Minutes
Inland Waterways Users Board Meeting No. 84
Held at the Embassy Suites by Hilton Portland (Oregon) Airport
The Firs and Oak Rooms
7900 Northeast 82nd Avenue
Portland, Oregon 97220
July 19, 2017

[Note: The following minutes of the Inland Waterways Users Board meeting No. 84 were approved and adopted as final at Inland Waterways Users Board meeting No. 85 held on November 3, 2017 at the U.S. Army Corps of Engineers District Office Building located at 4155 Clay Street Vicksburg, MS 39183.]

The following proceedings are of the 84th meeting of the Inland Waterways Users Board held on the 19th day of July 2017, commencing at 9:00 o'clock a.m. in The Firs and Oak Rooms of the Embassy Suites by Hilton Portland (Oregon), located at 7900 Northeast 82nd Avenue, Portland, Oregon 97220, Mr. Martin T. Hettel, Chairman of the Inland Waterways Users Board presiding. Inland Waterways Users Board (Board) members present at the meeting included the following:

CHAIRMAN MARTIN T. HETTEL, American Commercial Barge Line, LLC.

MR. DAVID A. EARL, Marathon Petroleum Company.

MR. MIKE FEWELL, Dow Chemical Company.

MR. ROBERT J. INNIS, LafargeHolcim, Inc.

MR. DAVID KONZ, Tidewater Barge Lines.

MR. G. SCOTT LEININGER, CGB Enterprises, Inc.

MR. DANIEL P. MECKLENBORG, Ingram Barge Company.

MR. MICHAEL J. MONAHAN, Campbell Transportation Company.

MR. TIMOTHY M. PARKER, III, Parker Towing Company.

MR. CHARLES M. "MATT" RICKETTS, Crounse Corporation.

Board member MR. WILLIAM M. WOODRUFF, Kirby Corporation did not attend the Board meeting.

Also present at the meeting were the following individuals serving as observers of the activities of the Inland Waterways Users Board, designated by their respective Federal agencies as representatives:

MR. ERIC V. HANSEN, Deputy Assistant Secretary of the Army (Management and Budget), Office of the Assistant Secretary of the Army for Civil Works (ASA (CW)), Washington, D.C.

MS. BRANDEN LEAY CRIMAN, Director, Inland Waterways Gateway Office, Maritime Administration (MARAD), U.S. Department of Transportation, St. Louis, MO.

MR. KUO-LIANG "MATT" CHANG, Economic Analyst, Transportation and Marketing Division, Agricultural Marketing Service, U.S. Department of Agriculture (USDA-AMS/TMD), Washington, D.C.

LT. MATTHEW M. FORNEY, OMAO/DOD Liaison, Office of Coast Survey, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, Silver Spring, MD.

Official representatives of the Federal government responsible for the conduct of the meeting and providing administrative support to the Inland Waterways Users Board from the U.S. Army Corps of Engineers (the Corps or USACE) were as follows:

MS. ANDREA L. MURDOCK-McDANIEL, Acting Executive Director for Civil Works, Headquarters, U.S. Army Corps of Engineers, Washington, D.C. and Chief of Operations and Regulatory Division, Southwestern Division, Dallas, Texas, substituting for MAJOR GENERAL DONALD E. JACKSON, Executive Director of the Inland Waterways Users Board and Deputy Commanding General for Civil and Emergency Operations (DCG-CEO), USACE Headquarters, Washington, D.C.

MR. MARK R. POINTON, Executive Secretary and Designated Federal Officer (DFO), Inland Waterways Users Board, U.S. Army Corps of Engineers, Institute for Water Resources, Alexandria, Virginia.

MR. KENNETH E. LICHTMAN, Executive Assistant and Alternate Designated Federal Officer (ADFO), Inland Waterways Users Board, U.S. Army Corps of Engineers, Institute for Water Resources, Alexandria, Virginia.

Program speakers in scheduled order of appearance were as follows:

MR. MARK R. POINTON, Executive Secretary and Designated Federal Officer (DFO), Inland Waterways Users Board, U.S. Army Corps of Engineers, Institute for Water Resources, Alexandria, VA.

MS. ANDREA L. MURDOCK-McDANIEL, Acting Executive Director for Civil Works, Headquarters, U.S. Army Corps of Engineers, Washington, D.C and Chief of Operations and Regulatory Division, Southwestern Division, Dallas, Texas.

MR. MARTIN T. HETTEL, Chairman, Inland Waterways Users Board.

MR. JEFFREY A. McKEE, Chief, Navigation Branch, Operations and Regulatory Division, U.S. Army Corps of Engineers Headquarters, Washington, D.C.

MR. STEVEN D. RILEY, Navigation Data and Decision Support Center, Institute for Water Resources, U.S. Army Corps of Engineers, Alexandria, VA.

MS. SHERYL A. CARRUBBA, Senior Navigation Program Manager, Northwestern Division, U.S. Army Corps of Engineers, Portland, OR.

MR. JEFFREY L. STAMPER, Technical Manager, Inland Navigation Design Center, Rock Island District, U.S. Army Corps of Engineers.

MR. MICHAEL E. BRADEN, Chief, Olmsted Division, Louisville District, U.S. Army Corps of Engineers, Louisville, KY.

Mr. DON GETTY, Project Manager, Nashville District, U.S. Army Corps of Engineers, Nashville, TN.

MS. FRANCHELLE E. CRAFT, Project Manager, Galveston District, U.S. Army Corps of Engineers, Galveston, TX.

There were two individuals who provided comments during the public comment portion of the meeting:

MR. SCOTT LEVY, Bluefish.org

MR. ROB RICH, Shaver Transportation Company

PROCEEDINGS

MR. MARK R. POINTON: Good morning. My name is Mark Pointon. I am the Designated Federal Officer (DFO) for the Inland Waterways Users Board (the Board). I want to welcome you to the 84th meeting of the Inland Waterways Users Board here in Portland, Oregon.

One of the locals told me yesterday that they get three months of great, fabulous weather like we had yesterday, and then pay the price for the other nine months of the year. So I think we were fortunate to have good weather yesterday. We had a great tour yesterday of the Port of Kalama and the TEMCO grain elevator and the Bonneville Lock and Dam.

We were actually up in Walla Walla last time we were out here in the Pacific Northwest [Inland Waterways Users Board Meeting No. 72 was held in Walla Walla, Washington on August 14, 2014]. The last two meetings we had were held in Walla Walla [Board Meeting No. 72 in 2014 and Board Meeting No. 58 was held on July 31, 2008]. We are in Portland today. It was actually back in October of 2005 the last time we actually held a meeting here in the Portland area [Users Board Meeting No. 50 held on October 31, 2005, in Vancouver, Washington]. I did not realize it was that long ago. Kristin [Ms. Kristin Meira, Executive Director of the Pacific Northwest Waterways Association (PNWA)] mentioned that yesterday on the bus ride, that we hadn't been to Portland in a number of years, and it was actually really longer than I thought it was. Hopefully we avoid that in the future.

We had a great tour yesterday. I appreciate all the support in getting that set up, and all the participation from the various presenters who provided a lot of useful information during the tour.

