

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2017

WEDNESDAY, MARCH 2, 2016

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:33 p.m., in room SD-138, Dirksen Senate Office Building, Hon. Lamar Alexander (chairman) presiding.

Present: Senators Alexander, Cochran, Murkowski, Hoeven, Lankford, Feinstein, Tester, Udall, and Coons.

U.S. ARMY CORPS OF ENGINEERS AND
BUREAU OF RECLAMATION

HON. JO-ELLEN DARCY, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), CORPS OF ENGINEERS—CIVIL, DEPARTMENT OF THE ARMY, DEPARTMENT OF DEFENSE—CIVIL

ACCOMPANIED BY THOMAS P. BOSTICK, LIEUTENANT GENERAL,
COMMANDING GENERAL AND CHIEF OF ENGINEERS

ESTEVAN R. LÓPEZ, COMMISSIONER, BUREAU OF RECLAMATION,
DEPARTMENT OF THE INTERIOR

ACCOMPANIED BY TOM ISEMAN, DEPUTY ASSISTANT SECRETARY,
WATER AND SCIENCE

OPENING STATEMENT OF SENATOR LAMAR ALEXANDER

Senator ALEXANDER. Good afternoon. The Subcommittee on Energy and Water Development will please come to order.

Today's hearing will review the President's fiscal year 2017 budget request for the U.S. Army Corps of Engineers and the Bureau of Reclamation, which is part of the Department of Interior. This is the subcommittee's second budget hearing this year, and we will have two more budget hearings in the coming weeks.

Now, we are going to change our procedure just a little bit, but it will not hurt to have a little more relaxed and informal hearing. We have four votes on the Senate floor that are scheduled to begin now, and I will give my opening remarks, and then will turn to Senator Feinstein for her remarks. Once Senator Feinstein and I have given our opening statements, we will take a brief recess to allow Senators to vote and come back, or if a Senator is here, we will just continue the hearing, alternating in between Senator Feinstein as Chairman of the Committee.

To allow Senators enough time to ask their questions, I am going to ask each Senator to withhold their opening remarks, and I ask unanimous consent that any written statements Senators would like to submit be included in the hearing record.

Our witnesses' written testimony, which we have, will also be included in the hearing record, and I would ask you to withhold your opening statements. And then as soon as Senators arrive, we will recognize them one by one for their 5 minutes of questions and conversations. And if there is anything in your opening statement that you would like to say when you answer questions, there will be plenty of time to say that.

So basically during these votes, which are going to last about an hour and a half, we will have alternating Senators. But I hope we can continue to have our hearing all the way through the end—to the end. Several Senators had expressed an interest in coming today, and I know for certain that Senator Feinstein will be here.

Our witnesses today include Jo-Ellen Darcy, the Assistant Secretary of the Army for Civil Works. Ms. Darcy has been serving as the Assistant Secretary since 2009, and she has told me this may be her last budget hearing before this committee. I want to thank her for her many years of public service. I have enjoyed working with her both publicly and the visits we have had in our offices, and including her time working on the Senate Environment and Public Works Committee. So thank you, Secretary Darcy, for being here today.

[The statement follows:]

PREPARED STATEMENT OF HON. JO-ELLEN DARCY

Thank you Chairman Alexander and distinguished members of the subcommittee for the opportunity to present the President's Budget for the Civil Works program of the Army Corps of Engineers for fiscal year 2017. We are pleased to have an opportunity to further expand on the Administration's priorities and goals. Those priorities include promoting resilient communities to address current and future impacts of climate change and sea level rise; fostering and maintaining strong partnerships with local communities; and practicing sustainability and sound stewardship across all our missions. I also want to take this opportunity to touch on points that this Committee has raised in the past.

This year's Civil Works Budget reflects the Administration's priorities through targeted investments in the Nation's water resources infrastructure that will reduce flood risk to communities; facilitate commercial navigation; and restore degraded aquatic ecosystems.

The 2017 Civil Works Budget provides \$4.62 billion in discretionary appropriations for the Army Civil Works program, focusing on investments that will yield high economic and environmental returns or address a significant risk to safety.

The Budget focuses on funding our three major mission areas:

- 42 percent of funding is allocated to commercial navigation,
- 26 percent to flood and storm damage reduction, and
- 8 percent to aquatic ecosystem restoration.

Other practical, effective, sound investments include allocating \$196 million of the Budget to hydropower, \$200 million to regulatory activities, and \$103 million to the clean-up of sites contaminated during the early years of the Nation's nuclear weapons program.

The Civil Works program, which this Budget supports, relies on the strong relationships between the Corps and local communities; these strong relationships allow us to work together to meet their water resources needs across all of our missions, as well as to address broader water resources challenges that are of concern at the national or regional level.

The Budget supports a Civil Works program that has a diverse set of tools and approaches to working with local communities, whether this means funding studies and projects with our cost-sharing partners, or providing planning assistance and technical expertise to help communities make better-informed decisions.

PLANNING MODERNIZATION

The Budget supports the continued implementation of Corps efforts to modernize its planning process. The Budget provides funding in the Investigations account for 49 feasibility studies, and funds 12 of them to completion.

The Budget reflects full implementation of the SMART (Specific, Measurable, Attainable, Risk Informed, Timely) planning initiative, under which each feasibility study is to have a scope, cost, and schedule that have been agreed upon by the District, Division, and Corps Headquarters. The Budget supports efficient funding of these studies.

Studies generally are funded with the presumption that they will complete in 3 years and for \$3 million (\$1.5 million Federal). In the first year, the Corps will work to identify the problem, develop an array of alternatives, and begin the initial formulation. The bulk of the study costs are anticipated to be incurred during year two, as the alternatives are narrowed down and a Tentatively Selected Plan is identified, which requires more detailed feasibility analysis and formulation. During the third year, the focus is on completing the detailed feasibility analysis, State and agency review, and finalizing the Chief's Report. There are some exceptions to this funding stream, such as where an increase in the study cost or an extension in the study schedule is appropriate based on factors such technical complexity, public controversy, the need for more detailed work to address a specific issue, or the overall cost of a proposed solution.

Over the past 3 years, the Corps began 29 new studies and resumed 10 studies. The fiscal year 2017 Budget focuses on managing these and other ongoing studies and bringing them to a conclusion. It includes funding for 14 studies and three preconstruction engineering and design efforts previously funded only through the annual Corps work plans. Among the studies budgeted for the first time this year are two of the feasibility studies that were recommended as focus areas in the North Atlantic Coast Comprehensive Study, nine studies that are starting in fiscal year 2016, and three disposition studies under the Disposition of Completed Projects remaining item.

The Water Resources Priorities Study is one of the 10 studies started in the fiscal year 2016 work plan. This study will address the critical need to develop a baseline assessment of the Nation's vulnerability to flood damages on both a national and regional scale. First, a baseline assessment will identify and analyze the key drivers of flood risks, including the ways in which some of those risks are changing or expected to change over time. The study will then examine the effectiveness of existing Federal, State, and local programs, and develop recommendations to improve these programs to reduce the economic and life safety risk associated with large-scale flood and storm events in ways that will also promote the long-term sustainability of communities and ecosystems.

The Budget also helps to further combat the spread of invasive species by its proposals for funding work associated with the Great Lakes and Mississippi River Interbasin Study (GLMRIS). The Budget supports efforts to reduce the risk of interbasin transfer of aquatic nuisance species through the Chicago Area Waterway System (CAWS) in the vicinity of Brandon Road Lock and Dam. The Brandon Road effort will assess the viability of establishing a single point to control the one-way, upstream transfer of aquatic nuisance species from the Mississippi River basin into the Great Lakes basin near the Brandon Road Lock and Dam located in Joliet, Illinois. The Budget includes funding to continue this effort.

Among the 12 feasibility studies funded to completion is the Mississippi River Hydrodynamic Model—Delta Management Study under the Louisiana Coastal Area Ecosystem Restoration Program. This greater than \$25 million study effort will identify options to address the long-term sustainability of the lower Mississippi River Deltaic Plain and provide a model to assess the effects on navigation and sediment dynamics along the Mississippi River main stem associated with combinations of Mississippi River diversions.

Investigation funds are also provided to continue to support State and local flood risk mitigation priorities through the "Silver Jackets" program. The Corps currently supports participation on "Silver Jackets" team in 44 States and the District of Columbia through which technical assistance activities are being implemented that support State and local community flood risk and floodplain management priorities.

CONSTRUCTION

The Budget for the construction program includes funds to complete six construction projects, continue 27 ongoing projects, and start one new project. The one new construction project, Mud Mountain Dam in Washington State, involves construction of a fish passage facility to address a Biological Opinion.

Flood and Storm Damage Reduction

The Budget includes \$404 million for flood and storm damage reduction projects and remaining items, and funds the American River Watershed (Folsom Dam Modification), CA project and the Topeka, KS project to completion.

Over the last several years, Congress has funded the dam safety program at a lower level than the Budget, based on revisions of capabilities that the Corps has provided to Congress subsequent to the Budget submission. These revisions—often but not always showing a lower capability than requested in the Budget—are caused by a variety of factors, including savings from contract awards, process efficiencies, and changed conditions. The Budget includes \$239 million (not including \$21 million for the Dam Safety remaining item) for the dam safety program that, when coupled with anticipated unobligated carryover balances on these important projects, will ensure that each of the Dam Safety Action Classification (DSAC) I and DSAC II projects funded in the Budget is able to progress efficiently and effectively to implement a risk reduction strategy for these structures.

Coastal Navigation

The Budget includes \$105 million for coastal navigation and remaining items and funds the Oakland Harbor, CA (50-foot Deepening) project and the Delaware River Deepening, NJ, PA, & DE project to completion. The Savannah Harbor Expansion Project, GA project is funded at \$42.7 million, which is over a 100 percent increase from the fiscal year 2016 Budget. The Columbia River at the Mouth, OR & WA project is funded at a level that will enable efficient progress toward mitigating the life safety risk that is presented by the deteriorated jetties.

Inland Navigation

The Budget funds inland waterways construction and remaining items at \$246 million, of which \$33.75 million will be financed through the Inland Waterways Trust Fund (IWTF) for the Olmsted Locks and Dams, IL & KY project, which at \$225 million is funded at the highest amount ever budgeted for this project. With the passage of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), the Olmsted Locks and Dam, Ohio River, Illinois and Kentucky project is now cost-shared 85 percent General funds and 15 percent IWTF. This change reduced the cost of this project to the navigation users by around \$500 million, and increased the amount that Federal taxpayers will have to pay by an equivalent amount. In the ABLE Act, the Congress also increased the tax on diesel fuel used in commercial transportation on certain of the inland waterways. As a result of both of these changes, over the next few years there will be somewhat more money in the IWTF to support the user-financed share of inland waterways capital investments.

The Administration—as it has in recent years—will propose legislation to reform the way that we finance capital investments for navigation on the inland waterways. The Administration's proposal includes a new user fee to produce additional revenue to help finance long-term future investments in these waterways to support economic growth. We would like to work with the Congress to enact this legislation.

The Corps is also finalizing a Capital Investment Strategy for the inland waterways. The Corps has coordinated this effort with stakeholders and the Inland Waterways Users Board to provide an opportunity for their input. The process will include an estimate of the investment need over the next 20 years and objective nationwide criteria to provide a framework for deciding which capital investments should have priority for funding from a national perspective. While this Strategy will provide a benchmark, it is a conceptual plan and does not take the place of normal Budget processes or commit the Government to future actions.

Aquatic Ecosystem Restoration

The Corps continues to contribute to the Nation's efforts to restore degraded environments; to that end, the Budget for the Corps funds restoration of several large aquatic ecosystems that have been a focus of interagency collaboration, including the California Bay-Delta, the Chesapeake Bay, the Everglades, the Great Lakes, and the Gulf Coast. Other funded efforts include the Columbia River, and priority work in the Upper Mississippi and Missouri Rivers.

OPERATION AND MAINTENANCE

The Budget provides \$2.705 billion for Operation and Maintenance, with \$1.122 billion for operation and \$1.414 billion for maintenance, and an additional \$169 million for remaining items. This encompasses a wide range of activities, from operating and maintaining our locks and dams to monitoring the condition of dunes and berms that reduce the risk of flooding in a hurricane from wave action and storm

surges, running the Corps recreation facilities that are visited by millions of Americans each year, and helping us be responsible stewards of the lands associated with Corps projects and operate them in an increasingly sustainable fashion.

For example, the Budget helps us maintain and improve our efforts on sustainability. We are reducing the Corps' carbon footprint by:

- increasing renewable electricity consumption,
- reducing greenhouse gas emissions, and
- reducing non-tactical vehicle petroleum consumption.

We are also making important investments to promote the sustainable management of Corps-owned lands, waters and cultural resources. The Budget provides \$9.6 million to update 24 Master Plans and initiate work on 26 others that govern how we manage our facilities, which will help us make better decisions about how to use the land and keep it healthy; \$12 million to address impacts from invasive plants and animals at Corps facilities; and \$6.9 million for enhancements and protections for habitat in support of the National Strategy to Promote the Health of Honey Bees and other Pollinators.

The Budget also provides \$35.5 million for the levee safety program, which will help ensure that Federal levees are safe and in line with the Federal Emergency Management Administration standards.

The overall condition of the inland waterways has continued to improve over the last few years. The number of lock closures due to preventable mechanical breakdowns and failures lasting longer than one day and lasting longer than one week has decreased significantly since fiscal year 2010. However, the lock closures that do occur result in additional costs to shippers, carriers, and users. That is why the Budget continues to provide a high level of funding to operate and maintain the inland waterways, with emphasis on those that together carry 90 percent of the commercial traffic.

Harbor Maintenance Trust Fund

The Budget provides \$951 million from the Harbor Maintenance Trust Fund (HMTF) to maintain coastal channels and related work, which is the highest amount ever budgeted. This includes almost 11 percent for Great Lakes harbors, 10 percent for emerging harbors, \$856 million from the O&M Account, \$2 million from the Mississippi River & Tributaries account, and \$65 million from the Construction account.

RESEARCH AND DEVELOPMENT

Research, Development, and Technology is a component of the Science and Technology portfolio of the Corps and continues to address key strategic technology needs to inform policy-making and business processes. The fiscal year 2017 Budget includes \$18.1 million for research and development. This funding will be used to extend the service life of water resources infrastructure through research, use of novel materials, and technology transfer. The Research, Development, and Technology program enhances our capabilities to facilitate marine transportation, assist flood and coastal storm preparation and recovery efforts, restore aquatic ecosystems, pursue sustainable environmental management, and respond to changing environmental conditions.

REMAINING ITEMS

The Budget includes \$276 million for remaining items, including \$55 million in the Investigations account, \$44 million in the Construction account, \$169 million in the Operation and Maintenance account, and \$8 million in the Mississippi River and Tributaries Account.

Annual funding for these remaining items is determined based on current needs, such as the increased focus on technical assistance to States and local communities to improve resilience to climate change.

REGULATORY PROGRAM

The Budget includes \$200 million for the Regulatory program.

ALTERNATIVE FINANCING AND PUBLIC-PRIVATE PARTNERSHIPS

As part of looking to the future of the Army's Civil Works program, we continue to consider potential tools to expand and strengthen our already strong partnerships, especially in the area of Alternative Financing. As part of this effort, we are actively talking with potential non-Federal partners about their ideas for how we can work together and soliciting suggestions and best practices from others in the Federal Government with experience in this area.

Increasingly, some non-Federal sponsors have been contributing or advancing funds for work that is authorized to be funded at Federal expense. In such cases, the project beneficiaries assume more (or all) of the cost. Before entering into an agreement to accept such funds, the Corps carefully evaluates its overall workload to ensure that execution of the proposed work will not adversely affect our directly-funded programs, projects and activities.

VETERANS CURATION PROGRAM

Finally, this Budget provides \$6.5 million for the Veterans Curation Program, which was started in 2009 with support from the American Recovery and Reinvestment Act. This program offers veterans the opportunity to learn tangible work skills and gain experience by rehabilitating and preserving federally owned or administered archaeological collections found at Corps projects.

Thank you all for attending today. General Bostick will provide further remarks on the Army Corps of Engineers 2017 Budget.

Senator ALEXANDER. Lieutenant General Thomas P. Bostick is the Chief of Engineers for the U.S. Army Corps of Engineers. He has been serving as Chief of Engineers since 2012. Time goes awfully fast. This will be his last hearing before this subcommittee I am told, and I want to thank General Bostick. He has been responsive and straightforward to me as well as to other Senators, and I am deeply grateful for his many years of service to our country. [The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL THOMAS P. BOSTICK

Mr. Chairman and Members of the Subcommittee:

I am honored to testify before your committee today, along with the Assistant Secretary of the Army for Civil Works, the Honorable Jo-Ellen Darcy, on the President's fiscal year 2017 Budget for the United States Army Corps of Engineers (Corps) Civil Works Program. This is my fourth and final time before this Subcommittee to testify on the Civil Works budget; thank you for your support in the past, and I look forward to continuing to work together during the remainder of my tenure as Chief of Engineers.

I have been in command of the Corps for nearly 4 years, and I want to briefly update you on the four Campaign Plan Goals for the Corps.

First, Support National Security. The Corps supports the National Security efforts of the United States. We continue working across the globe with presence in more than 110 countries, using our Civil Works, Military Missions, and Water Resources Research and Development expertise to support our Nation's Combatant Commanders. We are proud to serve this great Nation and our fellow citizens, and we are proud of the work the Corps does to support America's foreign policy. Civilian Army Corps employees from across the Nation have volunteered—and continue to volunteer—to work, in a civilian capacity, to provide critical support to our military missions abroad and humanitarian support to the citizens of those nations. Many of these volunteers have served on multiple deployments.

Second, Transform Civil Works. The four elements of the Civil Works Transformation strategy will make the Corps more efficient and effective while continuing to support the Nation by addressing some of our greatest infrastructure needs. Civil Works Transformation focuses on modernizing the project planning process; enhancing the budget development process through a more streamlined process and the use of a systems approach, to identify and deliver more holistic outcomes to the Nation; evaluating the portfolio of existing water resources projects to support risk-informed investment decisions, identify priorities, and develop better solutions to water resources problems; and improving methods of delivery to produce and deliver quality products and services.

Since the inception of Civil Works Transformation efforts in 2008, 58 Chief's reports have been completed, with 45 Chief's Reports completed in the last 4 years alone; we are learning and continue to become more efficient in our processes.

Third, we must continue to be proactive and develop better strategies to Reduce Disaster Risks, as well as respond to natural disasters when they do occur, under the National Response Framework, National Disaster Recovery Framework, Public Law 84-99 as amended, and Corps project authorities for flood risk management. I continue to be amazed at the work the Army Corps does in this arena. For example, the Corps provided technical expertise to the State of South Carolina during

its historic flooding last year by assisting in inspecting over 600 locally owned dams to assess dam safety vulnerability. More recently, the Corps teamed with local communities and State-led Army National Guard units during the Mississippi River floodfight to help impacted communities in the flood's aftermath. Additionally, I am pleased to report to you that all of the Federal flood risk reduction systems along the Mississippi performed as designed, demonstrating the effectiveness of the investments made.

Fourth, Prepare for Tomorrow. This is about our people—ensuring we have a pipeline of the best Science, Technology, Engineering and Mathematics personnel, as well as strong Workforce Development and Talent Management programs. Efforts to tailor development programs to employee aspirations is helping to maximize talent retention and is instilling a career of service culture. We take seriously the importance of engaging and retaining our talented workforce and have significantly improved our agency ranking in the Federal Employee Viewpoint Survey over the past year, on the list of best places to work in the Federal Government. Equally important is helping the Nation's Wounded Warriors and transition out of active duty to find fulfilling careers. Last year, we set a goal to assist 150 transitioning Wounded Warriors. I am proud that we achieved more than double that goal. We assisted over 300 Wounded Warriors in finding permanent positions within the Corps and other organizations. Over the past 3 years, we have helped 631 Wounded Warriors find meaningful careers.

We are equally focused on Research and Development efforts to help solve a host of the toughest challenges facing the Army and the Nation. Our Civil Works Program research and development efforts provide the Nation with innovative engineering products, some of which can have applications in both civil and military infrastructure spheres. By creating products that improve the efficiency of the Nation's engineering and construction industry, and through providing more cost-effective ways to operate and maintain public infrastructure, Civil Works program research and development contributes directly to the national economy.

SUMMARY OF FISCAL YEAR 2017 BUDGET

The fiscal year 2017 Civil Works Budget is a performance-based budget, and reflects a focus on the work that will provide the highest net economic and environmental returns on the Nation's investment or address a significant risk to safety. Investments by the Civil Works program will reduce the risks of flood impacts in communities throughout the Nation, facilitate commercial navigation, restore and protect significant aquatic ecosystems, generate low-cost renewable hydropower, and support American jobs. Continued investment in critical Civil Works infrastructure projects is an investment in the Nation's economy, security, and quality of life—now and in the future.

The Budget focuses on high-performing projects and programs within the three main water resources missions of the Corps: commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration. The fiscal year 2017 Budget includes \$4.62 billion in gross discretionary funding for Civil Works activities throughout the Nation, including the construction of water resources projects that will provide high economic, environmental and public safety returns on the Nation's investment.

The Budget also proposes the necessary level of funding for the Regulatory program to protect and preserve water-related resources of the Nation.

INVESTIGATIONS PROGRAM

The fiscal year 2017 Budget provides \$85 million in the Investigations account, and \$7 million in the Mississippi River and Tributaries account to evaluate and design projects within the Corps three main mission areas, with emphasis on those that are potentially the most promising on a performance basis; and for related work, including some research and development. The Budget also supports the Corps planning and technical assistance programs, including using its expertise to help local communities increase their resilience to, and preparedness for, flood risks such as the flood risks in coastal communities associated with hurricanes and sea-level rise.

CONSTRUCTION PROGRAM

The Budget provides \$1.09 billion for the construction program in the Construction account, and \$64 million in the Mississippi River and Tributaries account, prioritizing projects with the greatest net economic and environmental returns per dollar invested, as well as projects that address a significant risk to safety. The Budget includes funds for one high-priority construction new start: Mud Mountain

Dam, Washington. In keeping with our Civil Works transformation strategy, the Budget provides construction funding to complete six projects, and deliver their benefits to the Nation.

The goal of the construction program is to produce as much value as possible for the Nation from the available funds. The Corps uses objective performance measures to allocate this funding. For projects that are being funded primarily due to their economic return, these include benefit-to-cost ratios. For projects funded on the basis of their environmental return, priority is given to those projects that are highly effective at restoring degraded structures, functions or processes of significant aquatic ecosystems on a cost-effective basis. The selection process also prioritizes dam safety assurance, seepage control, static instability correction projects, and those that address a significant risk to safety.

OPERATION AND MAINTENANCE (O&M) PROGRAM

All structures age and, over time can deteriorate, causing a potential decline in reliability. With proper maintenance and periodic rehabilitation, however, we can extend the effective life of most of the facilities owned or operated by, or on behalf of, the Corps for many years. As stewards of this infrastructure, we are working to ensure that key features continue to provide appropriate levels of service to the American people.

The Corps is working to improve the efficiency and effectiveness of its operation and maintenance program. The Budget focuses on investments that address infrastructure maintenance needs on a risk assessment basis. In fiscal year 2017, the Corps will further expand the implementation of a modern asset management program, dedicating an increased amount of its O&M funding to the key features of its infrastructure and for work that will reduce long-term O&M costs in real terms. The Budget also supports an energy sustainability program and pursues efficiencies in the acquisition and operation of our information technology.

The Budget for the operation and maintenance program provides \$2.705 billion in the O&M account, and \$151 million in the Mississippi River and Tributaries account, with a focus on the operation and maintenance of key commercial navigation, flood risk management, hydropower and other facilities. The Budget gives priority to coastal ports and inland waterways with high levels of commercial traffic, and includes \$951 million for work financed through the Harbor Maintenance Trust Fund. The Budget also funds some small ports, with emphasis on those that support significant commercial fishing, subsistence, or public transportation benefits. The Budget provides O&M funding for safety improvements at Federal dams and levees based on the risk and consequence of a failure. According to our analyses, 297 of the 709 dams in our current inventory have required some form of modification or interim risk reduction measure, or may require them over the next 50 years, if they are to continue to serve their authorized purposes. Many interim risk reduction measures have been implemented already and additional measures are considered and evaluated as new and existing issues are identified.

Generally, the O&M program supports completed works owned or operated by the Corps, including administrative buildings and laboratories. Work to be accomplished includes: operation of locks and dams along the inland waterways; dredging of inland and coastal Federal channels; operating multi-purpose dams and reservoirs for flood risk reduction, hydropower, recreation, and related purposes; maintenance and repair of facilities; monitoring of completed projects; and general management of Corps facilities and the land associated with these purposes including work to serve as a responsible steward of the resources on Corps lands.

The fiscal year 2017 Budget provides \$194 million in the O&M account for hydropower activities in order to maintain basic power components such as generators, turbines, transformers and circuit breakers at Corps hydropower facilities to keep them operating efficiently and effectively. The Corps is the largest hydropower producer in the U.S., operating 24 percent of the Nation's hydropower capacity.

REIMBURSABLE PROGRAM

Through the Interagency and International Services (IIS) Reimbursable Program, the Civil Works program assists other Federal agencies, State, local, Tribal governments, and those of other countries with timely, cost-effective solutions to support their programs. These agencies can turn to the Corps, which already has these capabilities, rather than develop their own internal workforce and expertise to oversee project design and construction. Such intergovernmental cooperation is effective for agencies and the taxpayer, and uses the skills and talents that we bring from our Civil Works and Military Missions programs. The work is principally technical oversight and management of engineering, environmental, and construction projects—

the work itself is typically performed by private sector firms—is financed by the agencies we service. IIS Reimbursable Program activities in support of our domestic stakeholders totaled \$657 million in fiscal year 2015. We only accept agency requests that are consistent with our core technical expertise, in the national interest, and that can be executed without impacting our primary mission areas.

