL, THE CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON

On behalf of the Tribal Council of the Confederated Tribes of the Warm Springs Reservation of Oregon. I am writing to express our strong support for S. 1771, Crooked River Collaborative Water Security Act—introduced by Senators Merkely and Wyden.

In short, this legislation is the result of countless hours of deliberation of a diverse group of local stakeholders. It helps resolve a decades-long question of how to balance water interests between municipal and irrigation users, while also ensuring the recovery of the salmon, trout and steelhead in the Crooked River.

Specifically, the Confederated Tribes believe that the "first fill" provision for irrigators is firmly balanced by the dedication of un-allocated water for downstream fish and wildlife. For both provisions to work and for the policy to be defensible in the future, we also believe the ESA provisions are appropriately and narrowly crafted. This will allow the collaborative management process to achieve ecological results with all stakeholders at the table.

Thank you for scheduling a hearing on this landmark legislation.

---

STATEMENT OF KIMBERLEY PRIESTLEY, SR. POLICY ANALYST, WATERWATCH, PORTLAND, OR, ON S. 1771

Founded in 1985, WaterWatch of Oregon is a non-profit river conservation group dedicated to the protection and restoration of natural flows in Oregon's rivers. We work to ensure that enough water is protected in Oregon's rivers to sustain fish, wildlife, recreation and other public uses of Oregon's rivers, lakes and streams. We also work for balanced water laws and policies. WaterWatch has thousands of members and supporters across Oregon who care deeply about our rivers, their inhabitants and the effects of water laws and policies on these resources.

On behalf of WaterWatch of Oregon's members and supporters we write in support of S. 1771, the Crooked River Collaborative Water Security Act of 2013, as introduced.

S. 1771, CROOKED RIVER COLLABORATIVE WATER SECURITY ACT

In the Crooked River Basin there exists a rare opportunity to pass a bill that could benefit all economic sectors in the region---farmers, cities and fisheries. In a situation that is nearly unheard of in the water parched West, Prineville Reservoir behind Bowman Dam holds over 80,000 acre feet of water that has not been allocated to any particular use. This fact presents an extraordinary opportunity to release the unallocated stored water to restore flows to the river and its economically important fisheries, without taking water away from existing irrigation districts or impeding growth opportunities for the City of Prineville.

S. 1771 takes advantage of this rare opportunity and delivers a bill that:

- Dedicates nearly 80,000 acre feet of unallocated water stored in Prineville Reservoir to downstream fisheries. This bill will result in significant flow increases to the historically water-parched Crooked River.

- Provides the City of Prineville with 5,100 acre-feet of water to serve as instream mitigation to offset the impacts of new groundwater pumping (under state law, new groundwater wells in this basin must provide instream mitigation).
- Provides farmers who currently hold irrigation contracts for water from the reservoir with guarantees to their longstanding use.
- Allows hydropower development to now proceed on Bowman Dam.
- Charts a path forward for flow restoration projects on McKay Creek (a creek that is key to steelhead introduction efforts).
- Requires dry year management planning.

S.1771, as introduced, represents a carefully crafted agreement between irrigation districts, the State of Oregon, the City of Prineville, conservation groups and the Confederated Tribes of the Warm Springs Reservation. We thank Senators Merkley and Wyden for introducing this bill that represents a balance amongst varied basin interests that, until now, was unattainable.

S. 1771 marks the end of over 30 years of fighting over the unallocated water behind Bowman Dam. The vision provided by this groundbreaking legislation could not only help save the Crooked River, its prized redband trout, and its newly reintroduced steelhead - it would also make a major contribution to the region's economy.

Thank you for all your work on bringing together the many varied interests of the Crooked River Basin and the State of Oregon to craft this truly collaborative legislation.

---

#### STATEMENT OF THE TUALATIN BASIN

##### S.1946 WILL IMPROVE DAM SAFETY, HELP SECURE REGIONAL WATER SUPPLY

Building on the Bureau of Reclamation's (Reclamation) Water 2025 Initiative and the principles of cooperative conservation, Tualatin Basin Water Supply Partners and Reclamation staff have been working collaboratively with regional business, environmental and agricultural stakeholders to meet the long-term water resource needs of the Tualatin River Basin in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component of the region's water supply. It is also among the most seismically at-risk dams in Reclamation's inventory. Passage of S. 1946, a bill to reauthorize and amend Reclamation's Safety of Dams program, would provide Reclamation with the ability to continue monitoring and improving the safety of its 476 facilities, including Scoggins.