Before we start the meeting, I am obligated to read for the record that the Inland Waterways Users Board was created pursuant to Section 302 of the Water Resources Development Act of 1986. The Board provides the Secretary of the Army and the Congress with recommendations on funding levels and priorities for modernization of the inland waterways system.

The Board is subject to the rules and regulations of the Federal Advisory Committee Act of 1972, as amended. This is a "Government in the Sunshine" Act meeting, and as such is open to the public. It looks like with have a fairly good attendance for today's meeting which is awesome.

The U.S. Army Corps of Engineers is the sponsor of the Board and the Corps provides the Executive Director, the Designated Federal Officer, and for all normal activities of this body.

We currently have one person that has requested to make a public comment at the end of the meeting during the public comment period, and we have received three written statements for the record, which I provided to the Board members. Those will be included in the record.

Anyone else wishing to make a public comment, go ahead and let me know at the break, or just leave a little note or something that you'd like to make a public comment at the end of the meeting.

These proceedings are being recorded and a transcript will be available shortly after this meeting is concluded.

Before I turn the microphone over to Major Cunningham with the Portland District (Major John D. Cunningham, Deputy Commander, USACE, Portland District) to make some opening remarks, I am going to ask the members, both the ones that are returning and the new members that are serving on the Board, to join me over at the flag to conduct the Oath of Office, and we can get that out of the way, and then proceed from there. So if you would all like to join me over there, I will swear you in.

You guys are familiar with this. It might be new to some of the other ones. It is a standard oath of office. I will go ahead and read it and you repeat after me.

Please raise your right hand and repeat after me. I, state your full name.

BOARD MEMBERS: I [names stated].

MR. POINTON: Do solemnly swear.

BOARD MEMBERS: Do solemnly swear.

MR. POINTON: That I will support and defend.

BOARD MEMBERS: That I will support and defend.

MR. POINTON: The Constitution of the United States.

BOARD MEMBERS: The Constitution of the United States.

MR. POINTON: Against all enemies, foreign and domestic.

BOARD MEMBERS: Against all enemies, foreign and domestic.

MR. POINTON: That I will bear true faith.

BOARD MEMBERS: That I will bear true faith.

MR. POINTON: And allegiance to the same.

BOARD MEMBERS: And allegiance to the same.

MR. POINTON: And that I take this obligation freely.

BOARD MEMBERS: And that I take this obligation freely.

MR. POINTON: Without any mental reservation.

BOARD MEMBERS: Without any mental reservation.

MR. POINTON: Or purpose of evasion.

BOARD MEMBERS: Or purpose of evasion.

MR. POINTON: And that I will well and faithfully discharge the duties.

BOARD MEMBERS: And that I will well and faithfully discharge the duties.

MR. POINTON: Of the office on which I am about to enter.

BOARD MEMBERS: Of the office on which I am about to enter.

MR. POINTON: So help me God.

BOARD MEMBERS: So help me God.

MR. POINTON: Congratulations. (Applause.)

Now that we're done with the oath of office, I would like to call on Major John Cunningham, the Deputy District Commander from the Portland District, to give us some brief welcoming remarks on behalf of Colonel Jose Aguilar, District Engineer and Commander of the Portland District of the Corps of Engineers.

MAJOR JOHN D. CUNNINGHAM: Thank you, Mr. Pointon. Appreciate it.

Good morning, everyone. For those of you who just joined today, welcome to Portland. On behalf of Colonel Jose Aguilar, I am Major John Cunningham, Deputy District Commander of the

Portland District of the Army Corps of Engineers. I am so glad to have all of you here, and I hope you got a sense of what a beautiful area this is in Portland, and what the Pacific Northwest has to offer.

I appreciate everyone taking the time to come into town here to talk about some important issues, and something that is important to our District. You get a sense driving down the Columbia River Gorge what wonderful resources we have here in the area, and what that provides to the region and the nation, particularly water, in how the Columbia River provides not only for agriculture, but commerce and hydropower at Bonneville Lock and Dam. We are really thankful to be in a position to help influence that.

What we see here in the Columbia River is a $24 billion highway that, as a District, we really take seriously in providing that to the region.

You get a sense, too, that it is a little bit different up here in the Pacific Northwest region of the country, some of the perspectives you will get from working in this area, there is a lot of interest, particularly in natural resources, fish in particular. There is a lot of effort in resources in order to protect those natural resources, so there is definitely a balancing act. We hope you come away with the sense of some of the challenges that we have here, running the infrastructure required to keep the commerce going.

Navigation is particularly important in the Portland District. It was our initial mission, Henry Roberts stepped off a boat back in the 1800s, and his first charge really was to remove impediments to navigation on the Columbia River. We feel that is pretty consistent with it being resourced by Congress and the partnership with the local community and industry to keep that flowing throughout the year, and it is something that particularly we want to continue.

If you need anything, if at any point during the rest of your visit here, I just want to offer up anything you need, please let me know.

And thank you again for taking the time. Thank you particularly to PNWA for helping to host the reception last night and Mike Ott, Operations Manager of the Channels and Harbors Project, and Bill Mackey, Administrative Officer of our Channels and Harbors Project in the Navigation section in the Portland District's Operations Division. It was just a wonderful tour yesterday. The timing could not be much better. For those of you who didn't join us, we got to see one of our contract dredges [Great Lakes Dredge and Dock Company Hopper Dredge TERRAPIN ISLAND] out working at the Port of Kalama, and also had the good fortune to see one of the barges locking through at Bonneville.

Again, welcome. Thank you again for taking the time to be here.

MR. POINTON: Thank you, Major Cunningham. We appreciate that. I would also like to extend my personal thanks as well to Mike Ott and Bill Mackey. They did a fabulous job leading the Portland team in setting this up. We appreciate their help with all that work.

I will now call on Ms. Andrea Murdock-McDaniel who is attending this morning's meeting representing the Headquarters office of the Corps of Engineers in place of Major General Donald E. Jackson, who is the Executive Director of the Inland Waterways Users Board and Deputy Commanding General for Civil and Emergency Operations (DCG-CEO), at USACE Headquarters. Major General

Jackson was unable to attend today's Inland Waterways Users Board meeting due to his attendance at a hearing of the House of Representatives, Subcommittee on Water Resources and Environment on the subject of "Building a 21st Century Infrastructure for America: Implementation of the Water Resources Reform and Development Act of 2014 and the Water Resources Development Act of 2016."

Ms. Murdock-McDaniel.

MS. ANDREA MURDOCK-McDANIEL: Thank you very much Mark. Welcome, new members of the Inland Waterways Users Board as well as our returning, reappointed members of the Board. It is a privilege to be here today.

As Mark has previously stated I am acting as the Executive Director for today's meeting of the Board on behalf of Major General Jackson who, as Mark just indicated, is attending a Congressional hearing as we speak.

I want to thank all of the members of the Users Board for coming out and being a part of this Board, for volunteering, and be being a voice for the navigation industry, whatever the situation may be. These are very important meetings to the Corps of Engineers because these meeting give us the opportunity engage in a dialogue with you as members, and to be transparent in what we do and how we deliver our navigation mission. It is extremely important to the Corps that we engage with our stakeholders in the carrying out of our navigation mission that we have in the Corps of Engineers.