EMERGENCY MANAGEMENT

The fiscal year 2017 Budget provides \$30 million in funding for the Flood Control and Coastal Emergencies account to enable the Corps to prepare for emergency operations in response to natural disasters. The Budget for the emergency management program also includes \$4.5 million for the National Emergency Preparedness Program.

An additional \$3 million is included in the Investigations account for the Corps participation in the development and expansion of intergovernmental teams, known as Silver Jackets, which collaboratively reduce the risks associated with flooding and other natural hazards. The Silver Jackets program is an innovative program, which provides a national forum to address State and local flood risk management priorities. Each team is developed at the State level. The teams share lessons learned at the State level with each other, and each team works to apply the available Federal and State resources effectively to meet its State's flood risk management priorities. There are now 45 active teams (44 States and the District of Columbia); our goal is to have a Silver Jackets team for every State. The floodplain management program of the Corps complements this effort by providing technical assistance.

CONCLUSION

The fiscal year 2017 Budget represents a continuing, fiscally prudent investment in the Nation's water resources infrastructure and restoration of its aquatic ecosystems. The U.S. Army Corps of Engineers is committed to a performance-based Civil Works Program, based on innovative, resilient, and sustainable risk-informed solutions.

Thank you, Mr. Chairman and Members of Subcommittee. This concludes my statement. I look forward to answering any questions you or other Members of the Subcommittee may have.

Senator ALEXANDER. Estevan López is Commissioner of the Bureau of Reclamation. As far as I know, he is not going anywhere right now.

[The statement follows:]

PREPARED STATEMENT OF ESTEVAN LÓPEZ

Thank you Chairman Alexander, Ranking Member Feinstein, and members of this Subcommittee for the opportunity to discuss with you the President's fiscal year 2017 Budget for the Bureau of Reclamation. I appreciate the time and consideration this Subcommittee gives to reviewing and understanding Reclamation's budget, projects, and programs and I look forward to working with the Committee in the future as Reclamation continues to address water issues in the West. Reclamation is committed to prioritizing and implementing its overall program in a manner that serves the best interest of the American public.

The Budget sustains our efforts to deliver water and generate hydropower, consistent with applicable Federal and State law, in an environmentally responsible and cost-efficient manner. It also supports the Administration's and Department of the Interior's (Department) priorities to ensure healthy watersheds and sustainable, secure water supplies; build a landscape-level understanding of our resources; celebrate and enhance America's great outdoors; power our future; strengthen Tribal nations; and engage the next generation.

The extreme and prolonged drought facing the western States affects major U.S. river basins throughout the West. Exceptional drought in many western States, specifically California, Nevada, Washington, and Oregon, affects households across the country because of the adverse impact on agricultural production. Drought is estimated to cost the Nation billions of dollars and impact thousands of jobs. In California alone, the estimated cost of the 2015 drought on agriculture—crop production, livestock, and dairies—is \$2.7 billion with a total loss of 21,000 seasonal and part-time jobs. The effects of the current drought on California's Sacramento and San Joaquin River Basins, its water, its agricultural economy, and its communities are particularly acute. The Colorado River Basin—crucial for seven States and several

Tribes, in addition to two countries—is also enduring historic drought. Nearly 40 million people rely on the Colorado River and its tributaries for some, if not all, of their municipal needs. The Basin is experiencing the worst drought in recorded history; the period from 2000 through 2015 was the driest 16-year period in more than 100 years of record keeping. In 2015, Lake Mead, behind the Hoover Dam on the Colorado River, has declined to its lowest elevation since the 1930's. Snowpack, which functions as reservoir storage for many western basins, is diminishing.

Water year 2016 is shaping up to be influenced by the periodic “El Nino” anomaly associated with warmer ocean temperatures in portions of the Pacific, a phenomenon that generally leads to a wetter than normal year in areas of the western U.S., including California. However, one wet year alone will not alleviate the impacts of the multi-year drought. This water year exists against the backdrop of long-term sustained climatic change; both short-term and long-term droughts are expected to intensify. Although Reclamation continues to emphasize strategic priorities and operational activities to understand, and effectively adapt to, the risks and impacts of a changing environment on western water management, groundwater must be replenished before runoff can fill rivers and reservoirs, and the hydrologic system as a whole will need time to recover. As one of the Nation's primary suppliers and protectors of water, Reclamation needs to continue to plan and prepare for the next drought and its successors, despite cautious optimism in 2016.

This Budget addresses Reclamation's priorities by allocating funds based on objective and performance-based criteria to most effectively implement its management responsibilities for water and power infrastructure in the West. Reclamation's goals and priorities—including water supply reliability and power generation, climate variability adaptation, water conservation, aging infrastructure, sound science to support critical decisionmaking, and ecosystem restoration—were balanced in the formulation of the fiscal year 2017 budget. Reclamation continues to look at ways to more efficiently plan for the future challenges confronting water resources management, and to improve the way it does business.

In order to meet Reclamation's mission goals, we are building a landscape-level understanding of our resources and the protection and restoration of the aquatic and riparian environments influenced by our operations. This budget is focused on meeting National priorities for Indian water rights settlements, ecosystem restoration, and healthy watersheds and sustainable, secure water supplies. Further details of these efforts will now be discussed.

WATER AND RELATED RESOURCES

The fiscal year 2017 Budget for Water and Related Resources, Reclamation's principal operating account, is \$813.4 million, a reduction of \$305.6 million from 2016 enacted. This reflects the budgetary shift of \$106.2 million from this account to establish a separate Indian Water Rights Settlement Account, and \$36.0 million to establish a separate discretionary account within the San Joaquin River Restoration Fund.

The Budget includes a total of \$383.5 million at the project and program level for water, energy, land, fish and wildlife resource management, and development activities. This provides for planning, construction, water sustainability activities, management of Reclamation lands, including recreation areas, and actions to address the impacts of Reclamation projects on fish and wildlife.

The Budget also provides a total of \$429.9 million at the project level for water and power facility operations, maintenance, and rehabilitation activities. Reclamation emphasizes safe, efficient, economic, and reliable operation of facilities, ensuring systems and safety measures are in place to protect the facilities and the public. Providing adequate funding for these activities continues to be one of our highest priorities.

HIGHLIGHTS OF THE FISCAL YEAR 2017 BUDGET FOR WATER AND RELATED RESOURCES

I would like to share with the Committee several highlights of Reclamation projects and programs within the Administration's Budget. The Budget continues to promote and support efficient water management, increased renewable energy production, the construction of new infrastructure and sound maintenance of existing facilities, restoration of aquatic environments, and the continued use of applied science and new technologies to help safeguard sustainable water deliveries and energy production. As a result, Reclamation continues to play an important role in providing a strong foundation for economic activity across the American West.

WaterSMART Program.—One method Reclamation employs to stretch water supplies in the West and prepare for these ongoing challenges is the WaterSMART (Sustain and Manage America's Resources for Tomorrow) Program. The programs

included in WaterSMART are collaborative in nature and work to effectively achieve sustainable water management. WaterSMART Grants, Title XVI Water Reclamation and Reuse, and the Water Conservation Field Services Program, along with other Reclamation activities, support the Department's Priority Goal for Water Conservation. The Basin Studies component of WaterSMART supports the Department's priority goal Ensuring Healthy Watersheds and Sustainable, Secure Supplies.

In the fiscal year 2017 Budget, the Administration proposes to fund WaterSMART at \$61.5 million. The WaterSMART components include: WaterSMART Grants funded at \$23.4 million; the Basin Study Program funded at \$5.2 million; the Title XVI Water Reclamation and Reuse Program funded at \$21.5 million; Water Conservation Field Services Program, funded at \$4.2 million; the Cooperative Watershed Management Program, funded at \$1.8 million; the Drought Response program, funded at \$4.0 million; and the Resilient Infrastructure program, funded at \$1.5 million.

Rural Water Projects.—Congress specifically authorized Reclamation to undertake the design and construction of six projects intended to deliver potable water supplies to specific rural communities and Tribes located primarily in Montana, New Mexico, North Dakota, and South Dakota. The fiscal year 2017 Reclamation budget includes \$38.1 million for rural water projects; \$18.6 million of that total is for operation and maintenance of completed tribal systems, while the remaining \$19.5 million is for continued construction for authorized projects.

Dam Safety Program.—A total of \$86.1 million is provided for Reclamation's Safety of Dams Program, which includes \$64.5 million to correct identified safety issues. Funding also includes \$20.3 million for safety evaluations of existing dams and \$1.3 million to oversee the Interior Department's Safety of Dams Program.

Site Security.—A total of \$26.2 million is provided for Site Security to ensure the safety and security of the public, Reclamation's employees, and key facilities. This funding includes \$4.1 million for physical security upgrades at high risk critical assets and \$22.1 million to continue all aspects of Bureau-wide security efforts, including law enforcement, risk and threat analysis, personnel security, information security, risk assessments and security-related studies, and guards and patrols.

Powering Our Future.—The Budget includes \$1.3 million to support Reclamation's Sustainable Energy Strategy and actions identified through the Sustainable Hydropower MOU with our partners at the Department of Energy (DOE) and U.S. Army Corps of Engineers. This funding will provide for increased hydropower development at existing Reclamation facilities, and will allow Reclamation to work with Tribes to assist them in developing renewable energy sources. These important projects will assist in the production of cleaner, more efficient energy and will support the Renewable Energy Resource Development Priority Goal.

Strengthening Tribal Nations.—The fiscal year 2017 Reclamation budget supports the Strengthening Tribal Nations initiative through a number of activities and projects. For example, the budget includes \$10.4 million for Reclamation's Native American Affairs Program in support of Reclamation activities with Tribes, including technical assistance, Indian Water Rights Settlement negotiations, implementation of enacted settlements, and outreach to Tribes; and \$15.7 million to continue the operation and maintenance associated with the delivery of up to 85,000 acre-feet of water to the Ak-Chin Indian Community in Arizona. Ongoing authorized rural water projects also benefit both tribal and non-tribal communities. Projects in the fiscal year 2017 Budget benefiting Tribes include the rural water component of the Pick-Sloan Missouri Basin Program, Garrison Diversion Unit; Fort Peck Reservation/Dry Prairie; and Rocky Boy's/North Central Montana; and operation and maintenance funding only for tribal features of the Mni Wiconi Project following completion of construction. Numerous other projects and programs, such as the Columbia/Snake River Salmon Recovery Program, Klamath Project, and the Yakima River Basin Water Enhancement Project also benefit Tribes. In fiscal year 2017, \$106.2 million for planning and construction of three recent Indian Water Rights Settlements is being proposed in a new separate account as described below.

River Restoration.—To meet Reclamation's mission goals of securing America's energy resources and managing water in a sustainable manner for the 21st century, our programs also focus on the protection and restoration of the aquatic and riparian environments influenced by our operations. Ecosystem restoration involves many activities, including Reclamation's Endangered Species Act recovery programs, which directly address the environmental aspects of the Reclamation mission. In fiscal year 2017, a total of \$135.5 million in the Budget for Reclamation projects and programs directly supports the goals of the America's Great Outdoors Program, through local and basin-wide collaboration in watershed partnerships. Several of the programs are described below.

The Budget has \$27.3 million for Endangered Species Act Recovery Implementation programs within the Bureau of Reclamation, including \$19.9 million in the

Great Plains Region to implement the Platte River Endangered Species Recovery Implementation program. Within California's Central Valley Project, \$11.8 million is for the Trinity River Restoration Program, with an additional \$1.5 million from the Central Valley Project Restoration Fund.

Many other projects and programs also contribute to ecosystem restoration including the Lower Colorado River Multi-species Conservation Program, Middle Rio Grande Endangered Species Act Collaborative Program, the Columbia/Snake River Salmon Recovery Program, and the Yakima River Basin Water Enhancement Project.

Research and Development.—Reclamation continues to promote research and development to advance the science and technology that supports best management of the country's natural resources and heritage. In fiscal year 2017 the research and development (R&D) budget totals \$28.6 million, with \$22.8 million for Science and Technology and \$5.8 million for the Desalination and Water Purification Research Program. Scientific discovery, technological breakthroughs, and innovation are the primary engines for expanding the frontiers of human knowledge, which are vital for responding to the challenges and opportunities of the 21st century. Scientific and engineering innovation promotes sustainable economic growth and job creation, moves us toward a clean energy future, and helps us manage competing demands on environmental resources.

Desalination and water purification research strives to produce new clean water technologies, reduce costs, and decrease environmental impacts while converting unusable waters into viable water supplies. Reclamation's budget for these efforts also supports the Administration's science and technology priorities, including sponsorship of technology prize competitions, to spur innovative breakthroughs and research related to climate adaptation and clean energy.

In addition to the highlights just discussed, the fiscal year 2017 Water and Related Resources budget provides \$110.8 million to operate, manage, and improve California's Central Valley Project; this amount reflects the shift of \$36.0 million for a separate discretionary account within the San Joaquin River Restoration Fund, as discussed below. The next three accounts are also related to California water and restoration.

SAN JOAQUIN RIVER RESTORATION FUND

Reclamation proposes \$36.0 million of current funds for the San Joaquin River Restoration Fund account in fiscal year 2017. The fiscal year 2017 Budget funds activities consistent with the settlement of *Natural Resources Defense Council v. Rodgers* as authorized by the San Joaquin River Restoration Settlement Act. The Act includes a provision to establish the San Joaquin River Restoration Fund to implement the provisions of the Settlement. The Settlement's two primary goals are to restore and maintain fish populations, and restore and avoid adverse impacts to water supplies. Under the Settlement, the legislation provides for nearly \$2.0 million in annual appropriations from the Central Valley Project Restoration Fund for this purpose.

CENTRAL VALLEY PROJECT RESTORATION FUND

The fiscal year 2017 Budget includes a total of \$55.6 million for the Central Valley Project Restoration Fund (CVPRF). This amount is determined on the basis of a 3-year rolling average not to exceed \$50.0 million per year and indexed to 1992 price levels. These expenditures are offset by collections estimated at \$55.6 million from mitigation and restoration charges authorized by the Central Valley Project Improvement Act.

CALIFORNIA BAY-DELTA RESTORATION

The fiscal year 2017 Budget provides \$36.0 million for California Bay-Delta Restoration. The account focuses on the health of the Bay-Delta ecosystem and improving water management and supplies. The Budget will support the coequal goals of environmental restoration and improved water supply reliability, under the following program activities including: \$2.2 million for a Renewed Federal State Partnership, \$5.3 million for Smarter Water Supply and Use, and \$28.5 million for Habitat Restoration. These program activities are based on the Interim Federal Action Plan for the California Bay-Delta issued December 22, 2009.

INDIAN WATER RIGHTS SETTLEMENTS

In fiscal year 2017, Reclamation will enhance support of Tribal nations. The fiscal year 2017 Budget proposes \$106.2 million for Indian Water Rights Settlements

(IWRS), in a new account of the same name. Reclamation is proposing establishment of an Indian Water Rights Settlements account to assure continuity in the construction of the authorized projects, and to highlight and enhance transparency in handling these funds. This account is proposed to cover expenses associated with Indian water rights settlements contained in the Claims Resolution Act of 2010 (Public Law 111–291) and the Navajo-Gallup Water Supply Project within Title X of the Omnibus Public Land Management Act of 2009 (Public Law 111–11).

Of this amount, \$6.4 million is for the Aamodt Settlement (Pueblos of Nambe, Pojoaque, Tesuque and San Ildefonso in New Mexico); \$12.8 million for the Crow Settlement (Crow Tribe in Montana); \$87.0 million for the Navajo-Gallup Settlement (Navajo Nation in New Mexico). These settlements will provide permanent water supplies and offer economic security for the Tribes and pueblos described above. The agreements will build and improve reservation water systems, rehabilitate irrigation projects, construct a regional multi-pueblo water system, and codify water-sharing arrangements between Indian and neighboring communities.

Per the Claims Resolution Act of 2010, in addition to the discretionary funding included in this Budget, additional mandatory funds have already been made available to Reclamation, in order to realize the deadlines mandated in the settlement acts. The White Mountain Apache Tribe activities will continue in fiscal year 2017 using mandatory funds.

POLICY AND ADMINISTRATION

The fiscal year 2017 Budget for Policy and Administration, the account that finances Reclamation's central and regional management functions is \$59.0 million. The account supports activities necessary for the management and administration of Reclamation that are not chargeable directly to a specific project or program, such as corporate oversight, policy and overall program management, budget preparation, finance and procurement, and management of safety and health, human resources, and information technology.

PERMANENT APPROPRIATIONS

The total permanent appropriation of \$106.8 million in fiscal year 2017 primarily includes \$103.6 million for the Colorado River Dam Fund. Revenues from the sale of Boulder Canyon power are placed in this fund and are available without further appropriation to pay for operation and maintenance of the project and other costs.

2016 THROUGH 2017 PRIORITY GOALS

Priority goals are a key element of the President's agenda for building a high-performing government. The priority goals demonstrate that our programs are a high value to the public and they reflect achievement of key Departmental milestones. These goals focus attention on initiatives for change that have significant performance outcomes, which can be clearly evaluated, and are quantifiable and measurable in a timely manner. Reclamation's participation in the Water Conservation and Supply Enhancement, Renewable Energy Resource Development, Climate Change Adaptation, and Engaging the Next Generation priority goals helps to achieve these objectives.

Water Conservation and Supply Enhancement.—The fiscal year 2017 Budget will enable Reclamation to achieve water conservation capability for agricultural, municipal, industrial, and environmental uses in the western United States by 1,040,000 acre-feet/year cumulatively (since 2009) through September 30, 2017. This will be accomplished through the use of the WaterSMART Program to assist communities in stretching water supplies while improving water management and increasing the efficient use of water. By the end of fiscal year 2015, Reclamation had already exceeded the prior goal of 975,000 acre-feet through partnerships with States, Tribes, irrigation and water districts and other organizations with water or power delivery authority.

Renewable Energy Resource Development.—The Budget also supports efforts to increase approved capacity authorized for renewable energy resources affecting Department of the Interior managed lands to at least 16,600 Megawatts (since 2009) by September 30, 2017. Reclamation contributes to the Departmental goal primarily through the Memorandum of Understanding (MOU) on Hydropower with the Departments of Interior, Energy, and the U.S. Army Corps of Engineers (USACE), signed March 24, 2010. The MOU encourages the development of sustainable hydropower at Federal facilities in order to help meet the Nation's needs for reliable, affordable, and environmentally sustainable hydropower by prioritizing goals and coordinating hydropower research and development efforts through studies and assessments. The Budget includes \$1.3 million for Reclamation to implement an auto-

mated data collection and archival system to aid in hydropower benchmarking, performance testing, and strategic decisionmaking.

Climate Change Adaptation.—Consistent with the direction in the President’s 2013 Climate Action Plan, Reclamation is developing and implementing approaches to understand, and effectively adapt to, the risks and impacts of a changing environment on western water management. Some examples include:

- The Basin Study Program takes a coordinated approach to assess risks and impacts; develop landscape-level science; communicate information and science to other entities and agencies; and work closely with stakeholders to develop adaptation strategies to cope with water supply and demand imbalances in a collaborative manner.
- The Drought Response Program will implement a comprehensive new approach to drought planning and will implement actions to help communities manage drought and develop long-term resilience strategies.
- Through the Resilient Infrastructure Program, Reclamation will proactively maintain and improve existing infrastructure for system reliability, safety, and efficiency for water conservation to prepare for extremes and to support healthy and resilient watersheds. Reclamation will continue to develop, implement, and test an enhanced decisionmaking criteria framework for selecting resilient infrastructure investments and will identify opportunities to integrate operational efficiencies more compatible with climate variability adaptation goals, as part of the Bureau’s ongoing infrastructure investments.
- Reclamation’s Science and Technology Program conducts water resources research to improve capability for managing water resources under multiple stressors, including a changing climate. This research agenda will collaborate with and leverage the capabilities of the Interior Climate Science Centers.

Reclamation’s WaterSMART Grants, Water Conservation Field Services, and Title XVI Programs are enabling the West to better adapt to the impacts of a changing environment by helping to conserve tens of thousands of acre-feet of water each year in urban and rural settings, on both large and small scales.

Engaging the Next Generation.—By September 30, 2017, the Department of the Interior will provide 100,000 work and training opportunities over four fiscal years, 2014 through 2017, for individuals ages 15 to 35 to support the Department’s mission. In fiscal year 2017, Reclamation will continue to provide work and training opportunities by leveraging funding through agreements with 21st Century Conservation Service Corps partners. Reclamation will continue to use the Public Land Corps Act authority and the Youth Conservation Corps Act to enter into partnership agreements. These agreements will be used to assist on-the-ground projects and internships involving youth in cooperative efforts in cultural and natural resource conservation related to Reclamation projects. In addition, a partnership agreement with the National Fish and Wildlife Foundation will help provide additional youth conservation employment opportunities.

President’s Build America Investment Initiative.—To help advance the goals and priorities of the Department, a new Center for Natural Resources Investment was recently launched by the Department as part of the President’s Build America Investment Initiative. Reclamation fully supports this activity, as the new center will promote increased private investment in water infrastructure and facilitate locally-led water exchange agreements in the western United States to increase resilience of water supplies and drive additional investment in conservation technologies.

Appropriations/Authorization Language Proposals.—The Administration is proposing two significant changes in authorizations, for which language is included in the fiscal year 2017 Budget. The first is to extend the California Federal Bay-Delta Authorization Act, as amended, from 2017 through 2018, so the CALFED program can continue its mission—even more important given the current drought. Language is also included to increase the authorized appropriations ceiling of Section 9504(e) of the Secure Water Act of 2009 from \$350 million to \$400 million to provide the appropriations ceiling needed for much of the funding for Reclamation’s WaterSMART program, one of our most effective programs.

CONCLUSION

Importantly, the fiscal year 2017 Budget demonstrates Reclamation’s commitment to addressing the water and power demands of the West in a fiscally responsible manner. This Budget continues Reclamation’s emphasis on managing, operating, and maintaining its public infrastructure and delivering water and power in an environmentally and economically sound manner, in the interest of the American public. Reclamation is committed to working with its customers, States, Tribes, and

other stakeholders to find ways to balance and support the mix of water resource demands in fiscal year 2017 and beyond.

This completes my statement. I would be happy to answer any questions.

Senator ALEXANDER. And Tom Iseman, Deputy Assistant Secretary for Water and Science at the Department of Interior, is also here.

[The statement follows:]

PREPARED STATEMENT OF THOMAS ISEMAN

Chairman Alexander, Ranking Member Feinstein, and members of the Subcommittee, I am Tom Iseman, Interior's Deputy Assistant Secretary for Water and Science, and I appreciate the opportunity to talk with you about the water related programs of the Department of the Interior, and the President's 2017 Budget. My office oversees the Bureau of Reclamation and U.S. Geological Survey activities.

This is a strong budget that builds on our accomplishments. Our request enables us to carry out our important missions—maintain our core capabilities, meet commitments, and invest in key priorities. The investments in this request show the Administration remains focused on meeting the Nation's greatest challenges looking forward and ensuring our economy works for all.

Our budget is part of the President's broader strategy to make critical investments in domestic and national security priorities while adhering to the bipartisan budget agreement signed into law last fall, and lifts sequestration in future years to continue investment in the future. This Budget recognizes the importance of the programs of Reclamation and the USGS to the overall strength of the Nation's economy, and its infrastructure. To put this into perspective, the U.S. Department of the Interior Economic Report for fiscal year 2014 States, Interior-managed lands and activities contributed about \$360 billion in national economic output, supporting an estimated two million jobs. Of this, Reclamation's contribution, including recreation activities, was \$48.4 billion, supporting over 360,000 jobs.

At the same time, the Department of the Interior's 2017 proposed investments lay the groundwork for promoting renewable energy development, wise water utilization, managing the Nation's lands responsibly, helping to protect communities in the face of climate change, and investing in science to inform natural resource management. This request addresses significant resource challenges for the Nation, including water availability, particularly in the arid West, and makes important investments in America's water infrastructure.

Interior's 2017 budget includes \$1.0 billion for research and development activities throughout the Department, an increase of \$84.5 million from the 2016 enacted level. Activities supported include scientific analysis of natural systems and applied field research to address specific problems, such as thawing permafrost, invasive species, and flooding. With multiple science programs across the Department's bureaus and offices, science coordination remains a critical component in the process of effective science application. Interior is well served by the deployment of science advisors in each bureau. These advisors serve critical roles within the organizations and across the Department by sharing information application. The Interior 2017 budget reflects high priority needs identified for scientific research across the Department, which is the foundation for the \$28.6 million requested for research and development for Reclamation. This request supports the Administration's efforts to collaborate with non-Federal partners on advanced water treatment and clean water technologies while conserving scarce Western water and protecting species habitat.

THE 2017 BUDGET ADVANCES A RECORD OF ACHIEVEMENT

This budget builds on a record of achievement across Interior's diverse mission in general, as well as within Reclamation's specific mission. To support the Powering Our Future Initiative, the 2017 Reclamation budget includes \$1.3 million to implement an automated data collection and archival system to aid in hydro-power benchmarking, performance testing, and strategic decisionmaking; investigate Reclamation's capability to integrate large amounts of renewable resources such as wind and solar into the electric grid; and work with Tribes to assist in developing renewable energy sources. These important projects will assist in the production of cleaner, more efficient renewable energy.

In addition, the 2017 budget sustains President Obama's strong commitment to tribal self-determination, strengthening tribal nations, and investing in the future of Native youth, as illustrated by Reclamation's continuing investment in endangered species recovery, rural water, and water rights settlement programs. In fact,

the Department's overall budget continues to address Indian water rights settlement commitments and programs to support Tribes in resolving water rights claims, developing water sharing agreements, and supporting sustainable water management.