##### S. 1946 EARNS STRONG COMMUNITY SUPPORT

On behalf of economic, agricultural, environmental and municipal interests in the region, partners of The Tualatin Basin Water Supply Project would like to enter the enclosed letters of support for S. 1946 into the record. Stakeholders include:

- Oregon Governor John Kitzhaber
- Washington County
- Clean Water Services
- City of Hillsboro
- City of Beaverton
- City of Forest Grove
- City of Tigard
- City of Tualatin
- Tualatin Valley Water District
- Joint Water Commission
- Tualatin Valley Irrigation District
- Oregon Water Resources Congress
- Intel Corporation
- Greater Hillsboro Chamber of Commerce
- Westside Economic Alliance
- Oregon Business Association
- Portland General Electric
- Portland Metro Homebuilders Association
- Tualatin Riverkeepers
- Tualatin River Watershed Council

## STATEMENT OF DENNY DOYLE, MAYOR, BEAVERTON, OR, ON S. 1946

On behalf the City of Beaverton, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Beaverton's and Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, important flood control and recreation opportunities, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Construction of the Tualatin Project was authorized by the Congress with the Act of September 20, 1966 (80 Stat. 822, Public Law 89-596). Since 1973, when Reclamation was developing stored water in the Tualatin Project (Scoggins Dam, Hagg Lake), the City of Beaverton has been a direct municipal "repayment contractor" to Reclamation for 4,000 acre-feet annually. Beaverton has two current contracts with Reclamation dating as far back as 1971.

The City of Beaverton received a letter from Reclamation dated October 20, 2011, which stated that: "Scoggins Dam could lose freeboard due to large deformations and fail from overtopping during a seismic event. Scoggins Dam could fail from erosion through cracking during a seismic event. The spillway walls at Scoggins Dam could fail during a seismic event leading to failure of the dam. Failure would result in the loss of lives and property downstream and the loss of project benefits for year to come. The seismic hazard at Scoggins Dam is among the most severe earthquake loadings within Reclamation's inventory of dam, largely due to the proximity to the Cascadia Subduction Zone. Assuring the safety of Scoggins Dam is a key element that Reclamation continues to deliver the authorized benefits of the project. The Reclamation Safety of Dams Act provides the necessary authority to reduce risks at Scoggins Dam. It should be noted that a project the size of Scoggins Dam will exhaust Reclamation's funding authority."

Consequently, this bill is very important to the future of Scoggins Dam and to the City of Beaverton.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for all of Oregon.

STATEMENT OF ANDY DUYCK, CHAIRMAN, CLEAN WATER SERVICES, HILLSBORO, OR,  
ON S. 1946

On behalf of Clean Water Services, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water. It supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. Within the next decade, the population and economic growth of Washington County will begin to outstrip the ability of our water supply infrastructure to deliver fresh water to homes, factories and farms. Expansion of the Scoggins Dam/Hagg Lake complex is a critical piece of the region's future water supply infrastructure.

In 2010, the Bureau of Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety and present water supply. Modification would also enable planning for the expansion of Scoggins Dam to move forward, which would move us further along the path to se-

curing our community's future water needs. Clean Water Services, the water resource management utility for more than 542,000 residents of urban Washington County and surrounding areas, is a managing partner for the water supply project.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF MICHAEL SYKES, CITY MANAGER, FOREST GROVE, OR

On behalf of the City of Forest Grove, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

The City of Forest Grove relies on water from Scoggins Reservoir for its 22,000 person population and industry. In addition, portions of our town could be flooded by a large dam failure.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF RICHARD WHITMAN, NATURAL RESOURCES POLICY ADVISOR, OFFICE OF GOVERNOR JOHN A. KITZHABER, SALEM, OR

On behalf of the Governor of the State of Oregon, I am writing to express the state's support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the authority to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component of our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future water needs. This legislation would allow Reclamation to move forward with securing structurally-deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping Washington County plan for a secure water future.