I want to express my thanks to Major Cunningham and Colonel Aguilar, who was able to come and visit us shortly when we were at Bonneville Lock and Dam yesterday. I know he would have liked to be in attendance at today's Board meeting, but he is in transition, too. There are a lot of different changes of command going on within the Northwestern Division of the Corps, and I believe Colonel Aguilar will be actually experiencing a change of command in a couple weeks. I appreciate his service to the Portland District, and his ability to come by and say hello to us yesterday.

I appreciate the team from the Portland District from the Northwestern Division for organizing this meeting and the site visits yesterday. I know it is a lot of effort, and the sort of last minute effort to try to get all of the pieces in place to be able to be here.

I especially want to thank Ms. Sheryl Carrubba, Senior Navigation Program Manager for the Northwestern Division, Mr. Michael Ott, Mr. Dwane Watsek, Chief of the Operations Division in the Portland District, Mr. Bill Mackey, and Mr. Patrick Duyck from Bonneville Lock and Dam for being out there and being on the ground and helping inform us on the mission that they have, and giving us the opportunity to see how the inland waterways system integrates with the coastal navigation portion of the Corps overall navigation mission. We appreciate that and their efforts to do that.

I also want to thank Ms. Kristin Meira from the Pacific Northwest Waterways Association. It is very obvious, from the conversations that we had with her and with Mr. Shawn Campbell from the U.S. Wheat Associates and Mr. David Grillot from the TEMCO Kalama Terminal, and Mr. Mark Wilson, the Director of the Port of Kalama, how all of these entities work together in a cooperative fashion and work with the Corps and support the Corps of Engineers in carrying out our mission that we have out here, and to be able to facilitate an extended multiple lock maintenance closure on the Columbia-Snake

River waterway between December 2016 and April 2017. How all those moving pieces came together, we certainly could not have done it without that support and collaboration.

I also want to thank Mr. David Konz from Tidewater Barge Lines for hosting and facilitating our reception last night and dinner. We really appreciate that. It was a great event, and a great venue.

I also want to recognize Mr. David Hester from the Office of Management and Budget (OMB) who is joining us at today's meeting. Welcome. He joined us on the tour yesterday. I enjoyed speaking with him, and I hope that he had a really good ability to see our hydropower mission and our navigation mission, and how these missions all come together at a multi-purpose project such as the Bonneville Lock and Dam project. I think it was a good opportunity for Mr. Hester learn more about the Corps' multiple missions and I appreciate him being with us on yesterday's tour. I understand that he will be taking some additional tours later on this week.

Finally, I want to recognize our Federal observers that we have in attendance at today's meeting. I will introduce you, then you will have an opportunity to provide opening remarks before the Board.

First off, we have Lieutenant Matthew M. Forney from the National Oceanic and Atmospheric Administration (NOAA), Office of Coastal Survey. Welcome, Lieutenant Forney.

Next, we have Ms. Branden Leay Criman from the U.S. Department of Transportation, Maritime Administration (MARAD), Inland Waterways Gateway Office in St. Louis. Welcome, Ms. Criman.

Next, we have Mr. Matt Chang from the U.S. Department of Agriculture, Agricultural Marketing Service, Transportation and Marketing Division, Washington, D.C. Welcome, Mr. Chang.

And finally we have Mr. Eric V. Hansen, Deputy Assistant Secretary of the Army (Management and Budget), from the Office of the Assistant Secretary of the Army for Civil Works (ASA (CW)), Washington, D.C. Welcome, Mr. Hansen.

With that, I will go to you, Lieutenant Forney, for your opening remarks.

LIEUTENANT MATTHEW M. FORNEY: Good morning Ms. Murdock-McDaniel, Chairman Hettel, members of the Board, other Federal observers, staff and guests. For the record, my name is Lieutenant Matthew M. Forney. I am a Federal observer to the Users Board, representing the National Oceanic and Atmospheric Administration (NOAA), and specifically Rear Admiral Shep Smith, Director of NOAA's Office of Coast Survey and the Nation's Chief Hydrographer.

I will keep my remarks brief and I will cover two items: 1) NOAA/USACE collaboration and 2) the National Weather Service's (NWS) River Forecast Offices (RFO's).

NOAA/USACE Collaboration in Channels and Anchorages. NOAA identified a gap in safe navigation in our federal channels and anchorages highlighted by the T/V (tanker vessel) Athos striking an abandoned anchor in the Delaware River, a tug vessel striking a surveyed rock pile here along the Columbia River, and a derelict propeller in the Delaware Bay. These along with other non-reported incidents and near misses have justified a need to modify the way NOAA depicts navigation on the

chart and the way the U.S. Army Corps of Engineers conducts survey operations and delivers information to NOAA.

The recently decided court case liability for one-half of the cost of clean-up [$80 million] to the federal government because they are considered responsible for federal anchorages/waterways. The other one-half of liability befell the shore-side operator who was found negligent for providing safe transit to the berthing area. The verdict is currently out for appeal and will be re-decided this fall.

NOAA conducts surveying for the purposes of navigation and the U.S. Army Corps of Engineers conducts surveys for channel conditions and dredging and construction verification. With this understanding in mind, NOAA and the Corps of Engineers are working to find a forward to collaborate for safer navigation for vessels operating in our federal channels and anchorages.

NOAA's Office of Coast Survey would like to formally thank Major General Jackson and his team from the U.S. Army Corps of Engineers for taking time to come to NOAA and discuss this gap in services to the maritime community. NOAA continues to being committed to aiding in the collection of object detection survey activities as the U.S. Army Corps of Engineers investigates ways they too can provide this information to NOAA in a manner that does not duplicate federal efforts. Additionally, NOAA is dedicated to modifying our chart products to better depict bathymetric information on the chart.

In the coming months, a Memorandum of Understanding (MOU) will be drafted, reviewed, and finalized to have both organizations work toward safer navigation in our federal channels. NOAA looks forward to this opportunity to collaborate and making our already stout relationship stronger.

NOAA NWS River Forecast Offices. Moving to the NWS River Forecast Offices (RFOs), I would like to introduce a fellow NOAA colleague, Mr. Steven King, Service Coordination Hydrologist from the Northwest River Forecast Center, located here in Portland, Oregon. At the last Inland Waterways Users Board meeting held on May 17, 2017 in Charleston, West Virginia Mr. Forrest Vanderbilt and Ms. Courtney Greenley introduced the Board to the new Navigation Web Platform.

A question came up about how flows might influence the lock delays and the movement of commerce. Flow of the river and prediction of the river seems to be an underlying theme at the two Inland Waterways Users Board meetings I have been to in the past. Please know that we have a river flow expert and meteorologist in the room to address river flow and forecast questions, in Mr. King. Additionally, we can find ways to work with you to provide the information that you need to aid in the movement of commerce on our inland waterways.

One last point before I conclude my remarks. The Office of Coast Survey recently released a draft National Charting Plan, titled *"National Charting Plan – A Strategy to Transform Nautical Charting"* dated February 28, 2017. The plan describes the current set of NOAA nautical chart products and their distribution, as well as some of the steps the Office of Coast Survey is taking to improve NOAA charts, including changes to chart formats, scales, data compilation and symbology. The purpose of the plan is to solicit feedback from nautical chart users regarding proposed changes to NOAA's paper and electronic chart products. The National Charting Plan is available at https://nauticalcharts.noaa.gov/staff/news/nationalchartingplan.html. We encourage the members of the Inland Waterways Users Board to look at the National Charting Plan and provide us with comments.