Interior continues to engage in innovative efforts to leverage youth engagement and partnerships to advance the Department's extraordinary mission, and Reclamation is a contributor to this effort.

Bureau of Reclamation projects funded from 2010 through 2015 exceeded the cumulative water savings target of 910,000 acre-feet of water/year, achieving savings of over 970,000 acre-feet, roughly the amount of water needed for household use in Phoenix and the surrounding area each year. The budget keeps Reclamation on track to conserve 1,040,000 acre-feet by the end of fiscal year 2017.

PROMOTES THE CONSERVATION AND PROTECTION OF AMERICA'S NATURAL AND CULTURAL RESOURCES

America's public lands and waters offer space to get outside and get active, and provide living classrooms with hands-on opportunities to build skills. The Administration launched the Every Kid in a Park Initiative to inspire the next generation to discover all America's public lands and waters have to offer. Starting with the 2015–2016 school year, all fourth grade students and their families are able to receive free admission to all national parks and other Federal lands for a full year. Reclamation's mission goals of securing America's energy resources and managing water in a sustainable manner for the 21st Century demands a focus on the protection and restoration of the aquatic and riparian environments influenced by its operations. Ecosystem restoration involves many activities, including Reclamation's Endangered Species Act recovery programs, which directly address the environmental aspects of Reclamation's mission. In 2017, a total of \$135.5 million in Reclamation's budget directly supports the goals of America's Great Outdoors Initiatives, through local and basin-wide collaboration in watershed partnerships. This supports efforts to manage and promote the health and resilience of ecosystems on a landscape scale, including a continued focus in priority landscapes such as the California Bay-Delta.

IMPLEMENTS THE PRESIDENT'S CLIMATE ACTION PLAN

As manager of roughly 20 percent of the land area of the United States and a partner with tribal, Federal, State, local, and territorial government land managers, the Interior Department works to address the challenges of natural hazards brought on by a changing climate as an integral part of its mission. The budget includes funding to improve the resilience of communities and ecosystems to changing stressors, including flooding, severe storm events, and drought as part of the Administration's effort to better understand and prepare for the impacts of a changing climate.

Healthy communities require secure, sustainable water supplies. This is particularly challenging with record drought conditions and increasing demand taxing watersheds throughout the country, especially in the arid West. To help increase the security and sustainability of Western watersheds, the budget continues investment in the Department's WaterSMART program to promote water reuse, recycling, and conservation, in partnership with States, Tribes, and other partners. Funding is also included for research, development, and challenge competitions to find longer term solutions through new water technologies. The budget invests in the Nation's water infrastructure to ensure millions of customers receive the water and power that are the foundation of a healthy economy.

IMPROVES OVERSIGHT AND USE OF FEDERAL DOLLARS

Interior has several multi-year efforts underway to reduce its nationwide facilities footprint, and improve the efficiency and effectiveness of its information technology infrastructure and financial reporting capabilities. Funding for these specific efforts is included in the Department's budget request. Reclamation is participating in these efficiency endeavors, as well as improving reporting and increasing data quality and transparency, as envisioned in the DATA Act. Reclamation is also implementing the Federal Information Technology Acquisition Reform Act, to improve standardization of information technology investments by strengthening the role of the Department's Chief Information Officer in strategic planning, budget formulation and execution, and acquisition of information management and technology activities.

NATURAL RESOURCE INVESTMENT CENTER

The Department has established a Natural Resource Investment Center to spur partnerships with the private sector to develop creative financing opportunities that support economic development goals while advancing the Department's resource stewardship mission.

The Center will use market-based tools and innovative public-private collaborations to increase investment in water conservation and critical water infrastructure, as well as promote investments that conserve important habitat in a manner that advances efficient permitting and meaningful landscape-level conservation. The Center will work closely with the private sector and others to identify innovative ideas and financing options for projects that conserve scarce Western water resources and protect species habitat.

RECLAMATION HIGHLIGHTS

The 2017 budget for Reclamation and the Central Utah Project Completion Act (CUPCA) totals \$1.1 billion and focuses on investments in Indian water rights settlements, ecosystem restoration, healthy watersheds and sustainable, secure water supplies.

Funding for Water and Related Resources shows a reduction of \$305.6 million from 2016, reflecting the shift of \$106.2 million to the requested new Indian Water Rights Settlements account and \$36.0 million for a separate discretionary account within the San Joaquin River Restoration Fund.

Reclamation requests establishment of an Indian Water Rights Settlements account in 2017 to assure continuity in the construction of the authorized projects and to highlight and enhance transparency in handling these funds. The budget includes \$12.8 million to implement the Crow Tribe Rights Settlement Act, \$6.4 million for the Aamodt Litigation Settlement Act, and \$87.0 million for the Navajo-Gallup Water Supply Project.

The extreme and prolonged drought facing the western States affects major U.S. river basins in virtually every western State. The effects of the current drought on California water, its agrarian economy, and its communities are particularly acute. According to the Economic Analysis of the 2015 Drought for California Agriculture by California Department of Food and Agriculture, University of California-Davis and California Department of Water Resources, the estimated cost of the 2015 drought on California agriculture-crop production, livestock, and dairies is \$2.7 billion with a total loss of 21,000 seasonal and part-time jobs. The Colorado River Basin—crucial for seven States and several Tribes, in addition to two countries—is also enduring historic drought. Nearly 40 million people rely on the Colorado River and its tributaries for some, if not all, of their municipal needs. The Basin is experiencing the worst drought in recorded history; the period of 2000–2015 was the driest 16-year period in more than 100 years of record keeping.

WATERSMART, WATER CONSERVATION FIELD SERVICES AND TITLE XVI PROGRAMS

Reclamation's WaterSMART program, requested at \$61.5 million, is helping to address the drought and other water supply issues across the West. WaterSMART Grants, Water Conservation Field Services, and Title XVI Programs, along with other Reclamation activities are enabling the West to better adapt to the impacts of a changing environment by helping to conserve tens of thousands of acre-feet of water each year in urban and rural settings, and on both large and small scales. The Drought Response Program will implement a comprehensive new approach to drought planning and will implement actions to help communities manage drought and develop long-term resilience strategies. Reclamation continues to promote research and development through its Science and Technology and Desalination and Water Purification Research Programs to produce new clean water technologies, reduce costs, and decrease environmental impacts while converting unusable water into viable water supplies. The 2017 budget includes \$8.5 million for an X-Prize competition to encourage innovative water purification and treatment technologies.

WaterSMART enables the USGS and Reclamation to make focused and leveraged investments to address water resource challenges. The USGS budget provides an increase of \$18.4 million for science to support sustainable water management, nearly doubling the investment made in 2016. As climate models forecast increasingly frequent and more intense droughts, improving water management science is a paramount concern for land and water management agencies, States, local governments, and Tribes. The USGS budget would improve water use information and research, provide grants to State water resource agencies, and create hydrologic models and databases for better decision support. The USGS budget also includes \$3.9 million

for drought science and \$4.0 million to develop methods to assess regional and national water use trends during drought.

CENTRAL UTAH PROJECT COMPLETION ACT

The Central Utah Project Completion Act, or CUPCA, Office is a Department of the Interior program that reports directly to the Office of Water and Science. The fiscal year 2017 Budget proposes \$5.6 million, a reduction of \$4.4 million from 2016 enacted, and includes \$1.3 million to be transferred to the Utah Reclamation Mitigation and Conservation Commission. The 2017 reduction in construction funding is the result of difficult choices necessitated by the constrained fiscal environment. The Budget provides funding through the CUPCA office to continue the partnership with the Central Utah Water Conservancy District in completing the Spanish Fork Canyon-Provo Reservoir Pipeline (Northern Pipeline) of the Utah Lake System delivering 30,000 acre-feet of water to Salt Lake County; required program oversight activities; and endangered species recovery program implementation.

CONCLUSION

Thank you for the opportunity to testify on the President's 2017 budget request for the Bureau of Reclamation and CUPCA. This budget is responsible, and proposes to maintain core capabilities with targeted investments to advance water conservation and the stewardship of water resources. I thank you again for your continued support of our mission. I look forward to answering questions about this budget. This concludes my statement.

Senator ALEXANDER. As I said, we are here today to review the President's fiscal year 2017 budget request for the Corps of Engineers and the Bureau of Reclamation, and I am going to focus my questions on three main areas. Number one, making investments in our Nation's water infrastructure a priority. We have made some real progress there in the last few years. Properly maintaining our inland waterway system. We have also made progress there. And deepening and widening our coastal harbors. We have made progress there, and I would like to keep making that progress.

Number one, in my opinion we should be spending more, not less, on our Nation's water infrastructure. Last year, Congress made record investments in our water infrastructure by providing nearly \$6 billion to the Corps of Engineers, the largest amount of funding for the Corps in a regular appropriations bill. Instead of building on that investment, however, the President's budget request this year proposes to cut funding for the Corps of Engineers to \$4.620 billion, which is \$1.4 billion, or a 23 percent, cut below fiscal year 2016.

This is an enormous step backwards. In fact, if we simply approve the President's request, the Corps of Engineers would receive less than what Congress appropriated in fiscal year 2006, setting us back more than a decade. And if we look at the condition of the locks and dams that the Corps operates across the country, for example, we should be able to see exactly why these investments are needed.

The National Academy of Sciences in 2011 said that the Corps has 138 locks in operation that are over 50 years old, and that the average age of our locks is 58 years. These locks are critically important to jobs. They ought to be among our highest priorities in Federal spending and support. Using locks is the only way for inland waterway shippers to move things like grain, steel, fertilizer, and coal up and down rivers. And having to unexpectedly shut them down for extended periods of time could be catastrophic for agriculture and other commodities that rely on them to get their goods to the market.

Yet as these facilities age, major upgrades, maintenance, sometimes replacement is required, so I think it is fair to ask why would the President cut funding for the Corps of Engineers at a time when more investment is needed? I believe President Obama should make funding our Nation's waterways a priority, but this year's budget request certainly does not reflect that, and I am going to ask our witnesses why that is the case.

PROPERLY FUNDING OUR INLAND WATERWAY SYSTEM

The President's budget request proposes significant cuts to our 12,000-mile inland waterway system. Critical projects, such as replacing Chickamauga Lock in Tennessee, have been piling up for years due to a lack of funding, and many of us in Congress have recognized that we needed to take steps to increase funding for the Corps of Engineers to address this backlog.

First, Congress passed a law that reduced the amount of money that comes from the Inland Waterways Trust Fund to replace Olmsted Lock, a project in Illinois and Kentucky that was soaking up almost all the money that is available for inland waterway projects. Second, Congress worked with the commercial waterways industry to establish a priority list for projects that needed to be funded on which Chickamauga ranks near the top in fourth place.

And third, 2 years ago, working together in a bipartisan way, we increased the user fee that commercial barge owners asked to pay in order to provide more money to replace locks and dams across the country, including Chickamauga Lock. These user fees are deposited into the Inland Waterways Trust Fund. These steps increased the amount of funding that was available for inland waterway projects from about \$85 million—at least the amount of money from the trust funds that was available from \$85 million in 2014 to now \$106 million this year.

Overall, these changes permitted us to spend over \$400 million on our locks and inland waterways when they were matched with funds from the General Treasury. Yet the President's budget request only proposes to spend \$34 million instead of \$106 million from the Inland Waterways Trust Fund, leaving about 75 percent of the available funds unspent. That means, in effect, that we would be collecting taxes from commercial barges to go through the locks in order to improve the locks, and then we would be keeping the money, putting it in the bank, and not spending it for the intended—for the intended reason.

The budget request also proposes to fund a single project, Olmsted Lock, and eliminates funding for three other projects that received funding last year, Monongahela Kentucky Locks and Chickamauga Lock. Replacing Chickamauga Lock is important to all of Tennessee, and if Chickamauga Lock closes, it will throw 150,000 more trucks onto I-75, yet the Administration continues to not include it in the budget. I have worked with Secretary Darcy and General Bostick, and I thank them for this, over the past few years with the money that we have appropriated here in the Congress. And I deeply appreciate the fact that we found a way to restart construction on Chickamauga Lock, which has now been funded for two consecutive years.

But this budget proposal is a huge step backwards in this area, and I will be asking witnesses today why the Administration has not proposed to spend all the funds that have been collected, especially since commercial barge owners asked Congress to increase user fees they pay to improve our inland waterway infrastructure. We hear about unhappy Americans today in this election season. I would think one reason they would be unhappy if we raise their taxes at their request to improve the locks, and then took the money and did not spend it for the reason that we said we were raising the taxes.

DEEPENING AND WIDENING OUR COASTAL HARBORS

The budget request also fails to make critical investments in our Nation's harbors. To maintain our economic competitiveness, our harbors need to be able to accept the larger ships that are expected to come through the Panama Canal. Significant work and funding is necessary to deepen and widen our coastal harbors to accommodate these bigger ships, yet the Administration's budget proposes major cuts for this program as well.

To ensure that these critical investments are made to our harbors, Congress enacted spending targets for the Harbor Maintenance Trust Fund in the 2014 Water Resources Reform and Development Act. The target for fiscal year 2017 is about \$1.18 billion, yet the Administration only proposes to spend \$986 million, a shortfall of \$194 million.

Now, we are talking about harbors that need work badly—Mobile, Charleston, Savannah, New York, Jacksonville. These are important to the future of our country. For 2 years, we have in Congress done what we said we would do and matched our targets for these critical investments. Yet the Administration would knock us back by about \$200 million this year. So I will ask our witnesses how they plan to make these important upgrades to our harbors without requesting sufficient resources to do it.

BUREAU OF RECLAMATION

I would also like to recognize our witnesses from the Department of Interior and Bureau of Reclamation. The Bureau of Reclamation delivers water to one of five farmers in the West, irrigating more than 10 million acres of some of the most productive agricultural land in the country. We have a farmer from the West on our committee. My guess is that he will probably have some questions in this area. Although Reclamation does not manage water resources in Tennessee, I know of its deep importance to Senator Feinstein and other Senators on this subcommittee, and we look forward to hearing your testimony.

Now, Senator Feinstein is not here, and what I think we will do is, Senator Tester, because of the votes today, what we—have you voted already? So what we decided to do was to go ahead and try to make the hearing a movable feast here, and they are going to submit their questions for the record, and Senators will have a chance to ask questions as they come in. If Senator Feinstein arrives, she will make her opening statement and ask her questions. If she does not before I leave, then I will turn to you and let you—if I may do that, and let you take questions.

INLAND WATERWAYS

Let me start with a few questions, and then I will go—then I will go vote. Ms. Darcy, we worked well together to improve funding for inland waterways, but this budget is a big disappointment. Can you explain why the Corps' proposed budget does not seem to reflect the President's statements that we should be investing more in our Nation's infrastructure?

Ms. DARCY. Senator Alexander, given the fiscal realities that we are facing, the President's overall budget for the Army Civil Works Program is what is affordable at this time given all the other competing requirements for the budget, including even deficit reduction. So at this time, it is what is affordable for us to be able to move forward with inland waterways as well as others in the overall President's budget.

Senator ALEXANDER. But we collected money from the commercial users of the locks. I mean, it is one of those unusual circumstances where the barge owners came and said would you please raise our taxes and use those taxes to improve the locks and the waterways. And so, we have done that, and you cooperated with that last year very well, and that permitted us to match the user fee money with appropriations and have more than \$400 million.

Yet this year if we take the President's budget, we would only have about \$225 million, and we would be leaving \$72 million in taxes that we collected unspent. What should I say to those commercial barge owners who paid extra taxes so we would use it to improve the locks when we not use it?

Ms. DARCY. Senator, as you know, with any funding coming out of the Inland Waterways Trust Fund, which is collected from the taxes, there has to be a match from the General Treasury from our budget, a 50/50 match for everything within the Inland Waterways Trust Fund. In the 2017 budget, the President funded Olmsted Lock and Dam at \$33.5 million out of the Trust Fund, because there was a change made in the law year before last that the cost share for Olmsted would not be 50/50. It would be 15 percent from the Trust Fund and 85 percent from the General Treasury.

In order to meet that match, the remaining money in the Trust Fund could not be matched for the other projects. In 2017, we are funding Olmsted Lock's capability, and then in the coming years, as you say, there is an unexpended balance in the Trust Fund. I think it will be \$106 million.

But over time, when we are buying down and completing Olmsted, which we expect to have completed in 2018, we will be able to free up other monies and match them with the Trust Fund in the out-years for other projects on the capital strategies list for inland waterways.

Senator ALEXANDER. Let me stop my questioning just for a moment. Senator Cochran, have you already voted?

Senator COCHRAN. Yes and no.

Senator ALEXANDER. So you have to go over and vote?

We have got about three minutes left I think in the voting. Would you like to make your opening statement before we go vote?

Senator COCHRAN. I have to go vote.

Senator ALEXANDER. Okay. Well then, why don't we do this. Why don't you and I go vote, and then we will come back, and then I will recognize you. And, Senator Tester, would you assume control of the committee here?

Senator TESTER. That is a dangerous thing.

Senator ALEXANDER. I know, but I trust you.

Senator TESTER. I will do it.

Senator ALEXANDER. And when Senator Feinstein comes, if you could hand over the gavel to her?

Senator TESTER. I would be more than happy to do that. I will hold the fort down while you are gone doing your job.

Senator ALEXANDER. Thank you.

Senator TESTER [presiding]. Thank you. Thank you all for being here. I appreciate your work. And thank you, Mr. Chairman, for the flexibility.

RURAL WATER PROJECTS

I am going to be starting with you, Commissioner López. I believe we have got a half a dozen major rural water projects that are in progress, that are being constructed. I think the request this year is \$19.5 million for construction on those six projects. I think it is probably north of \$1 and a half billion if we are going to complete them all right now, and that might be pretty conservative, quite frankly.

Montana has two of them that are pushing between \$250 and \$300 million each, give or take a few million dollars, and the request is for \$19.5 million. Now in past years we plussed that account up, I think \$47 million last year and \$31 million the year before that. I guess I do not know how the Department is doing its budget, but is it—are we coming in at such a low number just assuming we are going to bump it up, and then you can look fiscally conservative, and we do not look so fiscally conservative? What is the thought process behind that, because \$19.5 million is not even close to keeping up with the rate of inflation.

Mr. LÓPEZ. Good afternoon, Senator, and thank you for your question. My answer is very similar to Secretary Darcy's earlier remarks, working within the fiscal constraints that we are. Much of our infrastructure is quite old, 50 to 100 years old. So the vast majority of our funds go towards the continuing O&M and upkeep of that existing infrastructure. We try and maximize the amount that remains for this construction of new projects. Unfortunately, it is a very small remainder.

Senator TESTER. Yeah, I would guess. And one of the problems is that, you know, we are probably—I hope we plus this up again. But if you came asking for a few more bucks, we might be able to get more than just what we are going to plus it up by, because, I mean, the need here is for \$100 million, not \$19.5 million, and I think you agree with that. It could easily be used when you get these water projects done, move onto the next piece of infrastructure, and be done with it. Is there a long-term plan as far as—or a short-term plan—I do not care, either one—within the Agency to complete these projects?

Mr. LÓPEZ. Within the current budget constraints, we are doing what we can. We do thank Congress for the plus up. It certainly has helped us get moving along, but it has been inadequate.

Senator TESTER. So what you are saying is that as long as we are under these budget constraints, they will continue to—these projects will continue to flounder for dollars.

Mr. LÓPEZ. Senator, unfortunately we have to maintain our existing infrastructure and make sure that that continues to function.

Senator TESTER. Okay. Well, there was a proposal out there that my predecessor, Max Baucus, I believe, put forth about taking a funding stream out of the Reclamation Fund. Is that something that you think is appropriate? Is that something you would support?

Mr. LÓPEZ. Senator, obviously I would have to coordinate with the Administration as to an Administration position. However, I think your idea was the original intent of that Reclamation Fund—

Senator TESTER. Yes, it is.

Mr. LÓPEZ [continuing]. To plow back into investment and infrastructure. It seems like that would be a wise use of some of that money.

Senator TESTER. I will take that as an endorsement. Thank you.

Mr. LÓPEZ. I think it was.

IRRIGATION WATER

Senator TESTER. Assistant Secretary Darcy, my guess is at this point in time in your life, you would like to see the term “intake dam” go away. It has been—I am going to tell you from my perspective it has been—I do not know if we would go as far as calling it a nightmare, but it has not gone smoothly, let us just put it that way. There is active litigation currently on this project. I do not want you to get into those details.

But could you comment on what you are doing to make sure that the irrigators have access to irrigation water that they would normally get from intake? I think it is about 52,000 acres.

Ms. DARCY. We are trying to maintain existing operations. However, as you know, building the intake structure is currently under litigation, and we are forbidden from going forward with construction. But we have let a construction contract, so we would be ready to go if and when the litigation is resolved.

Senator TESTER. So do you anticipate that litigation is going to be solved by this month?

Ms. DARCY. I would not say this month, Senator.

Senator TESTER. Oh, okay.

Ms. DARCY. I would like to say this fall.

Senator TESTER. Okay. Well, that is instructive. Here is the problem. Are these folks going to have water this season? I do not know what they are planning, but they could be putting in the ground at the end of this month, like I say, depending on what the crop is. It could be in April. It could be in May. It could be in June. That is long before fall. Are they going to have water this year?

Ms. DARCY. I would have to say I do not know.

Senator TESTER. Whoa.

Ms. DARCY. General Bostick? I do not know.

Senator TESTER. That is not the right answer.

Ms. DARCY. I know.

Senator TESTER. Can somebody else shed some light on it?

General BOSTICK. A lot of our effort to move forward is going to depend on the completion of the EIS, and that EIS is not going to be completed until the fall. But once that is completed, then we can move forward with the construction.

Senator TESTER. I gotcha.

General BOSTICK. Beyond that, it would be difficult for us to commit. I know the water is needed earlier than that, but it would be difficult to do without the court ruling to move forward.

Senator TESTER. So by fall, just so you know, I mean, you guys—I hope you know this. By fall, the growing season is over. So is there anything we can do? Talk to me, please.

General BOSTICK. I think we can continue to work to accelerate it as much as we can.

Senator TESTER. So that you know, I do not know what crop insurance does in cases like this for these guys. I do not know if they can easily convert back to a dry land system. I doubt it. I do not know if Mother Nature will smile upon them this year so they will not need as much water. But we could—without irrigation water, we really—I mean, these guys could be—literally lose the farm. And I do not know their operations, but I do know that if it was my operation and I was counting on irrigated yield to pay my bills and I got dry land yield, it would be very difficult to maintain that operation. So—

Mr. LÓPEZ. Senator, if I may.

Senator TESTER. Sure, go ahead.

Mr. LÓPEZ. If I may address that just a little bit. We are working with the Lower Yellowstone Board of Control to seek an extension of a permit that would allow the continued rock piling of that diversion weir to try and get water this season. Obviously it is not certain that we will be totally successful, but we are going to do everything that we can to make sure that the farmers get some water.

Senator TESTER. You know what. Thank you. I mean, that is all I can ask for, you do everything you can do to make sure those folks get their water, and they will get their water. I appreciate that.

I feel bad not to—not having more questions for you because I have got time, and usually this never happens, okay.

WATER INFRASTRUCTURE IMPROVEMENTS

I guess what I will say is that I appreciate what you are doing, and I do appreciate the work everybody at this table and their priorities for the fiscal year. I think the issue when it comes to infrastructure is it is expensive, and it is needed. You talked about 50 to 100, and probably east of Mississippi it is 150 years old some of that water infrastructure. And it is in dire need of rebuild or replace.

And in some cases in Montana it is in dire need of just getting water in places that do not have water. It is critically important if we are going to have any kind of economy. And so, hopefully through your work, and if you continue to lay out the case and be

honest with Congress about what the needs are and what your capacity is under the current budget restraints, we will get enough votes in this outfit to try to get some solid infrastructure improvements around this country. It is something that my parents' generation got. Unfortunately my generation does not, at least the ones that serve here in Washington, DC.

So thank you for your work, whether it is in recreation, or flood protection, or hydropower production, or irrigation for agriculture, or drinking water. I certainly appreciate what you do.

With that, I guess if I was in the military, I would say "at ease, smoke them if you got them." But we are in a building that you do not do that in, and I will wait for Senator Feinstein's arrival, and we will go from there.

Okay. We will recess until the Chair, or Vice Chair, or a member of this Committee shows, and then I can go vote. Thank you all.

[Recess.]

Senator ALEXANDER [presiding]. The committee hearing will resume. Thanks to the witnesses. I understand we exhausted Senator Tester.

He missed his opportunity of a lifetime, but he appreciated the chance to question you. I will proceed with some of my questions until another Senator arrives, particularly Senator Feinstein, Senator Cochran I know, and we will talk a little bit. And I will defer to them whenever they come or as other Senators come. We have three more votes, but still we should be able to give Senators an opportunity to have a good discussion.

CHICKAMAUGA LOCK

General Bostick, I want to go back Chickamauga Lock on which I have worked with you before. I generally do appreciate the work that you and Secretary Darcy have done in the past 2 years to restart Chickamauga Lock. I know you have looked at it carefully. You have stayed within your—within the established priorities within your Department. But you had sufficient funds to spend \$3 million in 2015 of unallocated money, and then this past year the funding that Congress provided gave sufficient funds to do what you needed to do with the first three priorities on that priority list and left \$29 million for work on the fiscal year 2016 work plan for Chickamauga Lock.

I am perplexed about why the Corps would want to restart a project and then not propose to fund it until it is finished. So let me ask you this. How much funding could Chickamauga Lock use during fiscal year 2017?

General BOSTICK. Senator, you are asking about the capabilities, and I thought I would first talk about how we look at the capability on a project.

Senator ALEXANDER. That would be fine.