STATEMENT OF JUSTIN WOOD, DIRECTOR OF GOVERNMENT RELATIONS, HOME BUILDERS ASSOCIATION

On behalf of the Home Builders Association of Metropolitan Portland, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

The Home Builders Association of Metropolitan Portland and our over 1,100 members represent the many builders, developers, remodelors and trade contractors throughout the Portland Metro area. Homebuilding is a major component to the economic health of our state and region. Washington County provides the foundation for jobs and growth in our region and it is vital that this project be moved forward, providing the county with a safe a reliable water infrastructure to support continued economic growth.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

JOINT STATEMENT OF JERRY W. WILLEY, MAYOR, CITY OF HILLSBORO, AND JOHN GODSEY, CHAIR, HILLSBORO UTILITIES COMMISSION

On behalf of the City of Hillsboro, we are writing to thank you and to express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000. It is the economic engine of Oregon and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Hillsboro is a fast-growing community with a population of over 93,000. It is home to Intel, SolarWorld, Genentech, and many other businesses. The reliable water supply these industries receive from the city of Hillsboro is critical to their success. Hillsboro's contract for stored water at Scoggins Dam is an irreplaceable element in our ability to continue to supply those long term water needs. Protecting the reliability of that supply by funding Reclamation's construction of seismic improvements to Scoggins Dam is imperative.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

## STATEMENT OF DEANNA PALM, PRESIDENT, HILLSBORO CHAMBER, ON S. 1946

On behalf of the Hillsboro Chamber of Commerce, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Hillsboro and its businesses play a vital role in the regional and state's economy. The ability to locate new or expand businesses and grow jobs in our industrial areas is a critical element for economic success. An adequate water resource that is safe and secure is fundamental in achieving those goals.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

## STATEMENT OF JILL EILAND, INTEL, CORPORATE AFFAIRS DIRECTOR

On behalf of Intel Corporation, I am writing to thank you and to join our government partners, businesses, and environmental organizations across the region in supporting S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to the region's water supply. In 2010, the Bureau of Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure the region's water supply needs for cities, economic development, agriculture, and improve water quality in the Tualatin River and its tributaries. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Intel's operations in Oregon represent the Company's largest and most comprehensive site in the world—a global center of semiconductor research and manufacturing. With over 17,000 employees in Washington County, Intel appreciates the work you are doing to help make necessary infrastructure investments that will provide a reliable water supply for this growing region.

Thank you for your leadership on this important effort and for introducing this legislation.

STATEMENT OF MARILYN MCWILLIAMS, CHAIR, JOINT WATER COMMISSION,  
ON S. 1946

On behalf of the Joint Water Commission, I am writing to thank you and to express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most

seismically at-risk dams in their inventory. Scoggins Dam must be mortified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

The Joint Water Commission (JWC) is a water supply partnership between the cities of Hillsboro, Beaverton, Forest Grove, and the Tualatin Valley Water District. Together these agencies serve a population of over 400,000 in Washington County. The stored water at Scoggins Dam provides the majority of JWC's summer water supplies. As the JWC member communities continue to grow, they will continue to rely on a safe and secure supply from Scoggins Dam as the long-term foundation of their water supply. Protecting the reliability of that supply by funding the construction of seismic improvements to Scoggins Dam is imperative.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF RYAN DECKERT, PRESIDENT, OREGON BUSINESS ASSOCIATION,  
PORTLAND, OR, ON S. 1946,

On behalf of the Oregon Business Association (OBA), I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF APRIL SNELL, EXECUTIVE DIRECTOR, OREGON WATER RESOURCES  
CONGRESS, SALEM, OR

On behalf of the Oregon Water Resources Congress (OWRC), I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the U.S. Bureau of Reclamation (Reclamation) Safety of Dams program. OWRC is a nonprofit association representing irrigation districts, water control districts, improvement districts, drainage districts and other agricultural water suppliers. These local government entities operate complex water management systems, including water supply reservoirs, canals, pipelines, and hydropower production, and deliver water to roughly 1/3 of all irrigated land in Oregon. OWRC has been promoting the protection and use of water rights and the wise stewardship of water resources on behalf of agricultural water suppliers since 1912.

S. 1946 would provide Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon. Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to the region's water supply. One of OWRC's members, the Tualatin Valley Irrigation District, manages the reservoir and delivers

water to approximately 17,000 acres of farm land that sustains a variety of high value crops. Scoggins Dam/Hagg Lake also supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, and improves water quality in the Tualatin River to protect fish and wildlife habitat.

In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. Scoggins Dam controls releases from Henry Hagg Lake, sending water down Scoggins Creek toward the Tualatin River, which runs through Tualatin, Durham, Rivergrove and Lake Oswego and then on to the Willamette River in West Linn. The inundation zones of Scoggins Dam cross three counties: including numerous cities, water districts and unincorporated communities. In the event of a dam failure, there would be flooding, putting citizens at risk.

This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam and would help the local communities in planning for the potential impact of future seismic activity in and around Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our water suppliers plan for a secure water future for Oregon.