In closing, I would like to thank the Army Corps of Engineers and the members of the Users Board for the opportunity to provide these brief remarks and it is my honor to support your commendable mission. Again, I would like to encourage questions and comments to Mr. Steven King of the Northwest River Forecast Center concerning all things river forecasting-related.

Thank you Ms. Murdock-McDaniel, Chairman Hettel and other Board members.

MS. MURDOCK-McDANIEL: Thank you, Lieutenant Forney. I really appreciate the work that we have done together on these action items, and you will be receiving some information and feedback from us on some of those discussions. I greatly appreciate your efforts and the degree of collaboration and cooperation between the Office of Coast Survey and the Corps. Thank you.

Next, Ms. Branden Criman from the Department of Transportation, Maritime Administration.

MS. BRANDEN LEAY CRIMAN: Thank you Ms. Murdock-McDaniel. Chairman Hettel, members of the Board, other Federal observers, staff and guests. Good morning. It is a pleasure to be able to represent the Maritime Administration as a Federal observer to this Federal advisory board. For the record, my name is Branden Leay Criman and I serve as the Director of the agency's Inland Waterways Gateway Office in St. Louis, Missouri and I am representing Ms. Lauren Brand, who serves as the Associate Administrator for Intermodal Systems Development within the Maritime Administration.

Ms. Brand, who serves as the designated Federal observer to this advisory committee for the Maritime Administration, sends her regards and regrets for not being able to attend today's meeting. Ms. Brand recognizes the value of the Inland Waterways Users Board and supports the Board's mission.

I will keep my remarks brief and I will cover three items: 1) the recent announcement that Rear Admiral Mark H. "Buz" Buzby, U.S. Navy (retired) has been nominated to the position of Maritime Administrator; 2) an update on the status of a report on the economic contribution of the tugboat, towboat and barge industry, and 3) the award of a Cooperative Agreement to the National Waterways Foundation to complete a study of the economic impact of unplanned lock closures.

As many of you know, it was recently announced that Rear Admiral Mark H. Buzby, United States Navy, Retired, has been nominated for the position of Maritime Administrator. Admiral Buzby's naval career spanned 34 years, serving in at sea billets, primarily on board cruisers and destroyers. Admiral Buzby commanded the destroyer USS CARNEY (DDG 64), Destroyer Squadron THIRTY-ONE, the Surface Warfare Officers School Command, Joint Task Force GUANTANAMO BAY, and served as the Commander of the U.S, Navy's Military Sealift Command from October 2009 to March 2013. Admiral Buzby also served on staffs of the SIXTH Fleet, U.S. Fleet Forces Command, the Navy staff and the Joint Staff.

Admiral Buzby is a 1979 graduate of the U.S. Merchant Marine Academy. Admiral Buzby currently serves as the President and CEO of the National Defense Transportation Association, a position he has held since retiring from the U.S. Navy in 2013 and sits on the boards of several maritime industry related corporations.

Admiral Buzby is scheduled for his nomination hearing towards the end of this month.

The Maritime Administration and the American Waterway Operators (AWO) entered into a cooperative agreement in 2014 to develop a study titled *"Economic Contribution of the Tugboat, Towboat and Barge Industry"*. The study quantified the economic contribution in terms of employment, labor income, value added, and taxes for 2014, the most recent year for which a consistent set of data is available.

This report quantifies the industry's operational impact due to purchases of intermediate inputs and payments of labor compensation and dividends, and capital investment impact due to its investment in new structures and equipment, including vessels, at the national level. In addition, the study breaks out the industry's operational impact for each state.

The study, to be released on July 24, 2017, will be posted on the Maritime Administration website.

The Maritime Administration awarded a Cooperative Agreement to the National Waterways Foundation to complete the *Economic Impact of Unplanned Lock Closures Study* of the economic consequences of unscheduled closures of a small number of representative navigation locks. The project is creating an analytical template that can be applied to additional locks and dams as circumstances warrant.

The National Waterways Foundation awarded the study to a team from the University of Tennessee and Vanderbilt University. The final progress report of the study was presented in June 2017, at which time the following preview of results was provided:

- An unplanned closure of the Markland Locks and Dam would immediately affect commerce in 14 states and 175 counties, costing the shipping public more than $1.3 billion annually in additional transport charges.

- An unplanned closure of the Calcasieu Lock would immediately affect commerce in 18 states and 170 counties, costing the shipping public more than $1.1 billion annually in additional transportation charges.

- An unplanned closure of LaGrange Lock and Dam would immediately affect the nation's primary path for corn and soybean exports, costing the shipping public $1.7 billion annually.

The study and findings are expected to be completed in August and released to the public this September.

That concludes my remarks and thank you once again for the opportunity to provide this update on behalf of the Maritime Administration, and I look forward to the meeting today.

MS. MURDOCK-McDANIEL: Thank you, Ms. Criman.

MS. CRIMAN: Thank you.

MS. MURDOCK-McDANIEL: Mr. Chang.

MR. POINTON: For the sake of the recording, can we make sure we identify ourselves and our organizations, and please speak into the microphones.

Thank you.

MR. KUO-LIANG "MATT" CHANG: Thank you very much, Acting Executive Director Murdock-McDaniel, Chairman Hettel, Board members, fellow Federal observers, staff, and guests. For the record, my name is Dr. Matt Chang. I represent the Transportation and Marketing Program within the U.S. Department of Agriculture. I am representing Mr. Arthur L. Neal, Jr, the Deputy Administrator of the Transportation and Marketing Program within the Agricultural Marketing Service.

First of all, I would like to express my sincerest thanks to the Portland District office of the Army Corps of Engineers and Pacific Northwest Waterways Association for the very educational site visits to the Port of Kalama, the TEMCO Kalama Grain Terminal, and the Bonneville Lock and Dam yesterday. I surely learned a lot.

Next, I would also like to express my gratitude to all who made this meeting possible. It is a special opportunity to attend today's meeting of the Users Board and engage with the members of the Board and the users of the Inland Waterways system.

According to the 2012 Commodity Flow Survey, agriculture represented about 22 percent of all tons and 31 percent of all ton-miles moved by the transportation system in the United States. The inland waterways system is important to this country's agricultural sector. In 2015, the Columbia River moved 4.21 million tons of food and farm products. For the first six months of 2017, grain barge tonnages on the locking system of the Mississippi, Ohio, and Arkansas Rivers were 17.6 million tons, which is 14 percent higher than the three-year average. So we have had a good year.

The Transportation and Marketing Program in the U.S. Department of Agriculture publishes the *Grain Transportation Report* every week that provides latest information of grain movements and freight rates. Recently, we initiated new studies with stakeholders and major research institutes. Our goal is to provide new information regarding agriculture's use of the inland waterways system to transport grain and agricultural products from producers to the end users. We also hope to enhance the awareness of the importance of the inland waterways to the U.S. agriculture sector. We will provide updates on these studies at future Inland Waterways Users Board meetings.

Once again, I appreciate the opportunity to attend yesterday's site visit and today's meeting.

Thank you very much.