General BOSTICK. When we look at the civil works budget, it is a performance-based budget as we look at our projects. We look at each project based on what we can obligate each year, and that would be what we call the capability. It is also important to understand that when we look at capability, we identify the capability for each project without regard to the amount of money that we might have for the whole civil works budget. So if you added the

capability of every project, it would obviously be more than the capability that we could execute in a given year.

Given that, \$37 million would be the capability of Chick Lock in fiscal year 2017.

Senator ALEXANDER. So, well, thank you for such a precise answer. So if you sufficiently funded the first three priorities on your list, then the question would be whether you had \$37 million for Chickamauga Lock, which is fourth. Is that also correct?

General BOSTICK. If we sufficiently funded the first three projects, would we have—

Senator ALEXANDER. No. I guess the way you would be looking at it. Let us go back to this year. I think what you did this year, you looked at the first three priorities on your capital list and determined that you had a sufficient amount of money. What would the capability be for each of those.

General BOSTICK. Correct.

Senator ALEXANDER. You did that, and you had \$29 million left, and you spent that on Chickamauga Lock. Is that basically right?

Ms. DARCY. Yes.

General BOSTICK. The \$29 million, correct. That was out of the work plan.

Senator ALEXANDER. So in the next year it would be—\$37 million would be the amount you could spend if you had it available.

General BOSTICK. \$37 would be what we could obligate in fiscal year 2017.

Senator ALEXANDER. Thank you for your answer. I am now going to call on Senator Feinstein for her opening statement. I know that Senator Cochran, the committee's chairman is coming, hoping to—he was here earlier, hoping to make a statement. And we will continue until every Senator has a chance to do that, and we will go back and forth to voting. Senator Feinstein.

STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. Thank you very much, Mr. Chairman. And, first of all, let me give my apologies to you and to our witnesses as well as to the people that were here. As you know, I had an amendment on the floor and spoke on it, and at least am pleased that it passed unanimously. So that is the good news part of this.

I want to welcome our witnesses. I want to thank you for your testimony today. And, General Bostick, I understand you are retiring this year, so I want to extend my gratitude for your service to this country. It is very much appreciated.

General BOSTICK. Thank you.

Senator FEINSTEIN. You have served with distinction within the Army, both at home and abroad, and we are very proud of you. So thank you. And you have done work on behalf of California, which I thank you for.

Turning the President's 2017 budget request, Mr. Chairman, I have to say I am disappointed in the proposals from both agencies represented here today. A 23 percent drop in the Corps' budget and a 13 percent drop in Reclamation's budget is simply unacceptable when one considers all of the water resource needs our Nation faces. The work your agencies do to provide tangible benefits to

more people on a daily basis than perhaps anything else funded in our bill.

You are responsible for providing drinking water, water to produce food. You are tasked with protecting lives, homes, businesses from floods. You maintain navigation channels and ports. You restore the ecosystem to help combat climate change. So it is disappointing that every year we go through the same exercise of examining an Army Corps budget that has been cut by over \$1 billion from the previous year's enactment level, and that is not your doing. It is the executive branch's doing.

It seems to me your job is already difficult enough, and I am not pleased to have to play these games with the Administration for yet another year. So I hope we can come to some agreement on numbers that allow you to do the job well.

I am equally disappointed with Reclamation's proposed budget, which is a 13 percent decrease from fiscal year 2016. The subcommittee has undertaken herculean efforts to provide \$150 million more than was requested over the last 2 years to address the drought facing the West. And so, once again the Administration did not propose to continue that funding. That is \$150 million that we put in that they did not continue, and indeed did not request any additional funding for the drought. That, as a Californian, is really unacceptable.

My constituents are also the President's constituents, and I am really frustrated that the Administration seems unwilling to help me do something about this drought. One El Nino year alone will not be enough to end this drought, and Californians are really hurting. It should matter.

It is a huge State, 40-plus million people. Sixty-nine communities in our State have significant water supplies and water quality issues. Our economy lost \$42.7 billion from the drought last year. One million acres of California farmland was fallowed in 2015. The drought has led to 35,000 permanent jobs lost. Land subsidence from pumping too much groundwater has caused large areas of the San Joaquin Valley to sink by as much as two inches per month. As a result, bridges, aqueducts, and roads have already begun to crack.

Fifty million large trees are dead or likely will die. Another—and get this number—888 million trees experienced loss of canopy cover since 2011. And I said to my staff, Commissioner, this cannot be right, and they said, oh, yes, we have checked it, it is.

There are two themes I want to highlight today. The first is data versus intuition, and the second is win-win scenarios. Commissioner López, this subcommittee has provided the Bureau with extraordinary resources over the past 2 years to provide more water to people in the West. Yet I continue to hear that water pumping decisions are still being based on intuition of when protected fish might be near the pumps rather than when we know they are actually present.

For example, Interior may reduce pumping if even one smelt this size is found as far away as 17 miles from the pumps near a monitoring station called Prisoner's Point. But outside, biologists and scientists believe that Reclamation is reducing pumping prematurely. These experts believe that the Agencies could continue

with higher pumping levels, even if smelt are found at a monitoring station that is only 12 miles from the pumps. Why? Because they can still move back.

So we need to know who is right, and that is why I believe, and what we have proposed, is daily boat monitoring in turbid waters because that water is critical to making an informed decision and increasing the Agencies' operational flexibility. Reclamation has been given significant funds to make more data driven decisions grounded in the latest science, and so I hope you will do so.

Secretary Darcy, while water supply is not your primary mission, I believe that water supply can be achieved also during the course of the Corps' traditional work on flood protection, navigation, and ecosystem restoration. I believe there are numerous opportunities for the Corps to find these win-win scenarios, and you have done a good job, and I just want to encourage you to look for doing that.

For example, seismic retrofits could be coupled with dam raises, and we have that in one proposal of such in the San Joaquin Valley. Better weather forecasting resulting in less water being unnecessarily released from dams. I met with the Army Corps head from Sacramento yesterday about Folsom Dam. Folsom Dam is just 60 percent filled, and yet they are releasing water because of the possibility of rain, which could possibly produce flooding.

Now, I do not know if 60 percent is the right level to begin that—to do that or not, but I really think in view of the drought we ought to take a look at that. And ecosystem restoration projects can provide for additional groundwater recharge as well.

So, Mr. Chairman, let me say one thing. We have worked well together, and I have so appreciated your leadership over these many years. But this drought is the hardest thing I have ever done in my 23 years in the Senate. And I really want to make sure that the two agencies testifying today are working hand-in-hand with each other, with other Federal agencies, and with State and local partners. We are the most populous State in the Union, a significant source of our Nation's food, at least 50 percent. That means that drought is a problem for the whole Government and will require a whole of Government solution.

So, Mr. Chairman, what I am saying today is I look forward to working with you. You have always been a great one to work with, and I really appreciate it. And I hope that we will be able to reallocate some funds to solve some of these big problems. So thank you very much.

Senator ALEXANDER. Thank you, Senator Feinstein. We have had an excellent working relationship on this committee and with the witnesses. For the information of Senators, what we decided to do today, we dispensed with their testimony. That has been submitted to the record. We dispensed with opening statements except for the chair and the ranking member. And because of the votes we are giving Senators an opportunity to take their five minutes in terms of questions or statements in order.

And so, Senator Feinstein, if I may suggest, I am going to ask you to chair for the next few minutes, and I will go take the—I will vote early on vote three, and then I can get back here I think in time for you to go.

Senator FEINSTEIN. Good.

Senator ALEXANDER. And after you are through, if Senator Cochran comes back, he would be next. And if he is not, Senator Murkowski would.

Senator FEINSTEIN. Okay.

Senator ALEXANDER. So if you could please do your questions and then go to the next Republican member, I will be back by that time.

WATER PUMPING DECISIONS

Senator FEINSTEIN [presiding]. Thank you very much, Mr. Chairman.

My main question is on delta operations, and I am concerned that Reclamation has pumped less water in 2016 during this El Nino year than it did in 2015 when California was in extreme drought. Flows were as high as 50,000 CFS in the Sacramento River, yet the Agencies reduced pumping to the low end of the biological opinions because of one smelt.

I continue to hear that water pumping decisions are still being based on when protected fish might be near the pumps rather than when we know they actually are present. For example, Interior may reduce pumping even if one smelt is found as far as 17 miles away, as I have said, at Prisoner's Point. And I mentioned what outside biologists and scientists believe. I will not go into that again.

So here is the question. What are you doing to test whether or not smelt identified past the Prisoner's Point monitoring station can still survive and make their way back out to the central delta.

Mr. LÓPEZ. Senator, first of all, let me start by saying that I understand your frustration and that of the water users. We are equally frustrated. Having said that, I need to answer this by talking a little bit about what I understand the fish agencies are relying on.

And basically what they are concerned about is that once fish get to that point, Prisoner's Point and south of there, they are essentially entrained in the system. If they get into that area, they are not going to survive, nor are they going to spawn.

Senator FEINSTEIN. Excuse me. As long as we concur that Prisoner's Point is 17 miles from the pumps, right? That is all.

Mr. LÓPEZ. That is correct.

Senator FEINSTEIN. Please continue.

Mr. LÓPEZ. So we operate the pumps under the biological opinions, and the Fish and Wildlife Service regulate the conditions of the biological opinion of the smelt. They have a Smelt Working Group that is, in essence, the best minds on the issues of the smelt and its survivability.

They are of the opinion that once smelt get to that point around Prisoner's Point and points south, if the flow into the Old and Middle River is reversed, the smelt essentially moves on towards the pumps, they become entrained there, and they will not survive. So they are concerned about smelt even at a very long distance away from the pumps.

In fact, what has happened in recent timeframes of high flows, as you have mentioned, the Smelt Working Group has recommended even lower pumping rates than what we have done. But

David Murillo, our regional director of the Mid-Pacific, whom you know well, he and the fish agencies have a very good working relationship. They have agreed to essentially try something that is beyond what has been recommended, and that is what they have been doing.

One of the reasons that they are trying to prevent the entrainment is that we had an instance in the winter of 2012–2013 where the smelt did get entrained in that area. Once they got entrained, they got pulled into the pumps and we reached the take limit, and at that point we had to re-consult, and then we were even further constrained on pumping.

Senator FEINSTEIN. Let me ask you this question. Would you be willing to sit down with those biologists and agencies that believe that in the distance from 17 miles away and 12 miles away that those fish can still return, that they will not be entrained, would you at least sit down with them and listen?

Mr. LÓPEZ. Senator, absolutely, I would.

Senator FEINSTEIN. Okay. I will set it up.

Mr. LÓPEZ. However, I also want to mention that the entity that has to be convinced is the Fish and Wildlife Service and their biologists. They, in essence, regulate what we do.

Senator FEINSTEIN. We will include them, too.

Mr. LÓPEZ. Yes.

Senator FEINSTEIN. But, look, I do not intend to quit, so I am going to be at this, and there are so many conflicting opinions. Maybe if we get them in one room and listen to them, it might be profitable. So I very much appreciate that.

Senator Murkowski, welcome. You have a heavy load today I know.

KING COVE

Senator MURKOWSKI. We are all busy, and I apologize. We are all kind of jumping up and down like jack-in-the-boxes here to go vote because this is so important. I have what I hope will be three very quick questions.

The first one is relating to King Cove. Senator Feinstein indicates she is not giving up. I am not ever giving up on King Cove and getting my 10-mile—the people of King Cove a 10-mile, one-lane gravel non-commercial use road.

I am told, because I had the Secretary of Interior before me today in Interior Appropriations Subcommittee and last week in Energy, that the study that she asked the Corps to do about alternatives for King Cove was done by the Corps. When I asked her if she could make that public, she said she did not know if she could. She was going to have to check with the Corps. And I said, well, conveniently, I have got the Corps in front of me this afternoon, so I will ask if we will be able to get a copy of that report that was requested by the Secretary.

Ms. DARCY. Senator, I am—

Senator FEINSTEIN. Excuse me. Ms. Darcy, if you could wait. I will go down and vote, and you just continue on. Is that agreeable, Senator?

Senator MURKOWSKI. Thank you. Thank you.

Senator FEINSTEIN. Thank you.

Senator MURKOWSKI [presiding]. Thank you, Madam Chair.

Ms. DARCY. Senator, in response to your question, we did a report at the request at the Department of Interior for the non-road alternatives. And I will personally ask the Secretary of the Interior if we can make it public.

Senator MURKOWSKI. I would appreciate that. I think the people of King Cove would appreciate that, so I will look forward to that.

ARCTIC DEEP PORT STUDY

Let me ask you about the Port of Nome, and more specifically to a deepwater port in the Arctic. As you know, I have been a long proponent of making sure that we have infrastructure in the Arctic as we see developments taking place up north, and the increased traffic in the Bering, the Beaufort, and the Chukchi.

Last year, the Corps placed a strategic pause on the proposed port in Nome. When the President was up in September, he announced the need for a deepwater port that would be north of Dutch Harbor. Given the President's support for this, why have we not included construction funding going forward in this next fiscal year?

Ms. DARCY. Senator, the Arctic deep port study that you are referencing was indeed put on pause last October in conjunction with the local sponsor, the State of Alaska. Since that time and since the President's visit, we are now going to look at further scoping of that study, because it was limited to just some economics involving oil and gas. But there are other things that we think can be included in this, for instance, that the Port of Nome may be considered a port of national significance, in addition to the fact that it could possibly house the Coast Guard's icebreaker in the future, as well as other benefits that could come from that.

Senator MURKOWSKI. I appreciate the additional scoping, and I think that it is important that—life safety reasons. Like the socioeconomic benefit that accrues to a community, to a region when you have a port that is accessible that can reduce the cost of goods that come in, reduce the cost of fuel that comes in, just the general cost of living.

But I do find it just really quite surprising that the assessment for a port could have been built upon one project without recognition of, again, the expanded role, the activities in the region. This is one of those areas where when you talk to the people, whether they are in Nome or anywhere south of that, they say the Arctic is more than just oil and gas exploration.

It is just more than just shale up north. It is about having infrastructure to accommodate a reality, a daunting reality that—it is almost as if a new ocean has been discovered at the top of the globe. And so, how are we preparing for that? You cannot really be in the game, you cannot be that Arctic participant unless we have that system of ports. So know that we are going to continue to press on this.

SECTION 107 SMALL NAVIGATION PROGRAM

The last thing that I wanted to ask you, and I actually have constituents that are waiting to see me from the community of St. George on the Pribilof Islands. I had asked about the Section 107

Small Navigation Program last year. Many of my constituents have thanked me for advocating on behalf of that program because it really is a great fit, a great fit for these small villages, these small communities that are trying to construct a small harbor, break water. But the waiting between WRRDA (Water Resources Reform and Development Act) bills has been a little bit lengthy, and just these are projects, as you and I know, just compete on that national scale.

And what I would ask from you is just further commitment from you, from your staff to continue to work with my office so this Section 107 Program can continue to benefit these small communities. I know for a fact that the people of St. George that are waiting for me as I go to this next vote are going to want to know that this type of support is going to continue.

Ms. DARCY. Yes, the CAP programs are an important part of our entire program, and we have three 107 projects now ongoing in Alaska. And that program is one that it is for smaller projects that do not need the full-blown WRDA authorization, and that is why it has been successful, especially in small communities like those in Alaska.

LIQUEFIED NATURAL GAS EXPORTS

Senator MURKOWSKI. Well, we will work with you on that. And since nobody is back, I will take an opportunity. I was in Houston last week at CERAWEEK, which is the big oil and gas summit really in the country. And a lot of discussion about the fact that we had just seen that Wednesday the first shipment of LNG leaving Louisiana to head out to Brazil. Obviously exports of LNG (liquefied natural gas) are a big deal for me both because of the Alaska LNG project and because of the energy bill that we are working on that would expedite these approvals.

SABRINE-NECHES WATERWAY

The Sabine-Neches Waterway is probably one of the more important waterways in the Nation. By all accounts it is poised to play a key role in the buildout of LNG exports from the United States, specifically Louisiana and Texas. So if you could just give us a quick update on the 2014 authorization that we need to deepen that waterway.

Ms. DARCY. You are talking about Sabine-Neches?

Senator MURKOWSKI. Yes.

Ms. DARCY. That project currently has a benefit to cost ratio that does not compete well for budgeting at a 7 percent rate. However, our Galveston district is doing an economic update and that economic update I think will be approved in the third quarter of this year. So with an uptick in the economics, there is a possibility that the benefit-to-cost ratio would be improved and make it more competitive for budgeting.

Senator MURKOWSKI. Do you anticipate that that would, given what we expect to see coming out of Louisiana and coming out of Texas with LNG exports?

Ms. DARCY. I think in considering those, since the 4-year ban has been lifted and that can happen now, that will change the economics.

Senator MURKOWSKI. And that will be included as part of your analysis.

Ms. DARCY. It will be considered in it, yes.

Senator MURKOWSKI. Okay. I appreciate that. I am going to utilize a little bit of executive authority and call a recess for the committee until other members get back so that I do not miss this important vote. So we are recessed to the call of the chair.

Senator ALEXANDER [presiding]. Thank you for your flexibility. The hearing will come to order. That was the last vote, so Senators will be here, and Senator Coons was here earlier, so I will call on Senator Coons at this point for his five minutes of statements and questions.

Senator COONS. Thank you very much, Chairman Alexander. Thank you both for your forbearance and for your sound and solid leadership of this subcommittee and others. Thank you for your service and for the opportunity to talk with you today about the Army Corps of Engineers.

DELAWARE RIVER DREDGING

I have been particularly pleased with the service of the colonel who is charged with the Philadelphia district, Lieutenant Colonel Mike Bliss. And I am grateful for your continued support for a project that is near and dear to my constituents, the Delaware River dredging. I am pleased there is another \$55 million overall in the work plan to complete the project, so I just want to start by saying thank you since I know not every opportunity is taken to thank you for budget support and for leadership.

DELAWARE BEACH PROTECTION

If I might, Assistant Secretary Darcy, I just want to talk about Delaware's beaches. We have several world-class beaches. They are a key driver of tourism in our region, and they are essential to the economy of southern Delaware. We had a significant storm recently that imposed some very hard damage. We were grateful for previous investment in beach nourishment that protected those beaches, but most of what had been provided in recent years was torn away. That has left a lot of our coastal communities and their infrastructure exposed. I am hopeful that we can work together to find resources.

The President's budget, to my disappointment, did not include funding for Bethany Beach or South Bethany Beach, and as the project information reports from the Philadelphia district come into your office describing damage to Delaware's beaches, I am hopeful that you conclude that the Flood Control and Coastal Emergencies Act Funds that remain unspent from Sandy could be used for Rehoboth, Bethany, and South Bethany.

Do you think that is possible or likely, and if not, what else do you think we could do to rebuild Delaware's beaches and its coastal defenses?

Ms. DARCY. As you say, Senator, we are in the PIR stage which will inform as to what damages were done and what the actual cost of those repairs will be.

As far as using Sandy supplemental funds, I am going to have to defer because I believe that those can only be used for damages

that were incurred from Super Storm Sandy as opposed to subsequent storms. That is something we will check into if the need for the repairs is unmet.

Senator COONS. Given just a visual inspection as well as detailed reports from local government leaders suggest to Delaware's congressional delegation that there will be some significant needs here, what funding source do you think is most likely relevant or appropriate to take action this year?

Ms. DARCY. Probably the FCCE account. That is our Flood and Coastal Emergencies account, but it would depend on how they are evaluated as far as relative to the most recent storm.

Senator COONS. I will join comments made by other of my colleagues earlier in this hearing that it is disappointing that the Administration's funding request is insufficient for what are the likely needs of the whole country. As a member of this subcommittee, I am happy to commit to continuing to support needed increased funding that will make it possible for you to address the needs of Delaware and many other States.

PORT OF WILMINGTON

Let me also turn to the Port of Wilmington. It is on a dredging cycle that really is not sufficient to meet the needs of this port. It is a relatively small port, but it is an important port for my home State. It silts in about every 6 to 9 months, and right now it is causing havoc with the number of customers at the port. I am hopeful that going forward you will consider including funding for two dredging cycles a year. Is this something you are familiar with?

Ms. DARCY. Senator, I am aware that we did provide 2016 O&M dredging for this port at \$3.845 million, and also in the President's 2017 budget request we have \$4.355 million for the next dredging cycle. So I think an additional dredging cycle is what your question is, sir?

Senator COONS. Yes.

Ms. DARCY. I believe that currently we are budgeting on a single dredging cycle, and that is what I think those numbers reflect.

DELAWARE RIVER BASIN COMMISSION

Senator COONS. Well, I will urge you to reconsider, based on experience at the port, two dredging cycles a year. Let me in my closing moments simply recommend to you again funding for the Delaware River Basin Commission. Although there is a congressionally approved compact that requires a Federal contribution, the Federal contribution has been forthcoming, I think, in 19 of the last 20 fiscal years.

HARBOR MAINTENANCE TRUST FUND

I also am an advocate for the Harbor Maintenance Trust Fund. You have made some significant, I think, improvements. The request is higher. Our funding has improved, but it is still 20 percent less this year than what was appropriated last. I think it would make a significant difference for harbors across the country, not just in my home State of Delaware.

So please note me as an advocate for working to ensure that the Harbor Maintenance Trust Fund is put to its appropriate purposes, and that we invest to the level we need to in order to ensure that our export and import businesses that go through our vital ports and harbors are appropriately maintained.

Ms. DARCY. Yes, sir.

Senator COONS. Thank you very much.

Senator ALEXANDER. Senator Udall, I think we have other Republican members coming, but since you are here, I will call on you. And what we have done is because of the votes, we have asked the witnesses to put their statements in the record, Senators have put their opening statements in the record, and now you have five minutes for statements or questions, whatever you would like. Senator Udall.

NEW MEXICO RURAL WATER PROJECTS

Senator UDALL. Senator Alexander, Chairman Alexander, thank you very much. And I guess I lucked out with not having to alternate here.

I want to thank you both for working with the Albuquerque District to fund some important New Mexico projects over the last few years. New Mexico often has a tough time in the President's budget request, so additional discretionary funds that this committee provides and your hard work is really critical in my State.

We have had some good success funding flood control projects in Alamogordo, Socorro, the Southwest Valley, and others, and I am very relieved that we have continued the New Mexico Acacias Program. I hope you know what that is, Honorable Jo-Ellen Darcy.

Ms. DARCY. I visited about 4 years ago.

Senator UDALL. Good. Good. And to support the historic—these are various, you know, historic irrigation canals that also help our local ecosystems and manage water flows.

Additionally, I am pleased that for 2016, the Corps has funded the Rio Grande Environmental Management Program for the first time. It will be important to continue that effort which will link together stakeholders and watershed information to encourage collaboration on water challenges and minimize the potential for counterproductive conflicts. And finally, I am glad we are making progress on reimbursements under the Environmental Management Accounts, specifically for Rio Rancho in 2016. We talked about this issue last year, and I wanted to thank you for your attention to this issue.

The Corps signed agreements years ago with a variety of New Mexico communities to fund water projects, and we need to close these accounts out. So given our recent success—hopefully this is an easy question—will you continue to work with this committee and stakeholders in New Mexico to advance these kinds of projects in a fiscally responsible way if this committee continues to provide additional discretionary funding for the Corps?

Ms. DARCY. Yes, Senator.

GILA RIVER DIVERSION PROJECT

Senator UDALL. Thank you very much. And now turning to the commissioner of Bureau of Reclamation Estevan. Good, solid New Mexican is back here. Good to see you again.

Commissioner López, I want to touch on an issue that is very important to me and one I know you are familiar with, the proposed Gila River diversion project. The Gila River is the crown jewel of the Southwest and one of the last remaining free-flowing rivers in the United States. The river provides amazing opportunities for recreation, wildlife habitat protection, and has unique historic value. And, of course, we are also very sympathetic to the water needs of nearby communities and the agricultural needs.

I understand why any proposal that could mean more water resources is a discussion worth having, but from everything I have seen, this project simply does not add up. My understanding is that a diversion has the potential for about 14,000-acre feet of water, but with significant technical challenges, and only in a wet year that will not happen very often, with construction costs estimated near a billion dollars and would need NEPA approval for disturbing a relatively untouched river system. In short, this does not seem like a viable or wise project.

I understand that the environmental review process is the next step, and the Bureau of Reclamation along with the New Mexico Interstate Stream Commission are joint leads on this. What kinds of analyses will be included in your comprehensive review process? Will the costs associated with this project be fully reviewed in an objective way, because I have said, and please go ahead with those, Estevan, and then I will just finish with these last couple of questions.

Mr. LÓPEZ. Good afternoon, Senator. It is good to see you.

Senator UDALL. It is a pleasure. Great to see you.

Mr. LÓPEZ. And so, to date New Mexico has yet—the New Mexico Unit entity has yet—to propose a project, so we have not yet begun that process. Once they do, it will be a few months before we begin a public scoping process. We would develop a full range of alternatives that would be evaluated in that process, and we would assure that there is a robust analysis that would comport to the Federal principles, requirements, and guidelines for water and land related resource implementation studies. That was part of the agreement that was entered into last November.

Specifically, you asked what type of studies would be looked at. We would intend to look at the impacts on fish and wildlife, hydrology, land use, cultural resources, recreation, and ecosystems, and, by all means, the economics of any proposal that comes forth. We are committed to a robust evaluation of this. As you say, the Gila is truly a jewel in the Southwest, and it is something that needs to be protected.

Senator UDALL. Thank you. And, Senator Alexander, I will submit the rest of my questions to Mr. López for the record. But I just want to say that I have seen estimates that range from half a billion to \$1 billion for construction. I cannot see any White House Office of Management and Budget clearing a new billion-dollar Federal water supply project with such limited potential. So thank you,

and I will submit additional questions, and look forward to your answers.

Thank you, Mr. Chairman.

Senator ALEXANDER. Thank you, Senator Udall.

Senator Lankford.