---

STATEMENT OF SUNNY RADCLIFFE, DIRECTOR, GOVERNMENT AFFAIRS &  
ENVIRONMENTAL POLICY, ON S. 1946

On behalf of Portland General Electric, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

This project is of great importance to PGE and our customers. As Oregon's largest electric utility, we know how critical it is that all of our region's infrastructure keeps up with the needs of our growing population.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF JOHN L. COOK, MAYOR, CITY OF TIGARD, OR, ON S. 1946

On behalf of the City of Tigard, I am writing to express our support for S.1946, a bill to reauthorize and amend the Bureau of Reclamation's Safety of Dams program. This bill would give the Bureau of Reclamation the ability to continue monitoring and improving the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is a primary source of water for Washington County and a central component to our region's water supply. Water from Hagg Lake provides drinking water for more than 400,000 residents, irrigates 17,000 acres of crop-

land, supports countywide employment with nearly 250,000 jobs and sustains water quality in the Tualatin River to protect fish and wildlife habitat.

In 2010, Reclamation identified Scoggins Dam as one of the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure the region's water supply and help meet future needs. This legislation would allow Reclamation to move forward with the important task of securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in our state with a population of more than 542,000. It is the economic engine for Oregon; home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. Employment on the Westside has more than doubled in the last 20 years, exceeding 250,000 jobs. A safe, secure and reliable water resource is critical to the state and region's continued economic success.

The City of Tigard provides drinking water to over 50,000 people in Tigard and surrounding communities. Tigard provides many of the jobs mentioned above and depends on Hagg Lake as our redundant water supply and Scoggins Dam for flood control. Improvements to these facilities are critical for our continued economic prosperity.

I want to thank you for introducing this important legislation and for your unwavering leadership in helping our region plan for a secure water future in Oregon.

---

STATEMENT OF LOU OGDEN, MAYOR, CITY OF TUALATIN, OR, ON S. 1946

On behalf of the City of Tualatin, I am writing to thank you and express our support for S. 1946, which would reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF DAVE WAFFLE, CHAIR, TUALATIN RIVER WATERSHED COUNCIL,  
HILLSBORO, OR, ON S. 1946

On behalf of the Tualatin River Watershed Council, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon,

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

The Tualatin River Watershed Council (Council) is an organization whose mission is "to foster better stewardship and understanding of the Tualatin River watershed resources; address natural resource issues; and ensure sustainable watershed health, function, and uses." The 21-member Council represents key interests and stakeholders in the Tualatin River watershed, including the agricultural community, business and industry, education, environmental, forestry, local government, commercial/recreational fisheries, utility districts and citizens.

The Council values environmental protection of the Tualatin Basin and believes that improving the safety of Scoggins Dam/Hagg Lake would address environmental destruction that would result from a catastrophic dam failure. The Council is willing to work with the Bureau of Reclamation in addressing any impacts to the natural environment caused by the project that would improve the dam's structural safety.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF BRIAN WEGENER, RIVERKEEPER, ADVOCACY & COMMUNICATIONS  
MANAGER, TUALATIN, OR, ON S. 1946

On behalf of Tualatin Riverkeepers, I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam. According to information provided by the Bureau of Reclamation at a recent open house, 200 workers lives at the Stimson mill are at risk with only 15 minutes to evacuate following a subduction zone earthquake.

Tualatin Riverkeepers is a non-profit organization dedicated to holistic watershed management for the benefit our communities. TRK takes a proactive approach to advocacy for clean waters, empowers the diversity of stakeholders in the Tualatin river basin to care for our unique river, and educates youth and future activists with creative curriculum inspired by local ecological traditions. We seek partnerships with agencies and landowners throughout the watershed to conserve the lands and biodiversity found within the broader landscape and analyze watershed issues from the floodplain's perspective. As such, we find strength from farmer to ecologist's viewpoints and believe bringing multiple parties together based on shared common ground will enhance sustainable management of the Tualatin watershed. TRK is a registered 501(c)(3) tax-deductible nonprofit charity and a member of the Waterkeeper Alliance.