MS. MURDOCK-McDANIEL: Thank you. Last but not least, Mr. Eric Hansen, Deputy Assistant Secretary of the Army of Civil Works.

MR. ERIC V. HANSEN: Thank you, Andrea. For the record my name is Eric Hansen, Deputy Assistant Secretary of the Army, Management and Budget, within the Office of the Assistant Secretary of the Army for Civil Works.

Thank you for the opportunity to be here. Somebody from my office is always at one of these meetings, but it has been about four years since I have been to one. Four years ago I didn't really know that much about the inland waterways, and since then I have come to appreciate quite a bit more, not just in terms of the value of the inland waterways, but the complexity of some of the challenges that we are dealing with, and they are very, very difficult to unravel.

However, I do want to point out that we have made some progress. Some of that is hard to see because when it concerns policy, progress is in people's heads, often until something miraculously appears.

Nonetheless, we have made progress, and some of that progress is absolutely dependent on the input and advice and engagement of this Board, in particular, the production of the Capital Investment Strategy, which was developed by the Corps of Engineers with the input from this Board. The Capital Investment Strategy is a really critical document that serves as a really good framework for having conversations about where we go in the future with respect to the modernization and rehabilitation of the nation's inland waterways system.

We also acknowledge that the nation's inland waterways system exemplifies many of the challenges that the nation is facing in terms of its aging infrastructure, and the path forward is not at all clear.

We are considering pretty much any good idea that anyone has, and when we come to meetings such as today's meeting, we are hoping to hear those ideas, ideas about public-private partnerships, creative ways of financing infrastructure, or more traditional approaches of financing infrastructure, and trying to assess how the inland waterways system competes for those funds, which is not always straightforward.

That is basically the message that I am trying to convey today. We appreciate the work that this Board has done and continues to do and the advice that it provides, and the opportunity to hear your ideas. It is extremely important to us, and I look forward to today's meeting and discussion of ideas.

Thank you.

MS. MURDOCK-McDANIEL: Thank you very much, Mr. Hansen, we greatly appreciate your attendance at today's meeting and the support that you provide.

Now I will turn the microphone over to the chairman of the Inland Waterways Users Board, Mr. Martin Hettel, for his opening remarks. Sir.

CHAIRMAN MARTIN T. HETTEL: Thank you Ms. Murdock-McDaniel, and welcome everyone here to our Inland Waterways Users Board Meeting No. 84 here in Portland, Oregon. The Board certainly wants to also recognize the Portland navigation community, along with the Pacific Northwest Waterways Association for sponsoring not only our social event last night, but our coffee and refreshments this morning.

The Board extends its appreciation to the Corps of Engineers Portland District for our site visits yesterday. We certainly realize the degree of coordination that goes into scheduling these types of events, and these site visits are informative for Board members, and we appreciate all the planning that went into our tours yesterday.

Personally I would like to welcome and recognize the newly appointed members to the Inland Waterways Users Board.

Mr. David Earle, representing Marathon Petroleum Company. Welcome David.

Mr. Mike Fewell, representing the Dow Chemical Company. Glad to have you on board, Mike.

Mr. David Konz, Tidewater Barge Lines, who took Mr. Bruce Reed's place on the Users Board. Welcome David.

Mr. Michael Monahan, representing Campbell Transportation Company. Mike, glad to have you join the Users Board.

Mr. Tim Parker, III, representing Parker Towing Company. Tim took Mr. Charlie Haun's place on the Board.

And, Mr. Matt Ricketts representing the Crounse Corporation. Welcome Matt.

Gentlemen, we look forward to your participation on the Board over the next two years.

And I would like to welcome back to the Board those members who have been reappointed to serve another two year term, including Vice Chairman Mr. Matt Woodruff of the Kirby Corporation, Mr. Robert Innis of the LafargeHolcim company, Mr. Scott Leininger of CGB Enterprises, Inc., and Mr. Dan Mecklenborg of the Ingram Barge Company.

Speaking of new Board members, yesterday I took the liberty to confirm with specific Board members on who would act as the Inland Waterways Users Board representative for the four priority ongoing construction projects that are currently underway. Those projects are the Olmsted Locks and Dam project located at Ohio River mile point 964.4 below Pittsburgh; the Lower Monongahela River Locks and Dams 2, 3, and 4 project, located at Monongahela River mile point 11.2 (Lock and Dam 2 at Braddock, Pennsylvania), mile point 23.8 (Lock and Dam 3 at Elizabeth, Pennsylvania) and mile point 41.5 (Lock and Dam 4 at Charleroi, Pennsylvania); the Kentucky Lock project located at Tennessee River mile point 22.4 from the Ohio River, and the Chickamauga Lock project, located at Tennessee River mile point 471 from the Ohio River.

I will continue to serve at the Users Board representative to the Olmsted Locks and Dam project development team. Board member Mr. Mike Monahan has agreed to serve as the Users Board representative to the Lower Monongahela Locks and Dams 2, 3, and 4 project delivery team. Board member Mr. Matt Ricketts has agreed to serve as the Users Board representative to the Kentucky Lock project delivery team, and Board member Mr. Dan Mecklenborg will continue to serve as the Users Board representative to the Chickamauga Lock project delivery team.

This is the second time in my tenure on the Board that the Board has visited the Columbia-Snake River System. It is always interesting to see a different operation than we are used to in our part of the country. While operations on the Columbia-Snake River system are certainly different than that on the Mississippi River system, we face some very similar situations when it comes to the Corps' operation and maintenance of the inland waterways system, that being the scheduling of lock closures and how these closures affect the transportation of goods within the inland waterways system.

The manner in which the Walla Walla and Portland District offices planned the repairs to all eight facilities on the Columbia-Snake River system, along with the communication and coordination with carriers and shippers is to be commended.

Within the Mississippi River system, we are facing a similar scenario on the Illinois Waterway where the Rock Island District is planning for six lock closures on the Illinois River. However, the Rock Island District is planning for four lock closures in 2020 on the lower part of the Illinois River, those being LaGrange, Peoria, Starved Rock, and Marseilles; then the plan in 2023, the next two locks north of there, which are Dresden Island and Brandon Road.

It sure would be nice to see the Rock Island District perform the maintenance on all six projects in the same year such as Walla Walla and Portland districts accomplished this year. While we know the repairs that are -- the maintenance being scheduled on Illinois River is different than and the maintenance that was performed here on the Columbia-Snake River system, maybe you guys in Portland and Walla Walla districts can call your colleagues in the Rock Island District and give them some ideas on how to accomplish that.

Looking forward to the Fiscal Year (FY) 2018 Budget and the Fiscal Year 2017 work plan, Mr. McKee, we are looking forward to your presentation. The House of Representative Appropriations Committee put forth their Fiscal Year 2018 Energy and Water Development Appropriations bill (H.R. 3266), which passed by an overwhelming majority in the committee, funding the Corps Civil Works program at $6.157 billion for Fiscal Year 2018, which is $120 million above the Fiscal Year 2017 appropriations.

Broken down by appropriations account, the House appropriations bill provides the Corps' Construction account a total of $1.697 billion and the Corps' Operation and Maintenance account a record appropriations level of $3.519 billion. While this is not confirmed yet, and they have to go through the conference process with the Senate to work out the differences between the two appropriations bills, I think the House appropriations bill shows that Congress understands the importance of the inland waterways system. And I will add that the Senate appropriations bill (S. 1609) was just published the other day, and it was very similar in its strong support for the Corps Civil Works program and similar robust levels of funding for the Construction and Operation and Maintenance accounts.