CORPS OF ENGINEERS DISPOSITION STUDIES

Senator LANKFORD. Thank you, Mr. Chairman. Thank you all for being here and for the work that goes into this. General Bostick, good to see you again. Let me pepper you with questions. It is so good to see you. How about that?

We have talked a couple of times before about the 2014 water bill that put into it a request to the Corps to say give us an inventory that is not needed—this was the quote—“not needed for the mission of the Corps of Engineers.” Obviously it is trying to determine if there may be any properties or entities that are anywhere within the Corps of Engineers that are not needed so that we can spend money on what is essential for the Corps.

How is that study, that assessment going, and when can we expect to have that report?

General BOSTICK. It is good to see you again, Senator. There are a number of activities going that I think are related that I wanted to highlight and talk about. And the first is the deauthorization report that we had to come back to Congress with, \$18 billion worth of deauthorizations.

Senator LANKFORD. If my memory serves me correctly, about \$14 billion in that \$18 billion request.

General BOSTICK. We were able to come up with \$14 billion, but in coming with that, we had to do an assessment of many of our projects, so the assessment is underway. We are not complete. We still have a lot of work to do. It is not directly tied to the 6002 report, but it is related. The other thing that—

Senator LANKFORD. So give me a ballpark on timing when that assessment might be complete.

General BOSTICK. I cannot give you a ballpark time on that. What we are trying to do, because we have not started the 6002 report because we have put all of our focus on trying to get the deauthorization report accomplished. We did that, and now we are doing the annual deauthorization, and we will be finished with that in September of 2016.

I think combining the two efforts, we will be closer to doing an overall assessment. What we have done is completed an overall operational assessment of our projects, but we have not made an assessment of which ones we should retain, which ones we should divest ourselves of, and which ones should be repurposed. That is going to be a longer effort.

Senator LANKFORD. Sure. Well, that is why we started it early because you know my next question on that is the disposal process, and once we determine some of the things that might. And I say “might” because we are not asking you to choose those, but at least to start to put together a list of things that are not central to the mission of the Corps. Once we have that list, we have got to work through the process of how do we actually dispose of that.

Any ideas at this point on disposal authorities that the Corps may need once that list is out there?

General BOSTICK. Well, you do have authorities under Section 216, and rather than waiting until we have the complete report finished, we are starting now with disposition on two projects, disposition studies on the Kentucky River Lock and Dam and the West Pearl Navigation Project. So those disposition studies will go on this year.

Many activities are working in parallel. We are not going to wait until the complete report is done, but we are using the deauthorization requirement, both the annual and the one time report required in WRRDA, and also moving forward with 216 authorities.

Senator LANKFORD. Okay. That will be one of those things we will want to talk about at length is if there are additional authorities or ways we can help in that process. Obviously if we have an area where we are not authorizing or allowing or transferring, we do not want it to be more expensive than actually maintaining it. We want to actually have an efficiency of the process with this so you all do not have to worry about that.

ACCEPTING NON-FEDERAL FUNDING DURING EMERGENCIES

Let me ask about another question that came up from the 2014 WRRDA, and that is accepting materials and services from non-Federal entities in the case of an emergency situation. Obviously this has implications around the country, especially in inland waterways and places where we may have an emergency situation.

Congress passed that, and asking for a set of—asking for implementation. We were pretty clear to give that authority. I am trying to figure out if the Corps has the implementation on that, the guidelines for that done at this point. Are those guidelines complete?

General BOSTICK. Yes, we are finalizing initial Implementation Guidance on that. I think where we are finding challenges at the local level is we can accept funds on an emergency disaster type situation, but we cannot accept funds for some of our projects where we have not been able to maintain them.

Senator LANKFORD. So what about—this is an emergency situation just starting with that. What about services? You accept services. So if someone had materials, had equipment, had personnel, a contractor that was there, and a State or a private entity said this is an emergency, we want to be able to help with that. Are you all in a position now with these guidances to be able to accept those goods or services in the time of an emergency?

General BOSTICK. If it is related to a disaster, my answer would be yes.

Senator LANKFORD. Okay. Yeah, all these are contingent on an emergency. That was the definition that was on it, which is left open of what is an emergency. When I talked to several of the folks in the different areas, there seems to be a hesitancy in the field and in the regional offices to accept goods or services or be able to discuss that even of what the process would be in case of an emergency.

Those folks want to plan contingencies, and what I hear is, well, we are studying it. There are not those guidelines in place in the

field. So I do not know if those guidelines had just been released or not, but the individuals that this would actually affect cannot plan their contingencies because they do not know how to connect to the Corps at this point in case of an emergency.

General BOSTICK. We will go back and redouble our efforts to make sure that the Implementation Guidance that we will put out is understood in terms of what they can and cannot accept.

Senator LANKFORD. Okay. If there are additional authorities that are needed on that, we just need to know because if this is going to be an issue of, yes, we technically can, Congress gave us permission, but there are liability risks, and who is going to pay for what if it breaks. And suddenly we are in a position where there is actually not done what Congress said we could do, and there is some gap in it, we need to know in that process so we can actually resolve this. So can you help us with that?

General BOSTICK. We will follow up.

Senator LANKFORD. Great. Thank you. I yield back, Mr. Chairman.

Senator ALEXANDER. Thank you, Senator Lankford.

Senator Hoeven.

RED RIVER FLOOD PROTECTION

Senator HOEVEN. Thank you, Mr. Chairman. I would like to begin by thanking Secretary Darcy, also General Bostick, and I see that you brought Colonel Price with you as well. Thank you for your help and your commitment to move forward with permanent flood protection both in the Minot region as well as in the Fargo/Moorhead region in the Red River Valley. It is much appreciated and very important for both regions, so I would like to thank all of you. I would also like to thank the chairman of this committee. I appreciate it very much.

My first question would be to Secretary Darcy and also to General Bostick. And that is in terms of moving forward with the Red River permanent flood protection, if you would please describe for me how you anticipate approaching the Minnesota DNR process.

Ms. DARCY. In the 2016 work plan when we funded this project for \$5 million, there was a provision that said that in order to work through the current issues with the DNR, that we would need to have all of those issues addressed before May of this year when the Environmental Impact Statement is due. And then I would need to make a determination as to whether those conditions were met by July of this year in order for us to be able to execute a Project Partnership Agreement by August 30th of this year.

Senator HOEVEN. And I would ask both you, Secretary Darcy, and General Bostick to address, your thoughts on the DNR process, but then also how you are going about addressing upstream concerns as well in regard to the project.

General BOSTICK. I do not have anything else to add beyond what Secretary Darcy talked about on the DNR.

Senator HOEVEN. Okay. And then both of you, just your thoughts on, again, working to bring everybody together and advancing the project, but also working with upstream interests.

Ms. DARCY. Because this is a two-State project, we always have to consider the upstream impacts as well as the downstream. In

this particular situation, given the alternative financing arrangements, we need to be able to work with the upstream interests in order to be able to go forward with both the upstream portion as well as the downstream portion because the downstream portion is the Federal part of the project, and the upper portion is what the local sponsor as well as their private partners are going to be able to finance.

ALTERNATIVE FINANCING

Senator HOEVEN. And if you would, either or both of you talk for just a minute about the unique public/private financing model, and what you hope to accomplish here, and how you see that can provide benefits not only here, but to the Corps in general going forward.

General BOSTICK. When you look at some of the work that we are doing now, just the work that we are currently putting money in our overall program, it would cost about \$19.7 billion of additional funds to finish that work currently in construction. And we receive about a billion dollars in construction each year so, on average, it is going to take about \$20 billion or 20 years to finish the work that we are currently doing at this rate.

I think it is very important that we look at alternative means of financing where we bring in the private sector, the public sector, to see if we can accelerate these projects because when you take that long to complete these projects, the benefits are not accruing obviously, and the BCRs come down, and the people are just unsatisfied. So I think alternative financing is something that we must do. This is a first effort to move out on them.

Senator HOEVEN. Madam Secretary, did you have anything you wanted to add?

Ms. DARCY. I would concur with General Bostick's comments, and the fact that this is one of the first times the Army Corps of Engineers has approached a project in this way, it shows that we are open to looking at alternative ways of financing these projects with limited funding. In this instance because there are upstream concerns as well as downstream, we are going to take a really close look at all of this. I am going to have someone from my staff work with the upstream States in the next month to try to make sure that we can get this all agreed to in the timeframe that we have.

Senator HOEVEN. Thank you. And also, I want to, I guess, again emphasize the creativity that you are showing in both of these projects, not only the public/private partnership, but also in Minot you are—by providing for a study, you are allowing the State and locals to go forward and build flood protection while we are working on a—on the Federal portion of the project.

That is the kind of creativity that is not only going to save billions of dollars across the country for the Corps and for the Federal Government, but it is going to get these projects done sooner. So that creativity in the case of the Minot region is enabling them to start building using State and local funds. And so, I think, you know, just incredibly important that you are providing this flexibility, and, again, I want to thank you for that.

And, Mr. Chairman, I do have some more questions. I will certainly defer until the next round, but I just wanted you to be aware.

Senator ALEXANDER. Thanks, Senator Hoeven. Just to—we will have a second round of questions. Just a comment on that. This has been an interesting discussion with me. The leadership of the committee has worked with Senator Hoeven and with the Corps of Engineers on a new approach toward dealing with this backlog of important projects. And it will be interesting to see if this significant State and local contribution, when matched with the Federal flexibility and Federal dollars, provides a way in the future to take that \$20 billion figure and move more rapidly in it.

So I appreciate the flexibility that you have shown in your leadership of the Corps to work with this committee and with Senator Hoeven on that issue. I think taxpayers would be pleased with us for seeing how this works, and particularly taking a project where there has been such a significant State and local investment. It is easy for me to say because North Dakota is a long way from Tennessee.

Let me ask two or three questions here, and then I will go to Senator Feinstein, and then we will see if other Senators have other questions.

HARBOR MAINTENANCE TRUST FUND

Let me talk about the Harbor Maintenance Trust Fund. This is something that—well, a few years ago several of us, including Senator Feinstein, reared back and asked our staff what would a great country like the United States—what kind of harbors do we need, particularly in light of the widening of the Panama Canal. We came up with a figure, and Congress passed a bill, set a target, and we have met that target for a couple of years.

Now, we are talking about ports like Los Angeles, Long Beach, Oakland, Mobile, Savannah, Charleston, Memphis, Louisiana, Cleveland Harbor. These are important parts of our commerce in this country, and for two straight years this committee has been able to meet our goals in terms of deepening these harbors so the ships can do their work there and not do it in ports in other places in the world.

Now, we also collect money from the private sector when they come into the harbors. So my question, Secretary Darcy, is how much money do you expect to collect in fiscal year 2017 in the Harbor Maintenance Trust Fund?

Ms. DARCY. Senator, I believe that the Treasury has made an estimate that in 2017 we would be collecting \$1.6 billion. I think it is down from what Treasury projected in 2016. I think it is \$1.6 billion.

Senator ALEXANDER. Okay. How much—

Ms. DARCY. In collections in 2017.

Senator ALEXANDER. In collections in 2017 to the Harbor Maintenance Trust Fund is the Treasury estimate. How much does the budget propose that we spend of that \$1.6 or \$1.7 billion?

Ms. DARCY. The President's budget request for the Harbor Maintenance Trust Fund is \$951 million for fiscal year 2017.

Senator ALEXANDER. So we are collecting taxes for a dedicated purpose at about \$1.6 or \$1.7 billion to deepen ports to improve commerce, but we are just going to keep the money and not spend it even though we take it. And as a result of those kinds of practices, the Harbor Maintenance Trust Fund today has over \$9 billion in it, money that was collected from ports, from people doing business in the port with the expectation that it would be spent to keep the ports in good shape and we are just stacking it up in the Federal bank.

INLAND WATERWAY TRUST FUND

We talked a little earlier about the Inland Waterway Trust Fund. We do not want that to happen there. We do not have much money in the Inland Waterway Trust Fund that is unspent. Am I correct about that?

Ms. DARCY. Currently, I think the unspent balance in the Inland Waterway Trust Fund is \$106 million for 2017.

Senator ALEXANDER. The unspent, but we could spend that for—I mean, that is yet to be determined how much of that we are going to spend, correct?

Ms. DARCY. Yes, because that would have to be matched with other revenues from the budget.

Senator ALEXANDER. But if we matched it in 2017 as we did in the current year, then there would be almost no unspent money in the Inland Waterway Trust Fund. Am I correct about that?

Ms. DARCY. If there was a 50 percent match coming from General Treasury and coming from the Corps budget to match, that is possible.

Senator ALEXANDER. But on the Harbor Maintenance Trust Fund, we already got \$9 billion that should have been spent on our harbors, yet the President's budget only asks for \$986 million, about \$194 million short of the target that Congress set for this year. So we are going to continue to build up the unspent money in the trust fund. I am very concerned about that.

NATIONAL FISH HATCHERY

Let me ask you a different—completely different question. TVA, the Bureau of Reclamation, the Corps of Engineers all mitigate the loss of fish caused by the dams that they operate. This is a general subject that Secretary Darcy and I have discussed before, but not a specific one. The Corps of Engineers purchases fish from the National Fish Hatchery at Dale Hollow and Irwin to restock fish in the Cumberland River where there are dams and excellent fishing, by the way. TVA is mitigating that loss of dam—loss of fish due to the dams. It operates on the Tennessee River.

So you are already doing what I think you should be doing. But my question is, does your budget request sufficiently reimburse the Fish and Wildlife Service to ensure our Nation's mitigation fish hatcheries can continue to meet the mitigation needs?

Ms. DARCY. Yes, it does, Senator.

Senator ALEXANDER. Thank you, Secretary Darcy, and I greatly appreciate your personal attention to that.

I am about out of time, so why do I not go to Senator Feinstein, and then I see Senator Hoeven, I think, also has questions.

BOAT TURBIDITY STUDIES

Senator FEINSTEIN. Thanks very much, Mr. Chairman. Mr. Chairman, you and I and certain members in the House of Representatives were able to get \$100 million in the omnibus for drought. That money is still there. The President did not ask for the money to be continued in 2017; however, it is there for the remainder of the year. And I am wondering, Commissioner López, would it be possible to use some of that money to begin to do boat turbidity studies in the turbid waters both 12 miles and 17 miles from the pumps to determine with some accuracy the degree of smelt that are present?

Mr. LÓPEZ. Senator, I think that we have created a spending plan for that money, and we have tried to build in maximum flexibility to use that in the way that is going to be deemed the most useful. So I think that we can. I think my answer to your question is that we can expend some of that money for those purposes.

I have recently seen some correspondence in preparing for this hearing that calls into question the utility of that sort of thing simply because there are so few smelt that are out there. But I can certainly look into that, and I think we do have a mechanism by which we could use some of that money for that purpose.

Senator FEINSTEIN. Well, I thank you very much for that. Now, we know the smelt gravitate toward turbid waters.

Mr. LÓPEZ. That is right.

Senator FEINSTEIN. And so, it seems to me that the monitoring should be in the turbid places, and the turbid places where decisions are made about operations of the pumps. We are in a drought emergency proclaimed by the governor. It seems to me that this is an appropriate use of that money, and I would like very much to work with you to see that the appropriate monitoring gets set up as quickly as possible because time is a-wasting. If we have El Nino, it is going to be in the next couple of months or this month and maybe through March, so this means moving with it. So I am going to get out my needle and start poking at you, and I thank you for that answer.

SHASTA DAM AND LOS VAQUEROS

I would also like to ask this question, and I go to pages 407 and 408 of the omnibus. 407 stated that "The commissioner of Reclamation shall complete the feasibility studies," and in this section on 407 it refers to Shasta Dam. That was completed in December of 2015. The next section on 408 refers to sites in Los Vaqueros by November 30th, 2016. Will you complete those studies?

Mr. LÓPEZ. Senator, for both Sites and Los Vaqueros, we need to work with non-Federal partners to fund even the study portions of these. And to date, we do not have those agreements in place, further—

Senator FEINSTEIN. Commissioner, it is has been 9 years. We are in our 10th year.

Mr. LÓPEZ [continuing]. The proponents, the Sites JPA and Contra Costa, have both recently—as recent as last week, come to us and asked that we actually slow the process down a little bit to be more in line with the State's process of the funding proposals

that will be taken in November of 2017. They want to assure that the study we do comports not only with our requirements, but whatever requirements the State is going to have. And so, we are working with them to try and position——

Senator FEINSTEIN. Well, let me say something. This is a law. It is not “may complete.” It is “shall complete.” So if you would relay to the Sites JPA my concern that this has taken too long, and you are now mandated by law to complete these studies. Sir, I suggest you do it.

SAN LUIS EXPANSION

There is a third one, and that is the feasibility study that has to do with the San Luis expansion, “shall be completed not later than December 31, 2017.” This is not up to the Sites JPA to make these decisions. You have the law.

Mr. LÓPEZ. Senator, going back to sites, we do have that mandate. You are absolutely correct. We recognize that. What we do not have is we do not have the funds to do the work that is——

Senator FEINSTEIN. Then I suggest you use some of the drought \$100 million to get it done.

Mr. LÓPEZ. We will look into it, Senator.

Senator FEINSTEIN. But really, sir, you have got one California Senator that is going to ride this. We worked hard to get these things in that omnibus, and they are there now. And it is not “may,” it is “shall.” And I think—I have met with the committee. I think they are doing very good work, but they are not the law, and this is the law. So you can quote me, and if they have a problem, they can come see me, okay?

Mr. LÓPEZ. Senator, I will convey that to them.

SEISMIC SAFETY PROJECTS

Senator FEINSTEIN. Thank you. Secretary Darcy, there are four critical seismic safety projects, California VA projects: L.A., San Francisco, Long Beach, and San Diego. And they will be part of this new construction partnership between the Army Corps and the VA. And I would like to ensure that they proceed as quickly as possible because the seismic risk in California is not going down. It is going up. So when do you expect to execute the joint agreement with the VA regarding the new collaboration?

Ms. DARCY. I do not know. I am going to ask General Bostick if he might know. He has been working more closely with the VA on these issues than I.

General BOSTICK. I have worked with Secretary McDonald very closely in discussions on how some of these projects would transfer. The first one obviously was the Aurora Hospital in Colorado, and we are complete with that transfer, and we are starting to work on it. We are taking each of these one at a time and assessing them on a case-by-case basis, but moving out as rapidly as we can. Much of——

Senator FEINSTEIN. Could you give me some times, please? I do not want to ask your successor 10 years from now, if I am still alive, what happened.

General BOSTICK. The overall understanding is already completed. If it is over \$100 million, as in the cases of the California

hospitals, there is already agreement that the Corps will take those on. The next step is to determine if the designs are appropriate for us to move out and award a contract. That work is ongoing.

Senator FEINSTEIN. Okay. Well, that is good news. Do you have a specific timeline for when seismic safety projects can proceed?

General BOSTICK. I do not have a timeline, but I will respond—

Senator FEINSTEIN. May I ask that perhaps before you leave you could get a timeline? You set the course for your successor?

General BOSTICK. I will do that.

Senator FEINSTEIN. This is important, so thank you. And is there any—do you have any thoughts on how this collaboration, and maybe it does not affect these projects. But will they introduce of themselves time delays?

General BOSTICK. I cannot speak to the group of them in total, but if the project has not started, and some of these are brand new projects if they have a design, then we can just take that design if the design is adequate, then we can move out and award a contract. In the case of Aurora, for example, that took us a lot longer, a number of months in order to transition that one. So I would say it is a case-by-case situation, but I think it could be a clean transfer depending on the design.

Senator FEINSTEIN. So my job would be to see if the VA facilities in L.A., San Francisco, Long Beach, and San Diego have a design. Is that correct?

General BOSTICK. We can work on that, Senator.

Senator FEINSTEIN. Okay. Well, we will check.

General BOSTICK. We will follow up with you on that.

Senator FEINSTEIN. And I would appreciate it if you could let me know.

General BOSTICK. We will.

Senator FEINSTEIN. The question is do they have a design, and I thank you, General, very much.

Thanks, Mr. Chairman.

Senator ALEXANDER. Thanks you. Thank you, Senator Feinstein.

Senator Hoeven, whatever time—take time to ask whatever questions you may have.

LAKE TSCHIDA

Senator HOEVEN. Thank you, Mr. Chairman. Commissioner López, we have discussed Lake Tschida, Heart Butte Dam a number of times. You have been out, and I appreciate you coming out. I am drafting legislation to try to address this issue. We continue to work on trying to find a solution.

Specifically, my legislation would direct the Bureau to allow permittees in the trailer areas around Lake Tschida to keep their existing trailers on the lots as long as they comply with anchoring requirements set forth by the Bureau. These permittees have made investments and improvements to the lots and trailers over the years, all with the consent of the Bureau. I think this would be a good compromise to ensure dam safety while also allowing trailer owners to get full use out of the investments that they made honestly with the approval of the Bureau.

So my question is, would you be willing to work with me to find agreement on legislative language that would satisfy the Bureau's

concerns while giving fair treatment to the trailer owners around the lake?

Mr. LÓPEZ. Senator, I would certainly be willing to work with you on trying to develop legislation that would meet both those needs. You know my concerns about the trailers being within the flood pool and the concerns that that creates for us. If there is legislation to be worked on, we would work with you on it.

MARKET RENT SURVEYS

Senator HOEVEN. Thank you. I appreciate that. The other question I have is in regard to some of the recent market rent surveys that have been done by the BOR. As a result of those surveys, rents will double at Heart Butte Dam, Lake Tschida, but they triple at the Jamestown Reservoir and the Dickinson Reservoir. And my understanding is that any rents received go into maintenance and management of the reservoir.

And so, my first question is, is the Federal Government making a profit on this, or is all that money being put back into management and maintenance at those reservoirs?

Mr. LÓPEZ. Senator, I do not believe we are making any profit on anything, and the money that we collect is used in the O&M of those reservoirs.

Senator HOEVEN. Well, and essentially where I am going with this is, you know, those are very significant increases. We are hearing from the people that live around those reservoirs and have homes around those reservoirs. And there is a real concern that the rents are being raised well above what is going into management and maintenance at the reservoir, and well in excess of what those management and maintenance needs or expenses are.

And that is a real concern because I think those rents are supposed to be limited to the management and maintenance need costs of those specific reservoirs. And so, I would ask that you work with us to look at those and make sure that the increases are not unreasonable, and that the money is not being used for some other purpose.

Mr. LÓPEZ. Senator, I commit that we will look into that question, and assure that we are not collecting any more than we can use for those purposes.

Senator HOEVEN. Thank you, Commissioner. I appreciate it. Thank you, Mr. Chairman. Those are all the questions I had. I appreciate it.

Senator ALEXANDER. Thanks, Senator Hoeven. I have got a couple of questions.

INLAND WATERWAYS

Secretary Darcy, back to inland waterways. When we took the big step forward on inland waterways, Congress, among other things, got an agreement about what the priorities are for the inland waterways. The users agreed to that as well, and that helped us have some priority. That was the 2010 Capital Development Plan. Last year—the Congress then asked—told you to do a 20-year plan, but in our appropriations bill last year we said you should use the 2010 Capital User Development Plan priorities until we have a chance to review the new plans.

So my question is, will the Corps' new plan keep the list of priorities in the 2010 Capital Development Plan that has been endorsed by the inland waterway users?

Ms. DARCY. Senator, we will be having the new capital investment strategy delivered to you all before the month is out, so we will be able to discuss the specifics of that while you are putting together the bill for this year. I have not reviewed the final study to be quite honest with you, so I cannot answer whether they are the same priorities or not. But as I say, we will be getting that to you before the month is out, so.

Senator ALEXANDER. Well, you know the priority I am interested in.

Ms. DARCY. Let me guess.

REHABILITATION PROJECTS

Senator ALEXANDER. Yeah. And along that line, as you make your review, let me ask you to comment on something that really affects all of your projects, and that is the economic analysis that you use to justify a project, which I would assume you are going through now as you make up—as you finish this new plan. Funding the projects is largely based on their so-called benefit-to-cost ratio. The higher the ratio, the better the chance the project gets funded, the higher up the priority list.

I am concerned that the economic analysis for a project may not accurately take into account the true benefits. For example, your economic analysis may—let us take the Chickamauga Lock, for example. In 2004, 2.7 million tons of cargo were moving through the lock every year. That was 12 years ago. Today it is closer to one million tons.

Now, one big reason it has gone from 2.7 to one million tons is because the lock is in bad shape and needs to be replaced. And so, if you based your benefit-to-cost ratio upon the current lock cargo, it would not be realistic because when you fix the lock, one would assume that you would be back up to some number. I do not know what number. Maybe it would be 2.7, or maybe it would be more, maybe it would be a little less.

But do you not think that has become outdated or inappropriate to base your benefit-to-cost ratio on the way things are today in a lock that has for 12 years been in such bad shape that a lot of cargo simply could not go through it?

Ms. DARCY. I do agree, Senator, because in our equations that we developed for rehabilitation projects, I do not think that we take into account the historic significance of these projects. And I think that we are losing those benefits in making a future calculation.

As you know, rehabilitation projects do not compete well in the budget because they have a lower benefit-to-cost ratio because of that. I think we need to look at how we do the evaluations for the benefit-to-cost ratio and rehabilitation projects in a different way, and account for not only historic patterns—historic benefits that they have brought, but without that lock, what would have been lost if we did not have that lock. That calculation, and all of the benefits that it has brought not only up until one point in time, but historically, I think needs to be calculated for a rehabilitation project.

COMPLETING CONSTRUCTION PROJECTS

Senator ALEXANDER. Well, that is important testimony coming from someone with your experience both in Congress and in your current position. And finally, there also ought to be something to consider—I mean, should we not complete projects we have already started to build? For example, in Kentucky Lock we have already spent \$471 million, and on the Chickamauga Lock, we have already spent \$216 million. And as we have discussed, over the last 2 years working with Congress, you restarted construction.