Restoration of the Tualatin River has made tremendous progress over the last 25 years. Restoring cooling flows to tributary streams is a key missing element in recovery of steelhead trout in the basin. Expansion of Hagg Lake should make water available for tributary streamflow augmentation to aid in the recovery of our native fish. Seismic upgrade of the dam should also provide mitigation for blocked passage and lost habitat associated with the original construction of the dam.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF RICHARD P. BURKE, PRESIDENT, TVWD BOARD OF COMMISSIONERS,  
BEAVERTON, OR, ON S. 1946

On behalf of TVWD, I am writing to thank you for your leadership in sponsoring legislation that will address the need for a safer Scoggins Dam and specifically ex-

press our support for S. 1946 in order to reauthorize and amend the Bureau of Reclamation Safety of Dams program. The reliability of Scoggins Dam is essential to sustain the vital economy of Washington County.

In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure an important regional water supply, and help meet future needs. We appreciate your work on sponsoring legislation to allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

TVWDs Board passed Resolution 05-13 (attached) in May of 2013 as a way to demonstrate our support and encourage efforts to complete the seismic upgrades to Scoggins Dam as soon as possible. The Resolution has been a way to show our support and encourage regional cooperation and partnerships between water providers in order to develop and maintain multiple sources of water to meet Washington County's future water demands. Scoggins Dam is an important part of enabling water providers in the area to meet that objective.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF JAMES LOVE, CHAIRMAN OF THE BOARD, TUALATIN VALLEY  
IRRIGATION DISTRICT, FOREST GROVE, OR, ON S. 1946

On behalf of Tualatin Valley Irrigation District, I am writing to thank you and express our support for S.1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

The Tualatin Valley Irrigation District was formed by Oregon statute in 1962 for the purpose of shepherding the Tualatin Project through the Congress of the United States. The Tualatin Project, constructed by the US Department of the Interior, Bureau of Reclamation, provides water for the cities of Beaverton, Hillsboro and Forest Grove. It also provides water to improve the quality of the Tualatin River and most importantly the project provides water for the irrigation of crops within the district boundaries.

Scoggins Dam/Hagg Lake is Washington country's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon, home to Intel, Nike, SolarWorld, Genentech, and a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF ANDY DUYCK, CHAIRMAN, WASHINGTON COUNTY BOARD OF  
COMMISSIONERS, HILLSBORO, OR, ON S. 1946

On behalf of Washington County Board of Commissioners I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation's Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam here in Washington County, Oregon.

Scoggins Dam / Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports more than 250,000 jobs, provides drinking water for over 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat.

In 2010, Reclamation identified Scoggins Dam as one of the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow the Bureau to move forward with securing structurally deficient facilities like Scoggins Dam.

With a population of more than 550,000, Washington County is the fastest-growing county in the state, and has become the economic engine of Oregon and home to Intel, Nike, SolarWorld, Genentech, as well as a diverse agricultural economy. The number of jobs in our County has more than doubled in the last 20 years, surpassing 260,000 in 2013. A safe, secure, and reliable water resource is essential to our state and region's continued economic success.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.

---

STATEMENT OF PAMELA TREECE, EXECUTIVE DIRECTOR, WESTSIDE ECONOMIC ALLIANCE, TIGARD, OR, ON S. 1946

On behalf of Westside Economic Alliance (WEA) I am writing to thank you and express our support for S. 1946, a bill to reauthorize and amend the Bureau of Reclamation Safety of Dams program. This bill would provide the Bureau of Reclamation with the ability to continue to monitor and improve the safety of its 476 facilities, including Scoggins Dam in Washington County, Oregon.

Scoggins Dam/Hagg Lake is Washington County's primary source of water and a central component to our region's water supply. Hagg Lake supports nearly 250,000 jobs, provides drinking water for more than 400,000 residents, irrigates 17,000 acres of cropland, and sustains water quality in the Tualatin River to protect fish and wildlife habitat. In 2010, Reclamation identified Scoggins Dam as among the most seismically at-risk dams in their inventory. Scoggins Dam must be modified to reduce the risk of failure in a major earthquake in order to protect public safety, secure our region's water supply, and help meet future needs. This legislation would allow Reclamation to move forward with securing structurally deficient facilities like Scoggins Dam.

Washington County is the second-fastest growing county in the state, with a population of more than 542,000, and is the economic engine of Oregon. It is home to high technology and manufacturing firms, headquarters for active sportswear companies and the seat of a vibrant agricultural economy. The number of jobs on the Westside has more than doubled in the last 20 years, reaching over 250,000. A safe, secure, and reliable water resource is central to the state and region's continued economic success.

WEA is a business advocacy group, representing members from both the public and private sectors in Washington and western Clackamas counties. Together we work to improve the local business climate and the economic health of our region.

Thank you for introducing this important legislation and for your leadership in helping our region plan for a secure water future for Oregon.