Jeff (Mr. Jeffrey McKee), we are looking forward to your presentation on the Corps FY 2017 work plan and on the possibilities on where the FY 2018 budget might end up.

Lastly, the Inland Waterways Users Board's recommendations on the President's Budget request which was submitted to Congress on May 23rd is due July 25th, which I believe is six days from today.

Information presented at this meeting is extremely important to the Board because it will be included in our recommendations on the President's Budget that are due in a mere six days.

Finally, while the date of the next Users Board meeting has not been set, the location of the meeting has been finalized. Our next Inland Waterways Users Board meeting, Meeting No. 85 will take place in Vicksburg, Mississippi, and will include a tour of the research facilities at the Corps Engineer Research and Development Center (ERDC) the prior day.

This will conclude my brief opening remarks. I would now like to offer any of the other members of the Users Board an opportunity to make opening remarks or other comments.

MR. MICHAEL J. MONAHAN: Thank you, Mr. Chairman. As a new Board member, first I want to thank you for having me on Board. My name is Michael J. Monahan. I am with Campbell Transportation Company.

Mr. Chairman, in addition to being the Users Board's representative on the Lower Monongahela River Locks and Dams 2, 3 and 4 project development team, I would also ask that I be invited to serve as the Users Board's representative on the Upper Ohio River Navigation Study project development team, the new lock and dam construction project at Emsworth Locks and Dam, located at Ohio River mile point 6.1, Dashields Locks and Dam, located at Ohio River mile point 13.3 and Montgomery Locks and Dam, located at Ohio River mile point 31.7.

In preparing to join the Users Board as a new member to this Board, I reviewed the prior meeting notes, and I would like to recommend that the Corps at future presentations to the Users Board on the Olmsted Locks and Dam project, the Lower Monongahela River Locks and Dams 2, 3, and 4 project, the Chickamauga Lock project and the Kentucky Lock construction project, not only revise the terminology and presentations, be standardized and consistent, but also provide the Users Board and Executive Director data analysis on cost increases or cost savings summaries for each project versus the original costs forecasted for each project. The gap analysis should be consistent between all four projects and should ensure accountability and transparency.

From my perspective, the consistency in clearly understanding where we are from a financial perspective is extremely important to make sure we are spending not only the taxpayers' money wisely and efficiently and effectively, but the Inland Waterways Trust Fund money as well.

I would also like to offer up the following comment in light of the new and increased emphasis and focus on fixing the infrastructure of the United States, and in particular the locks and dams on the inland waterways system.

I believe it is incumbent upon the Users Board and the Corps of Engineers to make sure we spend any funds effectively, efficiently, and in a timely manner.

The devil is always in the details, but I am going to assume the American people will finally fund the renewal of our infrastructure in this great country.

The challenge I put forth to the Board is to develop an optimization model to minimize construction costs and overall construction time in preparation for future funding.

The optimization model should use best practices from the Corps and third-party construction companies such as Bechtel or McKinsey.

The optimization model should have clearly-defined deliverables, key project metrics, identify optimal funding processes, clearly identify the resources required, benchmarking practices, and gap analysis while striving for accountability.

I am requesting the Corps come back to the Users Board with a concept paper for evaluation of such an optimization model at the next Users Board meeting.

Mr. Chairman, I have been made aware from Brigadier General Toy (Brigadier General Mark Toy, Commanding General of the Corps Great Lakes and Ohio River Division) that he is kicking off an Ohio River Basin Inspection Tour, nicknamed "ORBIT" from October 17 to 19, 2017, in Pittsburgh. I believe the mission is to visit various sites and projects that the Corps is currently working on the Ohio River Basin. I would appreciate it if the Corps could shed more light on the long-term goals and objectives of this initiative by the Corps.

Finally, I would like to thank the Congress for full capability funding of the Lower Monongahela River Locks and Dams project at $82 million in 2017, and the $5.525 million for the economic analysis from the Upper Ohio River Navigation Pre-construction Engineering and Design (PED) analysis. It is my understanding that $2 million will be used for the updated Upper Ohio River Navigation Study, and $3.525 million will be used for the PED, and I just want to confirm that.

That concludes my remarks. Thank you again Mr. Chairman for the opportunity to offer opening remarks and I look forward to participating as a member of this Board and look forward to today's meeting.

MR. POINTON: Thank you, Mr. Monahan.

Next on our program is the approval of the minute from our last Users Board meeting. That would be Users Board Meeting No. 83, held in Charleston, West Virginia on May 17, 2017.

The minutes were sent electronically to the Board members a couple of weeks before this meeting and hard copy of the minutes from that meeting are also included in the read ahead notebooks that were sent to the Board members last week. Can I see a motion from the Board to approve the minutes of Board Meeting No. 83?

CHAIRMAN HETTEL: So moved.

MR. POINTON: Chairman Hettel so moved. Can I have a second?

MR. DANIEL P. MECKLENBORG: Second.

MR. POINTON: Mr. Mecklenborg seconds. Thank you. All I favor of approving the minutes of Inland Waterways Users Board Meeting No. 83 please say "Aye".

BOARD MEMBERS: Aye. (Unanimous)

MR. POINTON: Any "Nays"? (No response.) Very good. The minute from Users Board Meeting No. 83 are approved unanimously. Thank you, gentlemen.

Next on the agenda will be a presentation on the FY 2017 work plan and the FY 2018 Budget, items that the Chairman referred to in his opening remarks. Mr. Jeffrey McKee, Chief of the Navigation Branch in the Operations and Regulatory Division as well as Navigation Business Line Manager at USACE Headquarters will be presenting on the FY 2017 work plan and the FY 2018 President's Budget request as it relates to the navigation activities within the Corps' Civil Work program.

Mr. McKee, when you are ready, please proceed.

MR. JEFFREY A. McKEE: Thank you, Mark. Good morning Ms. Murdock-McDaniel, Chairman Hettel, Board members, other Federal agency representatives, fellow Corps employees and other attendees. For the record my name is Jeffrey McKee. I am the Chief of the Navigation Branch at the Headquarters of the Corps of Engineers in Washington, D.C. and as Mark has indicated, the Navigation Business Line Manager.

I plan to go through the FY 2017 work plan this morning, as well as the FY 2018 President's Budget request that was submitted to Congress on the 23rd of May, 2017.

Next slide. This first slide just shows you the typical time line of our budgetary process. Basically at any one point in time during the year we are working on three different fiscal year cycles.

The current timeline, if you look at the vertical yellow line, you will see in the middle of July we are in the process of executing the FY 2017 program, the current fiscal year. We are in the process of defending the FY 2018 Budget. As Ms. Murdock-McDaniel indicated, the Chief of Engineers [Lieutenant General Todd T. Semonite, Commanding General and Chief of Engineers, USACE], Mr. Douglas W. Lamont from the Office of the Assistant Secretary of the Army for Civil Works [serving as the Senior Official Performing the Duties of the ASA (CW)], and Major General Jackson are testifying today before the House Transportation and Infrastructure Committee's Subcommittee on Water Resources and Environment on the implementation of the Water Resources Reform and Development Act of 2014 and the Water Resources Development Act of 2016.