But should we not take into account the fact that we complete projects that we have already started to build?

Ms. DARCY. I think we should take that into consideration, and I think finishing what you have started is a laudable goal. It is just not always one that we are able to achieve in the current fiscal situation.

Senator ALEXANDER. There were several rules of life I learned from my parents, and one that I learned from my father was finish what you start, which turns out to be a pretty good rule of life, and might even be good for the Corps of Engineers.

I do not have any more questions. I will ask Senator Feinstein if she does, and then after that, her comments, we will conclude the hearing.

RESPONDING TO THE SUBCOMMITTEE'S QUESTIONS FOR THE RECORD

Senator FEINSTEIN. I have one, and I think it will surprise you. Madam Secretary, this committee held the Army Corps fiscal year 2016 budget hearing last year on February 11, after which members of this subcommittee submitted about 50 questions for the record. Believe it or not, we just received the responses to those questions yesterday evening, so it took a full year after the hearing to get the answers back to us.

I do not think you find that acceptable, and I do not find it acceptable. So can you help me understand why it took the Corps over a year to provide the responses to questions from this subcommittee?

Ms. DARCY. Senator, it is an unacceptable time, and for that I apologize. There is a lengthy review process within the Administration that takes place in order to respond to questions, and it is too long. And I will try to come through with a commitment to make it a shorter time because I will not be here a year from now, so I want to be able to get you the answers to your questions in a more timely manner this year.

Senator FEINSTEIN. Well, let me ask you, what do you think is a reasonable response time, because we are going to submit some questions from this hearing. And, candidly, I would like them back in a couple of weeks because there are issues that are pressing.

Ms. DARCY. They are answers to questions that you need the answers to in order to formulate your bill.

Senator FEINSTEIN. That is right.

Ms. DARCY. And, you know, that happens this summer and this fall. I think 3 months is more than enough time for us to be able to respond to your questions.

Senator FEINSTEIN. So are you saying you put a response time of 3 months, and that we would have our questions answered in 3 months?

Ms. DARCY. That is my goal.

Senator FEINSTEIN. What do you think?

Senator ALEXANDER. Well, if you had not asked that, I was going to. So here is what I think. My guess is that part of the fault lies with the Office of Management and Budget. I do not expect you to comment on that. But I think here is what we ought to do. I think——

Senator FEINSTEIN. Well, can I? Are you saying the Office of Management and Budget reviews the answers to questions?

Senator ALEXANDER. My guess is they do, right?

Ms. DARCY. That is correct.

Senator FEINSTEIN. They do?

Ms. DARCY. Yes, ma'am.

Senator ALEXANDER. Yeah, that is the way they work.

Senator FEINSTEIN. Ask her if she could tell us why.

Ms. DARCY. Okay.

Senator ALEXANDER. Why?

Ms. DARCY. Any of the responses that come to Congress from agencies are reviewed by the Office of Management and Budget.

Senator FEINSTEIN. Oh, my god.

Senator ALEXANDER. Well, I would say to Senator Feinstein, and, you know, I would guess that the idea of underfunding the inland waterways and the Harbor Maintenance Account did not come from the Army Corps of Engineers, but probably came from the budget process. And so, here is what I think we should do.

Three months, Senator McConnell, and he has talked to Senator Reid about this. We hope to move rapidly on the appropriations process this year. We hope to keep big controversial riders off the committee bill.

Senator FEINSTEIN. Good.

Senator ALEXANDER. And they can debate them on the floor if they want to do that, and hopefully Senator Feinstein and I could do that. So we are moving pretty fast. This is our second hearing. We have got two more, and we would like to be finished by when, Tyler?

[Off audio.]

No, with the bill.

Well, he said early May. I am thinking maybe mid-April would be—would be better. So 3 months, that is just 6 weeks away. So I would suggest Senator Feinstein and I write a letter both to the Corps of Engineers and to the Office of Management and Budget and say we find this unacceptable. You have said you are going to do your best to get answers in at least by 3 months, that we are moving on a fast pace on appropriations. And there may be some questions that we would like to have an answer to more rapidly than that.

You have got a background of work on the Hill, and we can talk with you about that in an informal way. But it is very important to us to know your thinking before we write the bill.

Senator FEINSTEIN. Yes, that is right.

Senator ALEXANDER. So we will formally write the letter would be my suggestion if you would agree.

Senator FEINSTEIN. That is fine with me.

Senator ALEXANDER. And then we will ask staff to work with you informally on the questions that we think are the most important to us as we draft the bill. We would like to be among the first in line when we present a bill to Senator McConnell and Senator Reid to put on the floor, and I am hoping it is mid-April or not long after that when we are finished with the bill.

Senator FEINSTEIN. And I hope that we can keep our questions relatively limited to the need for this particular session and our budget—our appropriations bill.

Senator ALEXANDER. Yeah, so we will work with you. I mean, Senator Feinstein and I will work with you, and if you say, look, I have got 100 questions here, are there 20 that are more important, we will help you—we will help prioritize that. And that will be easier for you to give us responses to that. And there may be some cases where you could simply give us an oral response.

Senator FEINSTEIN. That is right.

Senator ALEXANDER. Just answer a question, and we do not—we will not have to go through a lengthy process. Senator Feinstein, do you have other questions or comments?

Senator FEINSTEIN. No, I am fine. Thank you very much, Mr. Chairman.

Senator ALEXANDER. Well, I want to thank all the witnesses for being here today. I am sorry about the voting interrupting, but I think we Senators had a chance to ask their questions and to make their testimony. We, again, thank Secretary Darcy and General Bostick for working with us, especially since this may be their last hearing before the subcommittee.

ADDITIONAL COMMITTEE QUESTIONS

The hearing record will remain open for 10 days. Members may submit additional information or questions for the record within that time if they would like. We would like to have all responses to questions to be provided within 30 days of receipt. You said 3 months. For the priority questions or most questions, we would like to ask for 30 days.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. JO-ELLEN DARCY

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

Question. Currently, the General Reevaluation Report (GRR) and accompanying Supplemental Environmental Impact Statement (SEIS) for the Port of Mobile is on-going. Together, they are expected to take approximately 4 years to complete, which is around 2019 or 2020. Secretary Darcy, can you give me an update on the status of this undertaking and what, if anything, can be done to expedite this process?

Answer. Preparation of the Supplemental Environmental Impact Statement, will require consultation with various resource agencies to satisfy the National Environmental Protection Act requirements. Coordination with a wide variety of Federal, State, and local agencies (U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service, the Environmental Protection Agency, Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, the State Historic Preservation Office, etc.) is currently on-going. Coordina-

tion is also ongoing with State and Federal Environmental Agencies to include discussion of the modeling needs of the project and begin the process of identifying realistic beneficial use opportunities for the dredged material from this project. Sediment removed in association with the potential deepening and widening of up to 37 miles of channel could generate up to 63 million cubic yards of material. Currently, the U.S. Army Engineer Research Development Center is collecting data to establish the existing and baseline environmental conditions of the project area. The Corps has met with the USFWS and work has begun on the Fish and Wildlife Coordination Act Report. Additionally, the documentation of the existing conditions for the benefit-cost analysis is complete. This task included gathering economic and demographic data, close review of Mobile Harbor's operational practices and trends, and gathering historical commodity flows and fleet data. Coordination is ongoing with the Corps' Institute of Water Resources and the Port to determine the commodity forecast for the Port, which is a critical step in the benefit analysis.

The proposed study duration was initially 56 months, but has been expedited to allow the study to be completed in 48 months. Currently, no additional measures have been identified that would allow the study schedule to be further accelerated.

Question. Assistant Secretary Darcy, an issue of importance to the State of Alabama is the ongoing water dispute involving Georgia, Florida, Alabama, and the Army Corps of Engineers. This Committee, included language in the last year's appropriations bill specific to this issue. In addition, the 2013 WRDA Conference Report contained language in Section 1051 that encouraged the governors of Alabama, Florida, and Georgia to reach a compromise to once and for all resolve this matter stating that "[a]bsent such action, the Committees of jurisdiction should consider appropriate legislation to address these matters including any necessary clarifications to the Water Supply Act of 1958 or other law." Unfortunately, a resolution to this decades long dispute does not seem any closer than when it began. On May 4, 2015, the Corps signed a Record of Decision regarding a Water Control Manual (WCM) update that applies to the ACT River Basin. Both States of Alabama and Georgia have filed lawsuits relating to the ACT WCM, with no resolution in sight.

Subsequently, on October 2, 2015, the Corps released a Draft Environmental Impact Statement (DEIS) pertaining to the WCM for the ACF River Basin. In comments recently submitted regarding the ACF DEIS, Alabama, Florida, and even the Environmental Protection Agency noted multiple concerns that the current proposal is contrary to legal rationale, public policy, and prioritizes one State's water needs over others. Assistant Secretary Darcy, can you respond directly to and elaborate on the concerns surrounding both the ACT WCM and the proposed ACF WCM? In addition, given its troubled history of decisionmaking in both the ACT and ACF basins, wouldn't it be best to leave such decisions to the affected States to work out their difference regarding these basins without unproductive Corps interference, including Federal legislation enabling such, if necessary?

Answer. The purpose of Water Control Manuals is to determine how Federal projects should be operated for their authorized purposes, in light of current conditions and applicable law. The Corps commenced its most recent efforts to update the master water control manuals for the systems of Federal improvements in the Alabama, Coosa, and Tallapoosa (ACT) and Apalachicola, Chattahoochee, and Flint (ACF) River Basins in October 2007 and January 2008, respectively. The purpose of the updates is to reflect changes in water usage and best practices about water resource management.

The water control manual updates will not determine how the waters of either basin will be allocated among the States. However, the Department of the Army has continuously expressed to the Governors of Alabama, Florida, and Georgia the Army's willingness, within the limits of its authority, to adjust the operation of the Corps projects in the ACT and ACF systems to accommodate any allocation of waters within those basins upon which the three States agree, and to provide technical assistance if requested by the States in reaching an agreement.

The Corps is currently in the process of reviewing public comments submitted on the draft EIS and water control manuals for the ACF basin. The Corps is considering all comments, and is committed to working with State and Federal agencies and stakeholders to address concerns. A final EIS and approval of the updated ACF master manual are anticipated by March 2017.

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

VETERANS AFFAIRS CONSTRUCTION PROJECTS

Question. Secretary Darcy, the 2016 Defense Authorization Act directed the Department of Veterans Affairs to work with the Army Corps to make the VA construction process more efficient, and Congress provided an additional \$100 million to compensate the Corps for this new mandate.

There are four critical seismic safety projects at California VA facilities (Los Angeles, San Francisco, Long Beach, and San Diego) that will be part of this new construction partnership between the Army Corps and the VA, and I want to ensure that they proceed as quickly as possible, given the seismic risk in California.

When do you expect to execute the joint agreement with the VA regarding the new collaboration?

Answer. The Corps and the Department of Veterans Affairs (VA) have already entered into the initial Inter-Agency Agreements (IAA) for two of the four of the projects in question. The San Francisco IAA was signed on November 13, 2015 and the Long Beach IAA was signed on February 4, 2016. The agreements for the two remaining projects, West Los Angeles Buildings 205/208 and San Diego are expected to be signed in the coming months. As the projects proceed towards construction award this will require the agencies to modify these IAAs.

The Corps will make every effort to process IAA modifications in a timely manner and ensure that these projects are completed efficiently. The Corps will remain vigilant to avoid unnecessary cost growth and incorporate sound engineering practices to protect public safety.

Question. Do you have a specific timeline for when seismic safety projects in California can proceed?

Answer. Based on an initial assessment of the projects, the Corps is forecasting a spring 2017 construction award for most portions of the Long Beach, San Francisco, San Diego, and West Los Angeles projects. San Diego and West Los Angeles projects were already completely designed under contract by the VA, and Long Beach and San Francisco are anticipated to have completed designs in June 2016 and November 2016, respectively. The construction award date in spring 2017 is a forecast, because the Corps must also perform a Design and Cost Validation process in order to accept these projects. Once the Corps completes this process, and they are satisfied that the technical solution, design and construction approach, and cost is appropriate, they can work to solicit and award the projects. As the Corps continues with this assessment phase of the individual project designs, they will refine schedules accordingly with the intent of saving time, where possible, while still implementing sound engineering practices. The duration for construction completion for each project is still pending further evaluation and will be based on the required work for each of the facilities.

Question. How will you ensure that the new collaboration does not introduce lengthy delays into the process?

Answer. There have been many discussions between the VA and the Corps to reduce delays and gain efficiencies where practicable. On the other hand, the new collaboration may itself lead to some delay in execution. Introducing a new responsible design and construction agent requires that the agency assume many significant responsibilities; the Corps must ensure that the work already done meets public safety needs, application of sound engineering practices, and code requirements, and that in entering into this collaboration, it does so with a goal of achieving and managing cost and schedule expectations. Public safety, sound engineering, the maintenance of professional relationships, and the appropriate due diligence to cost and execution issues are paramount. The Corps assessment process evaluates the technical solution and design approach, estimated construction cost, and forecasted construction duration to ensure that expectations are met and public safety is assured.

The Corps understands that many areas of California have seismic risks, and will work with the VA to mitigate risk and avoid unnecessary delays.

SOUTH SAN FRANCISCO BAY SHORELINE

Question. The San Francisco Bay region is extremely vulnerable to rising sea levels as a result of climate change. Nearly 200 square miles of the communities in the region sit in low-lying areas along the shoreline, including some that are more than 13 feet below sea level.

The South San Francisco Bay Shoreline Study was originally authorized by Congress in 2002, but the Chief's Report was only just completed in December of 2015, more than a decade later.

Secretary Darcy, as you well know, this project is very important to me. It will restore 2,900 acres of former salt ponds, create a new recreation area, and construct a four mile long levee to protect homes, high-tech businesses, and the new Silicon Valley water purification center. This work is very important to the local economy, safety, and quality of life for my constituents.

I want to thank you for including \$3 million in the fiscal year 2016 work plan for pre-construction engineering and design work for Phase 1 of the project.

What is the timeline for this step in the process, and when do you expect the project to be ready for construction?

Answer. The next scheduled milestone is execution of a Design Agreement for Preconstruction, Engineering and Design (PED) with the non-Federal partners. The current schedule identifies completion of PED by September 2017.

Question. How long do you estimate Phase 1 construction will take?

Answer. The Corps estimates that it would take around 4 years to construct phase I of this project once physical construction begins, assuming the availability of funding at the maximum level that the Corps can efficiently and effectively use for this project.

Question. Do you plan to prioritize funding the in fiscal year 2017 work plan for studies for the next phase of this project?

Answer. Should the Congress provide additional funding for which this study of the next proposed phase of this project would qualify, the study would be considered for funding in the 2017 Corps work plan along with other programs, projects, and activities across the Nation in competition for the available Federal resources.

CALIFORNIA DROUGHT AND ARMY CORPS "BIG PICTURE"

Question. California's population has grown to 40 million people according to recent census data. However, the State's water infrastructure is largely unchanged from when it was built 50 years ago when California was home to only 16 million people.

The drought in California is a powerful example of how important it is for our country to keep up with changing water infrastructure needs.

I understand that the Army Corps has conducted a large-scale study to assess flood risks and ecosystem restoration opportunities in California's Central Valley and in the Delta.

I also understand that there have been studies of individual watersheds in and around the Sacramento and San Joaquin River Basins.

Given continuing population growth and more unpredictable weather as a result of climate change, it is more important than ever that the Federal Government looks at water infrastructure in a "big picture" way rather than on an individual study-by-study basis.

Secretary Darcy, what steps has the Corps taken to look at water infrastructure in a holistic way and ensure that different individual projects are incorporated into a "big picture" understanding of future needs?

Answer. California's water resources management challenges are complex. As the Corps carries out its missions of flood and storm damage reduction, commercial navigation, and aquatic ecosystem restoration in this State, we are mindful that tens of millions of people live and work there.

In Northern California, an example of a Corps effort in support of watershed-level planning is the Sacramento and San Joaquin Comprehensive Basin Study (also known as the Central Valley Integrated Flood Management Study (CVIFMS)), which focuses on the Sacramento River Basin. CVIFMS is intended to be a Federal companion to the California Department of Water Resources' Central Valley Flood Protection Plan, which is the State's plan for long-term sustainable flood management in the Central Valley. The goals of CVIFMS are to:

- Develop and share a consistent and mutually complementary system-wide strategy for flood risk reduction and environmental stewardship with the State of California;
- Provide a blueprint to connect water resources management actions across the Sacramento, Yuba, American, and Feather River watersheds.

In evaluating water resources options in the Sacramento River Basin, the Corps is building on earlier studies, such as the American River Common Features and West Sacramento General Reevaluation Reports, and the Sutter Basin Feasibility Study, to update the system's multi-purpose performance baseline. The Corps work on CVIFMS continues to inform other studies, such as the Sacramento River General Reevaluation Study which began in July 2015, and has enabled the Corps to strategically align many of its regional, interagency activities.

In Southern California, the Corps is currently working with the Responses to Climate Change team and in particular with regard to impacts to Corps' projects due to extreme drought. A Drought Contingency Plan (DCP) Project Delivery Team (PDT) is working to assess the applicability of current available Drought Contingency Plans documents, as well as the need for updating these documents. The DCP PDT consists of Corps personnel nation-wide, with at least one representative from each Division. This endeavor to derive updated guidance for preparation of DCPs is still ongoing.

Question. When evaluating projects, particularly in California, does the Corps consider how they impact the State's overall water supply infrastructure and needs?

Answer. The Corps' role in water resources management is focused on its three main missions—flood and storm damage reduction, commercial navigation, and aquatic ecosystem restoration. The Bureau of Reclamation has responsibility for the Federal Government's involvement in water supply planning and operations in California.

However, the Corps is cognizant of California's significant water supply challenges. While Corps studies and projects focus on its three main mission areas, the Corps works with the Bureau of Reclamation, the California Department of Water Resources, as well as other Federal, State, and local agencies, in order to ensure the Corps work in California complements their effort on water supply.

An example of this coordination is the Joint Federal Project at Folsom Dam. This project is a cooperative effort between the Corps and the Bureau of Reclamation. Once completed, it will help to further reduce the flood risk in the Sacramento region; and at the same time, Reclamation (which is the owner and operator of the dam) will have more flexibility in maintaining water storage levels at the Dam.

Also, at the request of the non-Federal sponsors, the Corps is currently working on two Feasibility Studies to conserve water for Whittier Narrows Dam and Prado Dam. The dams' original authorization are for flood control, however the Feasibility Studies will look at water conservation opportunities such as permanent changes to dam operations and the timing of water releases following storm events. Constraints for these studies include ongoing dam safety issues as well as the inherent flood risk in these areas with unpredictable flash flooding. The local sponsor for the Whittier Narrows Dam Water Conservation Feasibility Study is the Los Angeles County Department of Public Works. The Prado Basin Ecosystem Restoration and Water Conservation Study is a dual-purpose study that includes both aquatic ecosystem restoration and options for a change to the water control plan for water conservation year-round at a higher elevation at Prado Dam. The local sponsor for the Prado Basin study is the Orange County Water District.

Question. Does the Corps have a system-wide strategy to address water and ecosystem problems in the Sacramento—San Joaquin River Delta?

Answer. The Corps Central Valley Integrated Flood Management Study (CVIFMS) is exploring options for system-wide flood risk management and ecosystem restoration strategy in the Sacramento River Basin, the San Joaquin River Basin, and the Bay-Delta. As mentioned above, the first phase of CVIFMS focuses on the Sacramento River Basin, while the next phase would focus on the San Joaquin River Basin.

ARMY CORPS PROJECTS AND WATER SUPPLY

Question. Secretary Darcy, I understand that the Corp's primary mission is flood protection. However, there are many instances in which flood protection projects also impact other important issues like water storage and ecosystem restoration.

For example, seismic retrofits on a dam can also be used to raise the height of a dam and store more water. Better forecasting of impending storms can result in more scientific decisions on when to release water from a reservoir and when to hold it, potentially providing water supply benefits.

Secretary Darcy, how does the potential for these "win-win" type of outcomes influence the Corps' internal policies and evaluation of projects?

Answer. The Corps agrees that projects do not necessarily have to be constrained to benefit only one purpose. The Corps seeks to achieve multiple public benefits at individual projects to maximize returns on Federal, State, and local investments. The Corps has extensive experience managing reservoirs for multiple project purposes throughout the United States, but the consideration of multiple project purposes is a matter of making trade-offs. Currently, the Sacramento River General Reevaluation Report underway is investigating both flood risk reduction and ecosystem restoration opportunities in the lower Sacramento River Basin.

With regard to reservoir operations, the Corps incorporates flexibility to consider other objectives like water supply storage when applicable. The Corps has always

relied on weather forecasting as one of a wide range of factors to determine when reservoir releases should be made or held back to meet its public safety mission and other objectives. Improved forecasting has allowed the Corps to adapt and be more agile in responding to changing conditions.

The Corps water control manuals are not static, and are continuously examined to determine if revisions are necessary based on engineering manuals and regulations. In addition, especially during times of significant drought, the Corps may allow for temporary deviations of water control manuals in order to increase water supply through conservation measures. As discussed below (Question #6), the Corps has almost completed the Folsom Water Control Manual Update project for the Folsom Dam; the update incorporates the use of forecasts in flood release operations. Lessons learned at Folsom, as well as at Lake Mendocino, could inform operations at other projects, and help the Corps and its partners achieve the multiple purposes that these reservoirs serve.

The Corps will continue to consider and evaluate opportunities for multi-purpose water management strategies at both Corps-owned and operated dams and those “Section 7” dams where the Corps may not own or operate the facility but has purchased flood pool space and provides oversight in accordance with the Water Control Manual, in consultation with stakeholders, and in accordance with law and policy.

Question. Are there any legislative barriers that hinder the Corps in assisting with drought mitigation, especially in light of the ongoing investments the Army Corps is making in California water infrastructure from a flood control and ecosystem restoration standpoint?

Answer. No. There are no legislative barriers. The Corps is closely coordinating with other Federal, State, and local partners to determine how they can help support other agencies’ objectives—such as water storage and supply—while operating within its defined main missions, which are flood and storm damage reduction, commercial navigation, and aquatic ecosystem restoration.

For example, 15 Federal, State, and local agencies have agreed to coordinate with one another to identify and potentially implement compatible Federal and non-Federal actions in the Yolo Bypass to achieve multiple public benefits, including flood risk reduction, fish and wildlife habitat restoration, water quality and supply improvements, agricultural land preservation, recreation.

Question. In general, what is the Corps doing to help with drought conditions in California?

Answer. The Corps has collaborated and communicated with the State, resulting in conservation measures in some California reservoirs, which, in turn, has helped to mitigate the effects of the drought on urban, agricultural, and environmental sectors.

Below are some of the Corps ongoing activities:

Water Management.—The operations manuals for many Corps dams includes a specific subset of instructions for drought conditions that allow flexibility in making flood releases from the Corps “flood control space” while the drought continues. The Corps water management team is fully engaged with other State and Federal agencies regarding operations and conditions, and is responsible for responding to deviation requests from our local water partners at Corps-owned dams. Water releases are closely coordinated and managed with local water users, power generating partners, and the Corps water management team, including times when drought conditions dictate that water releases fall below required or recommended flows.

Emergency Operations.—Under the Flood Control and Coastal Emergency Act (Public Law 84- 99, as amended), the Corps can provide emergency water assistance due to drought. The Corps has the authority to transport emergency water supplies of clean drinking water for human consumption to any locality designated as a drought distressed area. Affected localities also have the option of purchasing storage space where available at Corps reservoirs. Also, the Corps is authorized to construct wells in drought distressed areas if the option is not commercially available.

Regulatory Division.—During drought conditions, local water interests may consider temporary and permanent measures to improve water extraction such as pumps, siphons, wells, and dredging. Most activities fall under the Corps Nationwide Permit Program or the District’s general permit for emergency actions, pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

In some emergency situations, procedures may be approved by the Corps to issue a permit more quickly following informal coordination with resource agencies. For example, the Corps expedited a permit that allowed the California Department of Water Resources to construct a large temporary drought barrier in June 2015 to hold back saltwater from the interior Delta, and thus protect its freshwater supply.

Contracting.—PL 84–99 emergency response requests typically come with a contracting component—such as contracting for emergency services, supplies, construction, or system design. Contracting Division has the authority to streamline the contracting process where appropriate. Additionally, the Corps could modify existing contracts to change water use or conservation measures at our sites.

Real Estate Division.—Where needed, the Real Estate Division is authorized to procure land or buildings that might be needed to store water for pumping or for staging water bottle distribution.

The Corps currently has a deviation to the water control plan in effect for Whittier Narrows Dam for the purpose of water conservation. Last flood season the Corps had a short-term deviation in effect for Prado Dam and the Corps is considering a request for a 5-year deviation for Prado Dam. The deviations allow the Corps to impound additional water for water conservation purposes. In fiscal year 2016, Whittier Narrows Dam conserved 1,300 acre-feet of water from the deviation. Similarly, Prado Dam conserved 7,300 acre-feet.

BENEFICIAL USE OF CLEAN DREDGE MATERIAL

Question. I understand that more than 400 ports and 25,000 miles of navigation channels are dredged throughout the United States to keep ship traffic operating efficiently. The operations and maintenance of our ports falls under the jurisdiction of the Army Corps of Engineers.

Aquatic ecosystem restoration is also a critical mission of the Army Corps. Coastal resilience projects, like wetland construction, often require additional clean sediment material. This is true in many places all along the California coastline.

It seems to me that there is an opportunity here for a “win-win” scenario by using clean material dredged from ports for ecosystem restoration projects that have a need for additional dredged material.

Secretary Darcy, does the Corps have a process for pairing up projects so that material dredged from one project can be used in a second project?