Lastly, with respect to the Fiscal Year 2019 Civil Works program, we are in the process of developing that budget as we speak. As you can see things are pretty busy at the Headquarters.

Next slide please. This slide shows the President's Budget requests for the Fiscal Years 2009 through 2018. The good news for FY 2018, if you look across at the top line of the table you will see "Coastal" navigation, "Inland" navigation, the "Total" navigation program, the "Civil Works" total budget request, and in the last column on the far right, the percentage of the of the Civil Works budget represented by the navigation program. That is the navigation program's share of the entire Civil Works program.

You can see increases in the amounts requested for the coastal navigation program (an increase of $62 million) and the inland navigation program (an increase of $102 million), for a total budget

request for the navigation program of almost $2.1 billion for the navigation program in the FY 2018, and the entire Civil Works program of just over $5 billion. That is a good news story for the FY 2018 Budget request.

Next slide please. The Navigation Budget by Account slide shows just the navigation budget request by itself for the Fiscal Years 2009 through 2018. Across the top of the slide you see the four account categories: Investigations, Construction, Operation and Maintenance, and Mississippi River and Tributaries.

Investigations is where we do the feasibility studies and Pre-construction, Engineering, and Design (PED) studies. The Construction account is where we do the physical construction of a project and the Operation and Maintenance account is where we do our ongoing operation and maintenance of projects.

Under the Mississippi River and Tributaries (MR&T) account, we have an Investigations account, as well a Construction account and an Operation and Maintenance component, as well.

You can see the amounts requested for each of these accounts and the sum total of $2.1 billion for the entire navigation program in FY 2018.

Next slide please. For the Coastal Navigation Budget, briefly you can see in this slide how the coastal navigation component of the entire navigation program breaks out. I won't spend a lot of time on this slide but I thought it would provide some context for the entire navigation budget request.

Next slide please. The Inland Navigation Budget slide shows the break out of the Inland Navigation budget request across the four accounts: Investigations, Construction, Operation and Maintenance, and Mississippi River and Tributaries and in the far right hand column the total budget request for the Inland Navigation component of the Civil Works program.

Starting with the Investigations account you see that the President requested $8 million for Investigations, $177 million for Construction activities, of which $175 million of that $177 million figure is for continued construction activities at the Olmsted Locks and Dam project on the Ohio River.

The next column over is the Operation and Maintenance (O&M) account. You see a significant increase in the amount requested for FY 2018 for O&M activities on the inland waterways system (from $631 million in the Budget request in FY 2017 to a Budget request of $784 million for FY 2018).

The next column over to the right is the Mississippi River and Tributaries or "MR&T" account. Here again you see a significant increase in the amount requested for FY 2018, a total budget request figure of $50 million versus a budget request figure of $35 million for FY 2017. The increase in the budget request for the MR&T account is a combination of increased construction of the dikes along the main stem of the Mississippi River, as well as maintenance of the channels and inland harbors.

In the far right column you see a total figure for the Inland Navigation component of the budget request, a figure of over $1 billion in the budget request for FY 2018.

Next slide please. For Additional Fiscal Year 2017 Funds for Navigation in Appropriations Act: the Fiscal Year 2017 Omnibus Appropriations Act (Public Law 115-31, signed into law on May 5, 2017) included a significant increase in the amount of funds provided by Congress to the Corps' Civil Works program.

The Investigations account received an additional $15 million for the navigation program, including $5 million that was included in the general category of "Navigation" that can be used for anything on either the Coastal navigation program or the Inland navigation program, $5 million was included specifically for coastal and deep draft navigation projects, and $5 million for included specifically for inland navigation projects and studies.

Under the Remaining Items line item under the Investigations category, there was an increase of $6.4 million for Research and Development. The navigation component of that line item would probably be in the order of about a third to possibly one a half of those increased funds to support navigation-related research and development activities.

Moving a little further down the slide, you can see the amount of funds that were added to the Construction account. Under the Construction account, an additional $296 million was added to the Corps FY 2017 appropriations, of which $211 million is included in the line item General Navigation. The General Navigation line item is used to fund construction of coastal navigation projects, and it also funds the General Treasury's share that matches up with the next line item, which are inland waterways projects that are supported by the Inland Waterways Trust Fund (IWTF).

The line item below, titled Inland Waterways Trust Fund shows the additional $75.25 million that is strictly the Inland Waterways Trust Fund's share, and the match of that has to come out of the line item above.

The next line down shows the additional money we received for our Continuing Authorities Program (CAP). We have a small construction program for navigation projects that cost less than $10 million each. The program, the Section 107 program, received an additional $8.5 million. Our Section 111 program our "Mitigation of Damages" to shorelines due to navigation projects, received an additional half a million dollars ($0.5 million).

Towards the bottom of the slide you can see listed Mississippi River and Tributaries – Dredging received almost $4.0 million in additional funds, and that is for a combination of the inland harbors that you see in the MR&T account, as well as the main stem of the Atchafalaya and Old Rivers.

And the last line item on the slide titled Mississippi River and Tributaries – Other Authorized Purposes shows there was an additional $10.3 million that went to navigation, out of a total of total of $41 million by the Congress. The match share of that was $10.3 million for other authorized purposes, and that is for projects such as maintenance of dikes or construction of dikes, and that is where that $10.3 would be applied.

Next slide. The Additional Fiscal Year 2017 Funds for Navigation in Appropriations Act continued. This slide shows the additional amount of appropriations that goes towards the Operation and Maintenance account. The first line shows that an additional $425 million was added to the

Operation and Maintenance account, which was a very significant increase above the President's Fiscal Year 2017 Budget request.

The second line shows an additional $24 million was added for general "Navigation" purposes. That, again, can be used for any type of project in the navigation portfolio. The third line shows an additional $268 million was added for Deep Draft Harbors and Channels. The next line shows an additional $46.5 million was added Inland waterways.

The next line shows an additional $49 million was added for Operation and Maintenance of Small, Remote and Subsistence Harbors. These types of projects not only include inland harbors and coastal harbors, but also low-commercial use waterways.

The next line shows an additional $28 million for Donor and Energy Ports. Donor and energy ports are those projects that contribute a lot of revenue to the Harbor Maintenance Trust Fund (HMTF).

The next line shows an additional $9.2 million was directed to the category titled Remaining Items. A couple million dollars of that figure goes towards our Monitoring of Completed Navigation Projects. A number of you went on the tour we had in Tuscaloosa as part of Users Board Meeting No. 74 held in Birmingham, Alabama on February 25, 2015. We saw some of the coatings that we were using, some of the types of structures that we were using, some of the composites we were using instead of steel. That Monitoring of Completed Navigation Projects does a lot of work towards looking at our existing infrastructure and how we can better maintain it or improve it. That is where some of those Remaining Items dollars go.

In total, the Corps received almost $750 million additional dollars in the FY 2017 appropriations directed towards the navigation program, above and beyond the President's FY 2017 Budget request.

Next slide please. For FY 2017 Work Plan Highlights for Investigations, you see on the left hand side of the slide the name of the study. The middle column is the amount that was included in the President's Budget request. The right hand column shows the amount that was included in the Corps FY 2017 work plan.