Answer. Yes. There is coordination across Corps mission areas that can reduce overall costs. The beneficial use of dredged material is considered when and where practicable. The Corps also has a Regional Sediment Management Program to establish regional management strategies and link sediment management actions at authorized Corps projects. Management activities with other Federal agencies, State, and local governments are coordinated within the boundaries of physical systems, including inland watersheds, rivers, estuaries, and the coast.

Question. Given the need for dredged material in ecosystem restoration projects, does the Army Corps currently view dredged material as a resource, rather than just as a waste product from waterways?

Answer. Yes. The Corps considers dredged material as a resource and has been using dredged material beneficially for decades. There are numerous examples of the Corps using dredged material to nourish eroding shorelines and create offshore berms to reduce wave energy and provide a sand source for littoral drift. Dredged material has also been used to create wetlands, oyster reefs, submerged aquatic vegetation, bird islands, and other aquatic habitat, as well as to restore Brownfields, cap landfills, and enrich soil for agriculture. Dredged material has even been used as a construction product. Examples include restoration of the Middle Harbor Enhancement Area using dredged material from the Oakland Harbor project; construction of the Senator Paul S. Sarbanes Poplar Island Ecosystem Restoration project with dredged material from the Baltimore Harbor & Channels project; restoration of wetlands in the Mississippi River Delta using dredged material from the Mississippi River Baton Rouge to the Gulf project; and the use of sand from many coastal projects to re-nourish beaches and reduce erosion. While many of these beneficial use alternatives can be costly, some can be accomplished as the least cost alternative.

Question. Are there any barriers to using dredge materials more productively other than cost?

Answer. There are many factors that must be considered in deciding whether or not dredged material can be used beneficially, and where the material can be placed. These include, but are not limited to, the type of material (whether it is sandy, rocky, fine-grained, etc.), whether or not there is contamination in the dredged material, the needs of any biological resources that would be benefitted, time of year restrictions for the dredging and placement activities, and type and availability of equipment required to place the material. For instance, it is not good practice to use fine-grained or contaminated material to re-nourish beaches or create oyster bars.

UPDATING DAM OPERATION MANUALS

Question. The technical decisions made by reservoir operators regarding when to release water have become particularly important during the prolonged California drought. We want to make sure that we are not wasting even a single drop of water by releasing it when we don't have to.

In California, I understand that many regions receive a large portion of their annual rainfall from intense, but geographically narrow storm events called Atmospheric Rivers.

It seems to me that if we are better able to predict these storm events and the amount of precipitation they bring, we would be able to make more informed decisions about how we operate and manage our dams and reservoirs.

I believe this is another instance of bureaucratic inertia rather than prioritization of the latest science. We must ensure that the Federal Government is actually using the latest science to make informed water decisions.

Secretary Darcy, how is the Corps incorporating the latest science regarding Atmospheric Rivers into the way it operates dams?

Answer. The Corps is closely following the latest science on Atmospheric Rivers. In operating Corps-owned dams, and in managing flood releases at Section 7 dams, the Corps has incorporated the latest science. Corps dams are designed for extreme weather events. Given the fact that the Corps dams are designed for the extreme events, the agency must also balance the needs for flood control and other authorized purposes, relying heavily on several tools to ensure that the water conservation efforts do not compromise the safety of the dam. Such tools include: (1) Weather forecasts from the National Weather Service and private weather contractors; (2) Flow forecasts from the River Forecast Center; and (3) Corps Water Management System (CWMS) numerical models that can predict the water level at the dams from forecasted precipitation.

The Corps continues to evaluate its portfolio of dams with regard to risk and vulnerability to an array of potential scenarios that might impact the overall safety of the facilities. This could be attributed to a host of factors, including extreme design events and loading scenarios, as well as hydrologic and seismic events, and pertinent maintenance challenges associated with aging infrastructure. One of the contributing factors that is evaluated is the development of inflow frequency curves that explore the full range of loading conditions (including extreme events). This will help dam operators estimate how frequently the extreme events occur at each dam and how those loading events influence decisions with respect to Federal investment strategies to address infrastructure needs. Specifically, the Corps has almost completed the Folsom Water Control Manual Update project which is incorporating the use of forecasts in the flood release operations rule set for that Section 7 reservoir.

The Corps is currently participating in a 5-year research study to investigate use of the latest science in forecasting of the Atmospheric Rivers. If promising, the results of the study could be incorporated into operation of reservoirs. The study is known as the Forecast-Informed Reservoir Operations (FIRO) research in Lake Mendocino, and it is a pilot study that would use atmospheric river (advanced hydro-meteorological) forecasting data to inform water management decisions in a manner which reflects current and forecasted conditions. The study was scoped in 2014, and began in 2015. The research is projected to be a 5-year effort, and the results may indicate whether this technology can be applied in actual operations of certain projects. The Corps is participating in this pilot project with a consortium led by Scripps Center for Western Weather and Water Extremes, along with the Sonoma County Water Agency, California Department of Water Resources and State Climate Office, Bureau of Reclamation, NOAA's National Weather Service, Earth Systems Research Laboratory, and Restoration Center, USGS, and the private sector.

Question. How does the Corps prioritize which dam operations manuals need to be updated and when?

Answer. Updates are prioritized based on several factors, such as significance of the changes to original design components, operations, hydrology, environmental changes and/or a need to evaluate proposed changes to existing water control plans, vulnerability of the populations downstream of the dam, and interest from downstream partners. Prioritization of water control manual updates must also be made alongside other competing demands within the Corps budget.

Question. What is the Army Corps' basis for refusing to accept non-Federal contributions to pay for upgrades to these flood control manuals?

Answer. The Corps can—and does—accept funding to update manuals for Corps-operated and maintained dams. Paragraph (5)(B) of Section 1046(a) in WRRDA

2014 states, “The Secretary [of the Army] may accept and expend amounts from non-Federal entities and other Federal agencies to carry out this subsection and reviews of project operations or activities resulting from those reviews.” This only applies to projects that are “operated and maintained by the Secretary [of the Army]”, meaning projects operated and maintained by the Corps of Engineers. Section 1046 does not allow the Corps to accept funds for projects operated and maintained by other agencies.

Question. How is the Corps ensuring that rigid water release schedules do not undermine other Federal efforts to increase water storage?

Answer. The Corps uses operational flexibility afforded by the water control manuals to store water for the longest period of time possible, helping meet the needs of partners without compromising the flood control mission. The water release schedules prescribed by the Corps consider the most recent forecasts available as well as the results of coordination with our partners. Water release schedules are reevaluated on a 6-hour basis during flood events and daily during non-flood events to ensure that changes to the reservoir, stakeholder concerns, and forecasts are appropriately considered. The Corps also has a process for deviations from control plans, outlined in “Guidance on the Preparation of Deviations from Approved Water Control Plans,” Regulation No. 10–1–04, dated 18 December 2014. This allows the Corps to operate reservoirs to meet flood control requirements while considering other objectives, such as increased water storage.

Question. How has California’s drought affected the Corps’ management of Federal dams?

Answer. In general, the drought decreased the amount of water coming into and being stored in Corps reservoirs, which reduced the number of occasions where water was released solely for flood control reasons. It has also showcased the importance of coordination with partners, especially when the storage levels in the reservoirs entered the flood control space. Consistent communication between the Corps and its partners has helped keep all parties aware of upcoming water demands, inflow and precipitation forecasts, and changes to reservoir release schedules.

Question. When updating operation manuals, is the Corps accounting for its other missions, like aquatic ecosystem restoration, to ensure that water storage and releases benefit the California water system in multiple ways?

Answer. The Army Corps always considers its missions and the reservoirs’ authorized purposes, including when updating water control manuals. The Corps works collaboratively with Federal and non-Federal partners to update water control manuals to identify and incorporate benefits for different missions, and Corps partners have opportunities to provide comments before any documents are finalized.

MERCED ARMY CORPS PROJECT

Question. Merced County, a rural county in California, has been struggling for years to complete project elements of the Merced Streams Group that was authorized in 1944. One major project element of the Merced Streams Group that is yet to be completed is a flood control system on the Black Rascal Watershed.

It is my understanding that the project has remained stalled due scarce Federal resources, delays, and errors on the part of Corps district staff.

In 2013, the Corps advised Merced County that it could use local dollars to move forward with a cost share agreement. In 2015, however, the Corps reversed its position and said only Federal funds could be used.

Secretary Darcy, can you explain the current situation with Merced County and what needs to be changed to allow them to use local dollars to advance the project?

Answer. Pursuant to the Corps’ contributed funds authority (33 U.S.C. 701h), the Corps may accept such funds only if Federal funds have been appropriated for the study. That has not occurred because studies elsewhere in the Nation were considered a higher priority for the available Federal funds. In addition, the proposed work was considered in formulation of the original Merced County project authorized by the Flood Control Act of 1944 (Public Law 78–534). It was not part of the recommended plan due to concerns involving impacts to federally listed species.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Assistant Secretary Darcy, on February 11, 2016, I sent you a letter signed by 13 of my colleagues asking the Army Corps to finalize and publish implementation guidance for Section 2106 of the Water Resources and Development Act (WRRDA). WRRDA was signed into law in June 2014. This Subcommittee secured \$25 million in funding for Section 2106 in the fiscal year 2016 Omnibus Appropria-

tions bill. And yet, the Army Corps has still not completed implementation guidance. It is critical that this is done as soon as possible so that eligible ports have access to the appropriated funding and can maximize the effectiveness of Section 2106. When do you expect to issue guidance for Section 2106? Has the Army Corps met with eligible ports to understand how Section 2106 funds could be maximized on a port by port basis?

Answer. The Corps expects to finalize implementation guidance for Section 2106 in the coming months. Individual Corps districts coordinated with eligible ports to determine how they would utilize the Section 2106 funds. In addition, the Corps Headquarters has been working to develop criteria to allocate those funds, in consultation with the American Association of Port Authorities. Corps Headquarters has also been consulting with U. S. Customs and Border Protection on how payments will be made to shippers and importers in those cases where ports elect to provide those payments.

Question. Congress created Section 2106 so that donor ports and energy transfer ports can better address competitiveness by maintaining infrastructure through expanded uses and environmental remediation and by establishing a rebate program for importers and shippers to reduce cargo diversion to non-U.S. gateways. It is critical that the Army Corps provide ports the necessary flexibility to target the rebate program to cargo that is most at risk of diversion to non-U.S. ports. How will the Army Corps work with eligible ports to address cargo diversion? With respect to infrastructure improvements through expanded uses and environmental remediation projects, how will the Army Corps ensure eligible ports can define project parameters and contract the work themselves to ensure timely and cost effective project delivery?

Answer. Section 2106 specifies that payments may be provided to importers entering cargo or shippers transporting cargo through that port. The Corps has no authority to provide ports the flexibility to target the rebate program to cargo that is most at risk of diversion to non-U.S. ports. The Corps will issue implementation guidance and work with the ports to define the process and infrastructure improvements under expanded uses and environmental remediation projects, whether the ports decide to perform the work themselves or have the Corps perform the work for them.

Question. Washington State is the leading shellfish producing State in the Nation, employing over 2,700 people around the State, including in rural areas. The Army Corps, through the Seattle District, regulates the shellfish industry under Clean Water Act and Endangered Species Act authorities. In 2007, the Army Corps adopted Nationwide Permit 48 (NWP 48) to permit existing shellfish farms, and an updated NWP 48 was adopted in 2012 to cover shellfish farms through March 2017. Since 2007 and the initial NWP 48, Washington growers have submitted approximately 1,000 requests for NWP 48 verification. I am very concerned by reports that none of these requests have been approved.

The commercial shellfish industry contributes over \$184 million annually to the Washington State economy, and shellfish are important economically and culturally to tribal and non-tribal harvesters. In all industries, including shellfish growing, certainty for participants is important for success. I understand that the Army Corps is working with Federal partners, including the National Marine Fisheries Service and U.S. Fish and Wildlife Service, to complete action on Endangered Species Act permitting requirements through a Programmatic Biological Assessment. Can you provide me with an update on when this process will be completed? How does the Army Corps plan to communicate with the regulated community as the Programmatic Biological Assessment is being finalized and once the regulations have been implemented on how they can obtain verifications?

Answer. At this time, a Section 7 ESA consultation is underway between the Corps and the National Marine Fisheries Service and U.S. Fish and Wildlife Service (the Services) for aquaculture activities. This consultation is the result of several years of coordination among the Corps and the Services. Once this consultation is completed, many activities with pending requests for verification under NWP 48 may be verified. Any automatic verification of the pending projects before completion of this consultation would not be compliant with the Endangered Species Act or the "endangered species" general condition for the NWPs. Both the Services have indicated they will complete their consultations this spring.

Question. I also understand the Army Corps is reviewing options to update regulations of shellfish growers under the Clean Water Act. As this effort continues and potential pathways are explored, can you share your plan for communication and engagement with interested stakeholders, including the State of Washington, Federal agencies, shellfish growers, and tribes? Increased transparency and communication with interested parties, including explanations of regulatory authority under

the Endangered Species Act and Clean Water Act, are of great interest to me and I ask that you submit an update and expected timelines on these efforts to me in writing.

Answer. Following receipt of the final Biological Opinions, the Corps' Seattle District intends to host an open house to explain to shellfish growers and all other interested parties the conditions of the Biological Opinions and the next steps for the pending applications.

Question. The Army Corps, through the Northwest Division, plays an important day-to-day role in implementing the Columbia River Treaty as a member of the U.S. Entity. The U.S. Entity engaged in a multi-year process with tribal nations and domestic stakeholders throughout the Pacific Northwest to reach a regional consensus to modernize the Columbia River Treaty. The "Regional Recommendation for the Future of the Columbia River Treaty after 2024" was presented to the Administration in December 2013, and the Administration has since developed a high-level consensus position for negotiations with Canada based upon these recommendations.

Twice the entire Northwest Congressional Delegation wrote the Administration asking to begin formal negotiations with Canada. Unfortunately, we keep being told negotiations could begin soon and little progress has been made.

Assistant Secretary Darcy, my constituents are greatly concerned about the impacts a change in Administration may have on these negotiations. I urge you to encourage the Administration to begin formal negotiation with Canada as soon as possible.

Answer. The U.S. Army Corps of Engineers, Northwestern Division Commander, as a member of the U.S. Entity for the Columbia River Treaty, has informed the Department of State that the U.S. Entity is ready to support and assist in the negotiations with Canada on the future of the Columbia River Treaty.

Question. Assistant Secretary Darcy, as we have previously discussed, the Mud Mountain Dam project is of great importance to me, my constituents, and Washington State. I appreciate the time and energy you have put into finding a path forward with NOAA to ensure the Army Corps meets its Endangered Species Act and tribal trust responsibilities by replacing the diversion dam and building a new fish trap facility.

While I am pleased that the fiscal year 2017 budget request provides \$22.35 million and a construction new start for Mud Mountain Dam, I firmly believe this project is not a new start. Similar projects have not been subject to this hurdle, for example the Columbia River Fish Mitigation and Missouri River Recovery Program projects. Replacing the old barrier structure and fish trap facility is a continuation of the Army Corps' Endangered Species Act and tribal trust responsibilities and are simply requirements to mitigate the original construction and ongoing operation of Mud Mountain Dam for flood control.

Assistant Secretary Darcy, how is the Mud Mountain Dam project different than the Columbia River Fish Mitigation or Missouri River Recovery Program? Can you explain why a Biological Opinion which will bring an existing Army Corps project into compliance is a new start? Further, I ask that you work with me to ensure there are no funding gaps for this critical project if Congress passes a Continuing Resolution before a full-year fiscal year 2017 appropriations measure.

Answer. Multiple construction actions have been occurring over numerous years on the Columbia and Missouri in an effort to mitigate the impacts of ongoing operation of Federal projects to threatened and endangered species and their habitat, while at Mud Mountain Dam the plan is to initiate new construction to replace a 100-year old facility. The Mud Mountain Dam was determined to be a new start due to the scope and cost of this new investment.

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

Question. After many years of strong support from the Army Corps, there was no funding for continuation of construction of the McCook Reservoir of the Chicagoland Underflow Plan in the Administration's fiscal year 2017 Budget. The project was authorized in 1988, and the Army Corps' own documentation since then shows that it has always been considered one flood protection project, and it has consistently received funding. The reservoir provides \$100 million in annual benefits to 3.1 million people in 37 counties, including the City of the Chicago. It is 65 percent complete, and enjoys a three to one benefit cost ratio. Stopping construction of this project does not make sense.

Why was funding discontinued in the President's budget? Will you commit to seeking its inclusion in the Army Corps' fiscal year 2017 work plan?

Answer. The 2016 Corps work plan added \$5 million above the Budget level in order to provide the full amount that the Corps estimated it would need to complete “Stage I” of the McCook Reservoir project. The December 2011 consent decree with EPA and the Department of Justice requires the Metropolitan Water Reclamation District of Greater Chicago (MWRD) to ensure that the first of two McCook Reservoirs is in operation by December 31, 2017. The focus of the Corps funding to date has been to help MWRD meet its December 31, 2017 deadline by constructing part of the infrastructure called for in the consent decree. The Corps has now funded all of the authorized Federal share of that work, which will enable MWRD to collect and hold combined sewer overflow in this reservoir during a storm.

The 2017 Budget does not include funding for “Stage II” of the McCook Reservoir project. Should the Congress provide additional funding for which this project would qualify, this project would be considered for funding in the 2017 Corps work plan along with other programs, projects, and activities across the Nation in competition for the available Federal resources.

Question. Investment in flood prevention in the Metro East region, including protecting our levees, is vital to protecting Metro East communities.

Will the Assistant Secretary commit continued open dialogue with the local Flood Prevention District? Will the Assistant Secretary commit to providing regular updates to me or my staff as they happen?

Answer. The Metro East levee system consists of 75.8 miles of levees located in Madison, St. Clair, and Monroe Counties in Illinois. The Corps is working on this project with the Southwestern Illinois Flood Protection District Council (FPD) and the local levee districts to reduce the risk of under-seepage at these levees. The Corps welcomes the views of all interested parties, including the FPD, the local levee districts, and the public. Should the FPD or the local levee districts have any questions or concerns, they may contact the Corps at the district office, division, or headquarters levels, or my staff. The Corps provides periodic updates to my office on this project. I would be happy to work with you and your staff as well, in order to help keep you informed of the project status.

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL THOMAS P. BOSTICK

QUESTIONS SUBMITTED BY SENATOR JAMES LANKFORD

Question. Section 1024 of WRRDA provides that the Corps can accept materials and services from a non-Federal entity in an emergency situation if the Secretary deems it to be in the public interest. Considering maintenance needs of Corps assets system-wide, this would seem to be a good opportunity to leverage stakeholder resources. It is my understanding that this section has not yet been implemented.

Does the Corps have draft implementation guidelines yet? Could we have a copy?

Answer. The Corps is currently preparing implementation guidance for Section 1024 of WRRDA 2014.

Question. Has this information been shared with stakeholders that depend on waterway systems to ensure it is workable from the private partner perspective?

Answer. The Corps has discussed this provision with interested stakeholders. Their input is being taken into consideration during the preparation of the implementation guidance.

Question. How does the Corps interpret “emergency”? With substantial maintenance needs across the system, it is very possible that failures could occur outside of a situation in which there is an emergency declaration. Would these types of failures be eligible for private repair funding?

Answer. Section 1024 authorizes the acceptance of materials and services to repair, restore, or replace a water resources development project that has been damaged or destroyed as a result of an emergency. Section 1024 is not limited to situations where there has been an emergency declaration by the President.

The Corps does not view Section 1024 as allowing the Corps to accept services or materials to address general repair and maintenance needs. However, the Corps is authorized under 33 U.S.C. 701h to accept contributed funds from non-Federal public entities and from nonprofit entities, with the consent of the affected local Government, for that purpose.

Question. Has the Corps settled how to handle issues regarding who liable for damage or injuries caused during emergency repairs using private funds? Do you have all the authority you need to settle questions over liability and licensing?

Answer. Yes, we have all the authority needed to resolve questions over liability and licensing. Based on discussions with stakeholders, we expect to be able to address this concern.

Question. What is the timeline for having guidelines in place and allowing private partners to assist with emergency repairs?

Answer. This guidance is being developed and we anticipate issuing it later this year.

Question. Stakeholders in Oklahoma have expressed an interest in allowing assets to be used by the Corps at no cost, but have been told that regulations prohibit them from accepting use of resources. For instance, private entities may have a dredge that they would like to offer to the Corps to use upon request. What is the rationale for not accepting this assistance?

Answer. In general, the Corps needs specific authority to use equipment being provided at no cost, rather than obtaining such equipment using Federal procurement authorities and regulations. We anticipate the Corps would in many cases be able to accept and use a dredge provided for the purpose of repairing or restoring a project damaged or destroyed as a result of an emergency under Section 1024, but cannot answer more specifically until the implementation guidance is issued.

Question. In the 2014 reauthorization of the Water Resources Reform and Development Act (WRRDA), Congress included a provision requiring the Corps to conduct an assessment of all of their properties to determine which are “not needed for the mission of the Corps of Engineers” (Section 6002). The intent of this language was to assess how Congress could help unburden the Corps from the considerable backlog in maintenance needs.

In the hearing, it was stated that the Corps has not yet started this assessment. When will this task be undertaken? When can we expect to see the draft report? When can we expect to have the final report?

Answer. Implementation guidance for Section 6002 of WRRDA 14 was issued on August 7, 2015. The Corps periodically reviews the need for the Federal properties at its projects and uses existing property disposal methods for those properties if they are no longer needed to accomplish the agency mission. These efforts are ongoing.

Question. The Corps has previously shared that the disposal process for unneeded properties is so cumbersome and costly that it is often easier and less expensive in the short run to simply maintain unneeded assets. Would granting the Corps disposal authority independent of GSA assist in making the disposal process more manageable? What does the Corps need from Congress to be able to divest of unneeded assets in a cost-effective manner?

Answer. Generally, GSA is responsible for the disposal of real property that is no longer mission-critical to Federal agencies. This authority works well for land and general use improvements. In some cases, the Corps will seek to dispose of lands associated with a project as part of an effort to deauthorize the project. In those cases, the Corps generally would perform a study and seek deauthorization of the project prior to submitting the disposal package to GSA. These studies evaluate environmental concerns, safety concerns and the concerns of non-Federal interests. New processes are now in place to reduce the time required to fund, study and make recommendations as appropriate addressing the proposed end state of the project. To further reduce the timeline, future studies will include a recommended disposal plan, where feasible, for Congressional consideration. The 2016 Corps work plan and the 2017 Budget included funding for studies on the disposition of assets that no longer have a strong Federal interest; the Corps has completed the first of these studies and is preparing to start five more in 2016.

Question. The Corps was directed to produce a list of at least \$18b in projects that are eligible for deauthorization because a significant amount of time has lapsed without getting funded. This list was produced in October of last year and found a sizable—\$14b—amount of old, unfunded projects. An earlier report from GAO found that the Corps does not have written guidance for their districts requiring them to track studies and projects that have been authorized but not funded, leading to incomplete information regarding projects that may be eligible for deauthorization.

Has the Corps provided a written policy for districts to follow regarding cataloging all authorized projects and studies? If it has not, when will an internal policy setting how to track this information be set? Will the Corps then reassess the deauthorization list?

Answer. Yes, the Corps provided written implementation guidance to its divisions and districts for Sections 6001 of the Water Resources Reform and Development Act of 2014 and Section 1001 (b) (2) of the Water Resources Development Act of 1986, as amended. The Corps is developing an authoritative database for authorized projects and will use it to provide the Backlog Report and annual Minimum Funding Lists in accordance with Section 6001. As projects are identified for deauthoriza-

tion eligibility they will be included in future annual deauthorization processes consistent with amendments to Section 1001 (b)(2).

The Corps is currently developing written guidance for deauthorizing studies in accordance with Section 710 of WRDA 1986, and is developing an authoritative database of studies to support this effort.

Question. Does the list published in the Federal Register in October 2015 reflect information gathered from all of the districts?

Answer. Yes, the list published in the Federal Register in October 2015 reflects information gathered from all of the Corps districts.

QUESTIONS SUBMITTED TO ESTEVAN R. LÓPEZ

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

Question. Please explain why the Bureau of Reclamation (Reclamation) did not require any new data in 2004, when it changed the Technical Memorandum and currently does not require data regarding the performance of steel water pipe or ductile iron pipe with bonded dielectric coatings in highly corrosive soils but requires significant data regarding other corrosion protection methods for ductile iron pipe.

Answer. Reclamation prepared the Technical Memorandum (TM) in response to Congressional direction received in 2003 (H.R. REP. NO. 108-212, at 106) (2003),¹ and it was first published in 2004. The data as well as the recommendations in the TM encompass all types of buried metallic pipe. Reclamation's technical staff reviewed and evaluated industry standards, national consensus standards, independent engineering studies, and performance data from Reclamation projects as well as other Federal and non-Federal pipeline owners and water utilities. Reclamation also met with representatives from the Ductile Iron Pipe Research Association (DIPRA) in May of 2003 and January of 2004 to discuss technical issues and literature regarding corrosion mitigation of ductile iron pipe prior to publication of the TM. Reclamation also indicated that any other information DIPRA wished to provide would be welcomed.

Reclamation evaluated the technical content of the available literature, the thoroughness of the analyses, the reasonableness of the conclusions, and finally, the likely objectivity of the author(s). Reclamation then used its best technical judgment to perform what we believe is a balanced assessment of the available information and to develop a reasonable set of recommendations designed to meet Reclamation's 50-year minimum project service life.

During this evaluation, Reclamation found a number of respected studies which raised significant technical concerns regarding corrosion under unbonded dielectric coatings, including polyethylene encasement (PE). Reclamation also found that the effectiveness of PE had been the subject of debate within the pipeline and corrosion industries for years and that the results of engineering studies on the subject differ widely. In addition, Reclamation found that many professionals in these industries question the effectiveness of a cathodic protection system to counter the effects of corrosion under intact PE.

As a result of that review, Reclamation concluded that many corrosion engineers believe that buried pipes, which need a high level of corrosion protection, should have a bonded dielectric coating and cathodic protection. This conclusion is supported by the National Association of Corrosion Engineers' (NACE) International Standard Practice SP0169 "Control of External Corrosion on Underground or Submerged Metallic Piping Systems".

During its evaluation of these analyses and data, Reclamation balanced these technical concerns against the relatively good performance record of ductile iron pipe with PE and recommended the use of PE on all sizes of ductile iron pipe in all but the most severely corrosive environments (i.e. soil resistivity ≤ 2000 ohm-cm).

¹The relevant text from the House Report states: "The Committee is concerned that the Bureau of Reclamation is not adhering to its guidelines, described in the "Corrosion Prevention Criteria and Requirements", with respect to the use of ductile iron pipe and steel pipe. With respect to both products, the Bureau of Reclamation should be attempting to establish good engineering practices which address the long-term value and cost effectiveness of facilities constructed over time. The Committee recognizes that additional work is needed to develop a more definitive corrosion standard on which to decide the best product for a particular application. Accordingly, the Committee directs the Commissioner of Reclamation to conduct a study on the current corrosion criteria and to report to the Committee on Appropriations by March 1, 2004, on its recommendations for a more definitive standard. Until a more appropriate standard is in place, which reflects the basic principle of long-term cost effectiveness, the current criteria should continue to be used."

In those severely corrosive environments, bonded dielectric coating and cathodic protection (CP) was recommended for all metallic pipe types (including ductile iron pipe).

Based on this work, Reclamation prepared a draft of the current TM and sought review from a variety of sources. Reclamation employed a Consultant Review Board (CRB) to conduct an independent technical peer review of Reclamation's draft TM. To staff the CRB, Reclamation contracted with two private sector corrosion engineers from CH2M Hill and Schiff and Associates, as well as a materials scientist with the National Institute of Standards and Technology (NIST). In addition, a contract was issued for two additional materials scientists with NIST to serve as independent "referees" to evaluate the three reviewers' conclusions. After incorporating the CRB's input, the updated draft TM was sent out for Reclamation-wide review in May, 2004.

In July, 2004, Reclamation met with representatives of DIPRA to discuss the Design Decision Model (DDM) for selection of a corrosion control system on ductile iron pipe which DIPRA had developed in concert with CORRPRO (a large corrosion control company). Reclamation's process to evaluate the information in DIPRA's presentation was the same process used to evaluate all other technical reports we reviewed in preparation of the TM (i.e., Reclamation evaluated the technical content of DIPRA's presentation, the thoroughness of the analyses presented, the reasonableness of the conclusions, and finally, the likely objectivity of the author(s)). The comments from the Reclamation-wide review and DIPRA's input were incorporated, and the TM was finalized later in July, 2004.

Reclamation has remained actively engaged in this issue since the 2004 TM was issued. We continue to monitor technical literature on this subject and actively seek additional viewpoints from other organizations. Through these efforts, we have discovered many other organizations have concerns with the use of PE on ductile iron pipe. These organizations include non-Federal water resource agencies and other Federal agencies such as the Department of Transportation (DOT), Department of Defense, the Environmental Protection Agency, and the U.S. Army Corps of Engineers. Reclamation continuously seeks information on this issue by having its technical staff serve on national technical society committees such as the American Water Works Association (AWWA) Standards Committee A21 "Ductile Iron Pipe" and the NACE International Task Group 014 "Corrosion and Corrosion Control for Cast-and Ductile-Iron Pipe."

In the judgment and expertise of Reclamation, the technical positions outlined in the TM are fundamentally sound and represent a reasonable position in light of the available data, industry standards and practice, and scientific understanding of the issues. The 2008–2009 National Academy of Science's (NAS) review of the TM concluded that ductile iron pipe with PE and CP is not likely to provide a reliable 50-year service life in severely corrosive soils ($\leq 2,000$ ohm-cm) and bonded dielectric coating with CP would be more effective. In reaching this conclusion, the committee evaluated data from all sources, including the DOT data provided by Reclamation and the data and analysis provided and presented by DIPRA.

The NAS report confirms Reclamation's concern with the durability of ductile iron pipe with polyethylene encasement and cathodic protection installed in severely corrosive soils. Also, while the NAS committee could not assure that Reclamation's recommended corrosion protection system (bonded dielectric coating with cathodic protection) would provide a reliable 50-year service life for ductile iron pipe installed in these soils, the report does state that this system substantially improves the chances of achieving this level of reliability.

Reclamation agrees the collection of additional performance data recommended by the NAS committee will be beneficial as the agency seeks to refine its technical position in an updated TM. Reclamation has awarded a Grant Agreement to collect and compile water pipeline field performance data to Virginia Polytechnic Institute and State University (Virginia Tech). This agreement has a completion date of December 31, 2017.

During a July 2015 meeting between Reclamation, and representatives from the ductile iron pipe industry, DIPRA proposed that Reclamation change its corrosion prevention criteria for ductile iron pipe in soils having resistivity values equal to or less than 2,000 ohm-cm from bonded dielectric coating and cathodic protection, to a zinc metallizing with enhanced polyethylene encasement (V-BIO) and cathodic protection. Following the meeting, DIPRA provided several documents to support their position that their proposal would perform well in severely corrosive soils.

Reclamation's review of the submitted data focused on ascertaining the data covering field performance of zinc coated ductile iron pipe in severely corrosive soils. However, the majority of the supplied data was in reference to the use of conventional polyethylene encasement to protect ductile iron pipe in corrosive soils. Of the

few documents submitted in support of zinc coated pipe, the majority of them were very old references published in the 1970s and 1980s that provided limited performance data. Also, none of the documents addressed the long-term performance of enhanced PE (V-BIO), and none addressed the performance of the proposed combination of zinc metallizing, V-BIO, and cathodic protection. Based on this review, Reclamation concluded that while zinc or zinc with PE may provide some improvement over bare pipe or pipe with PE wrap alone in some soils, there is no evidence that this system will provide the same level of long term protection as a bonded dielectric coating with cathodic protection in severely corrosive soils.

The fiscal year 2016 Consolidated Appropriations Act (PL 114–113) directed Reclamation to contract with one of the Department of Energy’s (DOE) national laboratories with expertise in materials and corrosion disciplines to develop performance data for zinc-coated ductile iron pipe applications in highly- or severely-corrosive soils. The laboratory will also independently evaluate and recommend, based on the performance data and any other relevant data or information the laboratory may obtain, whether the material meets the corrosion protection requirements in the TM. On May 11, 2016, Reclamation awarded an Interagency Agreement to DOE’s Oak Ridge National Laboratory to perform this study.

Question. Is it Reclamation’s position that data is not required for a method of corrosion protection if there is a national or international standard for that method of corrosion protection?

Answer. Yes, Reclamation uses national consensus standards to guide its technical decisions where the use of those standards is practicable. Where those standards do not exist, do not address Reclamation’s technical needs, or conflict, Reclamation develops its own internal technical documents to guide the development of designs for Reclamation designed and/or funded projects. It is Reclamation’s position that methods and practices contained in a national standard have more weight than methods that are provided for information only and specifically identified as not being a part of the national standard.

—For example: The NACE International Standard Practice SP0169, “Control of External Corrosion on Underground or Submerged Metallic Piping Systems,” presents acknowledged practices for the control of external corrosion on buried or submerged steel, cast iron, ductile iron, copper, and aluminum piping systems. Section 5.1.2.3 states: “Pipeline external coating systems shall be properly selected and applied to ensure that adequate bonding is obtained. Unbonded coatings can create electrical shielding of the pipeline that could jeopardize the effectiveness of the CP system.” (PE is an unbonded coating.) The AWWA Standard C105 “Polyethylene Encasement for Ductile-Iron Pipe Systems” is a material and installation standard. Appendix A of that document provides a method to determine if PE should be used for corrosion protection of ductile iron pipe systems, but is specifically identified as not a part of the ANSI/AWWA C105/A21.5 standard.

Question. Based upon significant concerns, Congress has included directives to Reclamation for 5 years regarding its Technical Memorandum. Among the concerns are that Reclamation is holding different materials to different standards and increasing project costs. In addition, Congress noted in the fiscal year 2014 Consolidated Appropriations Act Explanatory Statement for Energy and Water that “[y]et another claim that Reclamation has always been in compliance and no changes are necessary is not a satisfactory response.” Please provide the changes that Reclamation has made in the implementation of the Technical Memorandum and in the treatment of different materials to address these concerns.

Answer. The TM’s corrosion control recommendations for both steel and ductile iron pipe in severely corrosive soils are the same—bonded dielectric coating with CP.

Reclamation uses the Technical Memorandum as a starting point for its decisions relative to the corrosion protection of buried metallic pipe, but it considers other factors and resources for its technical decisions related to corrosion protection. Reclamation relies on site-specific design data such as soil chemistry, national standards (e.g. NACE SP0169 and ANSI/AWWA C105/A21.5), and engineering judgment to guide decisions on the design of corrosion mitigation measures for Reclamation’s buried metallic pipelines. The appropriate usage of the TM was reinforced by a February 24, 2010 memorandum from Reclamation’s Deputy Commissioner—Operations to Reclamation’s Leadership Team.

To allow additional flexibility in the application of the TM, Reclamation policy provides a process by which a deviation from design criteria and engineering and technical standards can be vetted and approved by the local Reclamation executive. This process, as it relates specifically to requests to deviate from the corrosion mitigation design criteria in the TM, was clarified by a March 13, 2015 memorandum

from Reclamation's Deputy Commissioner—Operations to Reclamation's Leadership Team.

Question. Please list any and all standards of evaluation (viability, betterment, etc.) that Reclamation has used to evaluate the various materials and methods of corrosion control in the Technical Memorandum from 2003 until today. Please provide the year, standard and type of material/corrosion protection.

Answer. Reclamation does not use a "betterment" standard for corrosion control of buried metallic pipe. Reclamation has identified a target performance level of zero external corrosion induced leaks/ruptures/failures which would require the pipeline to be taken out of service during the minimum service life (i.e. 50 years) for the pipelines Reclamation designs and/or funds. Reclamation believes that the target performance level is reasonable in light of the types of pipelines that it typically constructs, but one which may not always be achieved due to a variety of factors including unseen imperfections and the number of variables involved with pipe installation in the field. The materials used and the type of corrosion protection needed varies depending on design parameters and soil conditions in the installation area.

Question. Please provide any and all performance standards that Reclamation has used to evaluate the various materials and methods of corrosion control in the Technical Memorandum from 2003 until today. Please provide the year, standard and type of material/corrosion protection.

Answer. Reclamation has identified a target performance level of zero external corrosion induced leaks/ruptures/failures which would require the pipeline to be taken out of service during the minimum service life (i.e. 50 years) for the pipelines Reclamation designs and/or funds. Reclamation believes that the target performance level is reasonable in light of the types of pipelines that it typically constructs, but one which may not always be achieved due to a variety of factors including unseen imperfections and the number of variables involved with pipe installation in the field. The materials used and the type of corrosion protection needed varies depending on design parameters and soil conditions in the installation area.

Question. Reclamation has acknowledged that some adjustment is necessary for the performance figures for "significant incidents" for oil and gas pipelines in soils of unknown corrosivity in the 2008 National Academies of Science report to provide a more accurate comparison with ductile iron water pipe with polyethylene encasement in highly corrosive soils. Please provide those adjustments and the basis for those adjustments.

Answer. The noted text is taken from Section 4 of the 2009 NAS Report which concluded that ductile iron pipe with PE and CP is not likely to provide a reliable 50-year service life in severely corrosive soils ($\leq 2,000$ ohm-cm) and a bonded dielectric coating with CP would be more effective. At the start of the NAS Committee's deliberations, they asked Reclamation to provide a quantitative benchmark against which they could measure the performance of ductile iron pipe installed in severely corrosive soils with PE and CP, in lieu of Reclamation's stated target performance level of zero external corrosion induced leaks/ruptures/failures which would require the pipeline to be taken out of service during the minimum service life (i.e., 50 years).

Specifically they asked if Reclamation would accept a similar failure rate for ductile iron pipe installed in severely corrosive soils with PE and CP, as they would get from steel pipe installed in severely corrosive soils with a bonded dielectric coating and CP. Reclamation responded that this would be a reasonable benchmark which led to the NAS Committee requesting information on Reclamation's experience related to the performance (i.e., failure rates) of steel pipe installed in severely corrosive soils, with a bonded dielectric coating, and cathodic protection. In response to this question, Reclamation conducted a review of available data on Reclamation's and other organizations' pipelines.

During this review, Reclamation reached out to the U. S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety, to see if they had the quantitative performance data requested by the Committee. Reclamation acknowledges that this data was related to steel pipelines carrying materials other than water, but believes the causes and rates of external corrosion and protection against such corrosion are the same regardless of the product being carried. Reclamation therefore concluded that the DOT database was the best source of quantitative data on this issue at that time.

Reclamation focused their review of the significant incidents tracked in the database to those pipelines that most closely matched the Committee's interest (i.e., coated steel pipe installed with cathodic protection) and, like most of Reclamation's projects, were transmission lines versus smaller distribution lines. Reclamation also limited their review to significant incidents that were caused by external corrosion.

Focusing on this subset of data within DOT's database, Reclamation was able to compute an average annual failure rate for these pipelines of 0.0000444 failures per mile per year (based on about 93,000 miles of installed steel pipe). Using the results of this analysis, a 450-mile long steel pipeline installed with coating and cathodic protection could be expected to experience one failure due to external corrosion during the first 50 years of service.

The DOT database does not include information on the soil conditions in which the pipelines are installed, so Reclamation was not able to further screen the data to include only pipe installed in severely corrosive soils. At that time, Reclamation noted that it was not able to quantify the impact this issue would have on the calculated performance data noted above, but some adjustment to the computed failure rate may be warranted to compensate for this uncertainty in soil conditions across the data set. However, as Reclamation also noted, even with an adjustment to the computed failure rate, it believed the analysis supported their original response to the Committee's question of what Reclamation defines as reliably providing a minimum service life of 50 years for our pipelines.

The data gathering and analyses currently being planned pursuant to the grant agreement awarded to Virginia Tech to collect and compile water pipeline field performance data should provide more useful data.

Question. Please explain why Reclamation used the performance of oil and gas pipelines in soils of unknown corrosivity as a proxy for the performance of steel water pipe in highly corrosive soils in a life cycle analysis when Reclamation had data regarding steel water pipelines in highly corrosive soils at the time it used the oil and gas data.

Answer. The life cycle analysis was conducted in August 2009 using best available data at the time. As stated in Commissioner Connor's letter to DIPRA dated January 29, 2010, "Our analysis showed the present worth of these additional capital costs for CP along with the additional OM&R costs associated with long term operations of the CP system was about 5 percent of the total project cost. Thus, the life cycle cost of a cathodically protected ductile iron pipeline with polyethylene encasement was about 5 percent higher than the life cycle cost for a similarly protected steel pipeline with a bonded dielectric coating. A summary of these analyses is shown in Attachment 3." Referring to Attachment 3, Scenario 3 which removes pipe repair costs from the analysis, the life cycle cost of a cathodically protected ductile iron pipe with polyethylene encasement was calculated to be 4.7 percent higher than the life cycle cost for a similarly protected steel pipe with a bonded dielectric coating. Reclamation's conclusion from their life cycle analysis is independent of pipe repair costs.

The data gathering and analyses currently being planned pursuant to the grant agreement awarded to Virginia Tech to collect and compile water pipeline field performance data will provide the foundation for assessing life cycle costs on a broader basis.

Question. In the same life cycle analysis, Reclamation used the failure of one ductile iron water pipeline in highly corrosive soils as a proxy for the performance of ductile iron pipe in highly corrosive soils when Reclamation had aggregate data regarding ductile iron pipelines in highly corrosive soils. Why did Reclamation use the single data point instead of the aggregate data?

Answer. The life cycle analysis was conducted in August 2009 using best available data at the time. As stated in Commissioner Connor's letter to DIPRA dated January 29, 2010, "Our analysis showed the present worth of these additional capital costs for CP along with the additional OM&R costs associated with long term operations of the CP system was about 5 percent of the total project cost. Thus, the life cycle cost of a cathodically protected ductile iron pipeline with polyethylene encasement was about 5 percent higher than the life cycle cost for a similarly protected steel pipeline with a bonded dielectric coating. A summary of these analyses is shown in Attachment 3." Referring to Attachment 3, Scenario 3 which removes pipe repair costs from the analysis, the life cycle cost of a cathodically protected ductile iron pipe with polyethylene encasement was calculated to be 4.7 percent higher than the life cycle cost for a similarly protected steel pipe with a bonded dielectric coating. Reclamation's conclusion from their life cycle analysis is independent of pipe repair costs.

The data gathering and analyses currently being planned pursuant to the grant agreement awarded to Virginia Tech to collect and compile water pipeline field performance data will provide the foundation for assessing life cycle costs on a broader basis.

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

Question. Commissioner López, I am concerned that Reclamation has pumped less water in 2016 during this El Niño year than it did in 2015, when California was in extreme drought. Flows were as high as 50,000 cubic feet per second in the Sacramento River, yet the agencies reduced pumping to the low-end of the biological opinions because of one smelt.

I continue to hear that water pumping decisions are still being based on when protected fish might be near the pumps rather than when we know they actually are present. For example, Interior may reduce pumping if even one smelt is found as far away as 17 miles from the pumps near a monitoring station called Prisoner's Point.

But outside biologists and scientists believe that Reclamation is reducing pumping prematurely. These experts believe that the agencies could continue with higher pumping levels even if smelt are found at a monitoring station that is only 12 miles from the pumps.

What are you doing to test whether or not smelt identified past the Prisoner's Point monitoring station can still survive and make their way back out to the central Delta?

Answer. Addressing this issue is challenging and would require tagging and marking studies similar to those conducted on salmonids. Until very recently, tags small enough to use in smelt have not been available/tested. The use of such technology to evaluate the movements of wild or other smelt in the Delta is needed, but as far as we are aware is in the planning stages only.

Reclamation is participating in efforts to apply this technology to the study of smelt movement and survival in the southern Delta. Projects stemming from the following proposal are ongoing with some of the work soon to be published in a leading journal:

Assessing Tagging-Related Mortality and Tag Retention in Adult Delta smelt to Support Field Investigations in Clifton Court Forebay and the Skinner Fish Facility (Grimaldo et al.—SFCWA Research Grant Proposal)

Due to the threatened and endangered status of the salmonid species in the Delta, most tagging/marking studies involving salmonids use hatchery produced specimens and not wild fish. The Delta smelt population is currently not augmented via hatchery-produced specimens. In addition, the use of wild smelt for such studies would be problematic due to the endangered status of the species and its population levels, which are currently at an all-time low. Efforts to identify individual wild fish by unique physical markings and characters are ongoing and may have applicability to Delta smelt in the future.

Question. If you aren't doing this monitoring, can you start doing it with some of the \$100 million in drought funding from December's Omnibus appropriations bill?

Answer. If the monitoring work is conducted during fiscal year 2017, current drought funding could be used to fund studies focused on developing and applying methods to determine smelt movements and survival in the southern Delta. Efforts are being made in this area.

Question. What is the Bureau of Reclamation doing to address other threats to smelt, such as ammonia from sewage discharges and predation by other species?

Answer. Since 2010, Reclamation funded studies that address ammonia loading and its potential effects on Delta smelt and the Delta ecosystem. There is no evidence of acute ammonia toxicity to Delta smelt or any other fish in the Delta. Some studies indicate the possibility of chronic effects in larval Delta smelt and their copepod prey when exposed to high concentrations under laboratory conditions. Some earlier research suggested that ammonium may inhibit diatom production in Suisun Bay under certain combinations, but recent does not support this hypothesis. Ammonium, may degrade delta smelt habitat by favoring Microcystis, a potentially toxic form of phytoplankton. The Sacramento regional wastewater treatment facility, one of the sources of ammonium loading to the Delta, is upgrading its plant to advanced tertiary treatment methods and completion is expected by 2020. This action will eliminate almost all of its contribution to Delta ammonium loading.

Predation is a common natural interaction within ecologic communities and occurs at some level for a multitude of fish species. Reclamation continues to support research related to predation, including several specifically focused on predation of Delta smelt.

Question. How is the Bureau of Reclamation working with other Federal agencies, like National Oceanic and Atmospheric Administration (NOAA) Fisheries and Fish and Wildlife Service, to develop and implement system-wide capabilities to monitor and track fish migrations into and out of the Delta?

Answer. Reclamation has and continues to provide funding to NOAA Fisheries and the Fish and Wildlife Service (FWS) to monitor and track ESA-listed fish species, both in and out of the Delta. Reclamation continues to work with a consortium of multiple agencies (including NOAA Fisheries and FWS) within the framework of the Interagency Ecological Program and beyond to monitor and track fish in the Delta. Over twenty separate monitoring activities within this program occur year-round, but with increased effort from fall through early summer.

Beyond their ongoing tracking, Reclamation has provided FWS with \$3.8 million this year to fund additional studies, including whether the viability measuring point can be moved from the current 17 mile marker at "Prisoner's Point." This study will take several years. To date, however, FWS maintains the measuring point at "Prisoner's Point."

Additionally, Reclamation's Tracy Fish Collection Facility has one of the most extensive long-term monitoring programs within the Delta, sampling every 2 hours on a continual basis. Monitoring and sampling activities include fish (covering the full range of life stages), water quality parameters and genetic material.

Question. How is the Bureau of Reclamation working with other Federal agencies, like NOAA Fisheries and Fish and Wildlife Service, to research and evaluate the impacts of Delta operations on fish behavior and potential mortality?

Answer. Reclamation continues to work with a consortium of multiple agencies (including NOAA Fisheries and FWS) within the framework of the Interagency Ecological Program (IEP). The IEP provides relevant and timely ecological information for management of the Bay-Delta ecosystem and the water that flows through it. Priorities within the program include:

- Improving the understanding of abundance, distribution, life history diversity, and life stage requirements of Delta smelt, longfin smelt, salmonids, steelhead and green sturgeon to inform management decisions.
- Improving smelt, salmonid and sturgeon real-time monitoring, indirect mortality, and entrainment prediction tools to reduce take and increase operational flexibility of the State and Federal water project pumps.
- Improving chinook and steelhead viability in the Delta with an initial emphasis on south Delta salmon survival through studies and modeling.
- Understanding the factors impairing water beneficial uses to inform management decisions.

Reclamation has supported a number of studies on juvenile salmonid survival in relation to Delta operations. These studies include:

- A 6 year fish tracking and monitoring study of San Joaquin steelhead survival (called for in NOAA Fisheries biological opinion).
- Fish tracking and monitoring studies of juvenile Chinook movement in relation to Delta Cross Channel operations (with FWS and the U. S. Geological Survey (USGS)).
- Physical and non-physical barrier studies at Head of Old River and Georgiana Slough (with the California Department of Water Resources and USGS).
- Chinook salmon survival studies based on coded wire tag recoveries (with FWS).

The majority of projects are coordinated with NOAA Fisheries and FWS with multiple project work teams (Chinook salmon, smelt, sturgeon, steelhead, delta rearing, Sacramento River monitoring, hatchery, and collaborative adaptive management team) and the Delta Operations groups continuously seeking ways to understand fish behavior, mortality and to improve survival.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Commissioner López, farmers in the Odessa Subarea of the Columbia Basin Project have faced significant challenges for several years as groundwater from the aquifer has been declining. This rapid decline has put agriculture production and commercial, municipal, and industrial water uses at risk. According to a study conducted by Washington State University, \$840 million and 3,600 jobs are at risk if agriculture producers in the Odessa Subarea no longer have access to groundwater from the aquifer and no alternative water solution is in place.

I appreciate your ongoing work with the State of Washington and the three impacted irrigation districts to prevent further depletion of the Odessa Subarea aquifer and deliver much needed surface water to agricultural lands within the Columbia Basin Project. Renewing the Master Water Service Contract with the East Columbia Basin Irrigation District (ECBID) last year was a significant milestone in this process. This will ensure ECBID can move forward with the development of the first of seven planned pressurized delivery systems to provide surface water to 87,700 acres of the Odessa Subarea in the Columbia Basin Project.

I understand that additional amendments to the Water Service Contract are needed for 70,000 acres within the Odessa Subarea. What is the current status of this amendment and when do you expect it to be completed?

Answer. Work on the amendment to the Master Water Service contract is in progress. Evaluation of the existing annual water service rate and completion of the rate-setting process are underway. Reclamation completed a draft payment capacity study in March 2016 and received comments from the irrigation districts in May 2016. Reclamation is reviewing the districts' comments and finalizing this study, which is needed to complete an ability to pay study. Reclamation has several other actions to complete as part of this process, including environmental compliance, reviewing land eligibility, completing a basis of negotiation, preparing the contract amendment, and negotiating the contract with ECBID. Additionally, Reclamation is required to provide a 60-day public notice prior to contract execution. We expect this process to be complete by the end of calendar year 2016.

Question. Are you aware of any challenges that may delay completion of this work?

Answer. We do not expect any delays. Unanticipated factors, including litigation or a significant change request from ECBID could delay completion of the process. The requirement for a 60-day public notice prior to contract execution was factored in to the completion date noted in the previous question.

SUBCOMMITTEE RECESS

Senator ALEXANDER. Thank you for being here today.

The subcommittee will stand adjourned.

Senator FEINSTEIN. Thank you, Mr. Chairman. Good work.

[Whereupon, at 4:35 p.m., Wednesday, March 2, the subcommittee was recessed, to reconvene subject to the call of the Chair.]