You can see we have some studies that received increased funding in the work plan versus what was included in the President's Budget request.

The first study listed is the Three Rivers Study in southeast Arkansas, where the Arkansas, Mississippi and White Rivers converge, which received $850,000 in the work plan versus $580,000 that was included in the President's Budget request.

The next study is the Inner Harbor Navigation Canal Lock Replacement Study in New Orleans, which received $550,000 in the work plan, the same amount as the President's Budget requested.

The next study is the GIWW (Gulf Intracoastal Waterway) - Brazos River Floodgates and Colorado River Locks Study in Texas, which received $1.7 million in the work plan versus $1.0 million in the President's Budget request.

Then below the Brazos River Floodgates and Colorado River Locks Study you can see those studies where we added money in the work plan: the Calcasieu Lock Study in Louisiana - $225,000; the Green and Barren Rivers Study - $135,000; the Upper Ohio River Navigation Study, that Mr. Monahan was referring to earlier, $5.525 million; the GIWW – High Island to Brazos River Study - $200,000; and the GIWW – Matagorda Bay Study - $100,000.

Next slide please. For FY 2017 Work Plan Highlights for Construction. Similar to the previous slide, you see on the left hand side of the slide the name of the project under construction. The middle column is the amount that was included in the President's Budget request. The right hand column shows the amount that was included in the Corps FY 2017 work plan.

The first project listed is the Olmsted Locks and Dam project, which received $250 million in the work plan, an increase of $25 million above the amount that was included in the President's Budget.

The next project is the Lower Monongahela River Locks and Dams project which received $82 million in the work plan.

The next project is the Kentucky Lock project which received $39 million in the work plan.

The next project is the Chickamauga Lock project which received $37 million in the work plan.

The Emsworth Locks and Dam major rehabilitation project on the Ohio River in Pittsburgh received $1 million.

The Atlantic Intracoastal Waterway Deep Creek Bridge project received $12 million to complete construction.

The J. Bennett Johnston Red River Waterway in Louisiana received $5.965 million.

And you can see $50,000 was allocated for the Inland Waterways Users Board expenses incurred by the Board and $275,000 for the Corps' expenses associated with support to the Inland Waterways Users Board.

Next slide please. FY 2017 Work Plan Highlights for Operation and Maintenance. Similar to the previous two slides, you see on the left hand side of the slide the name of the river. The middle column is the amount that was included in the President's Budget request. The right hand column shows the amount that was included in the Corps FY 2017 work plan.

The first river, Mississippi River, received $198.1 million in the FY 2017 work plan, an increase of a little over $9 million from the President's Budget request.

Next, the Ohio River received $120.35 million, an increase of a little over $15 million from the budget request.

Then the GIWW, the Gulf Intracoastal Waterway, received $75.5 million, an increase of $14 million versus the budget request.

Then the Illinois Waterway, it received a little more than the original budget request at $35.225 in the work plan.

The Tennessee River, it received $25.75 million, an increase of $2.75 million versus the budget request.

Then the Black Warrior and Tombigbee Waterway at $20.5 million, and then other inland waterways, at $209.292 million.

At the bottom of the slide, you see the Mississippi River and Tributaries account, both for Construction, which received $10.781 million in the work plan, an increase of almost $8 million from the budget request, and the Operation and Maintenance account, which received $48 million in the work plan versus $34 million in the budget request.

Next slide, please. The total FY 2018 Budget request for the navigation program is $2.098 billion, including $1019 billion for inland waterways, and $26 million would be drawn from the Inland Waterways Trust Fund to support continued construction at the Olmsted Locks and Dam project.

Under the heading Investigations you can see that $8 million was included in the budget request to fund the Three Rivers, Arkansas study; the Gulf Intracoastal Waterway – Brazos River Floodgates and Colorado River Locks Study; and the Atlantic Intracoastal Waterway (AIWW) Bridge Replacement at North Landing, Virginia study. The AIWW Bridge Replacement Study was the only New Start in the FY 2017 Budget. It is similar to the Deep Creek Bridge Replacement where the Corps would fund construction of the bridge replacement. This would be a study to see what improvements would be required at the North Landing Bridge. After completion of construction we would turn the bridge over to the non-federal interests, and we would no longer have responsibility for maintenance of the bridge.

And the last item under Investigations is for Remaining Items in the amount of $6 million.

At the bottom of the slide you can see under the heading Construction, there is $175 million for the continued construction at the Olmsted Locks and Dam project. And the Remaining Items figure is $2 million, which includes $60,000 for the expenses associated with the Board's expenses of the Inland Waterways Users Board and $275,000 for the Corps' expenses associated with the support of the Users Board.

Next slide please. Continuing the FY 2018 President's Budget highlights, under the Operation and Maintenance account, you see $784 million was requested for the inland waterways, with a focus on reducing the risk of failure on high commercial use waterways, and you can see on the slide, the distribution of funds across the various waterways including the Mississippi River, the Ohio River, the Gulf Intracoastal Waterway, the Illinois Waterway, the Tennessee River, the Black Warrior Tombigbee Waterway, and other waterways.

A lot of money will go towards the maintenance of our locks and dams, as well as dredging of the inland waterways. You can see the split there by the high commercial use waterways, as well as the moderate use and low use commercial waterways.

And at the bottom of the slide you see the Mississippi River and Tributaries account, with a request of $52 million, of which $15 million is for Construction, which is the highest we have had for construction in the last number of years. And the Operation and Maintenance account, at $37 million, is higher than in the past years, as well.

Next slide please. I did not have an opportunity to review the Senate version of the FY 2018 Energy and Water Development appropriations bill but these figures show the House version of the FY 2018 Energy and Water Development appropriations bill that Chairman Hettel referenced in his opening remarks.

The first item, the Investigations account received an additional $7.5 million in funding, split equally between $2.5 million for the General Navigation line item, $2.5 million to the Coastal and Deep Draft Navigation line item and $2.5 million to the Inland Navigation line item. No funds were provided for the Small, Remote or Subsistence Harbors line item.

On the line item titled Remaining Items there is about a half a million dollars ($500,000) increase in Research and Development, again, and a lot of that goes towards the inland waterways infrastructure.

Under the line item titled Construction you can see there was an increase of $247 million, similar to what I explained in the FY 2017 work plan. The General Navigation category received an additional $160.750 million which goes towards construction of coastal navigation projects as well as the General Treasury's share to match the Inland Waterways Trust Fund's share of $78.75 million, which you can see on the line below the General Navigation line.

The next line down shows the additional appropriations directed towards the Section 107 navigation projects, in the amount of $7 million and the line below that shows the additional funds directed towards the Section 111 projects, the Mitigation of Shore Damages projects, in the amount of $500,000.

Then at the bottom of the slide you see the Mississippi River and Tributaries Operation and Maintenance Dredging line, which shows that it received an additional $3.09 million and the Mississippi River and Tributaries - Other Authorized Project Purposes received $13.0 million, to be split among the various project purposes, including flood risk management and navigation. This line item is significantly less than the $41 million that was included in the FY 2017 Energy and Water Development Appropriations Act.

Next slide please. The additional FY 2018 Funds for Navigation in House Appropriations bill continued. This slide shows the Operation and Maintenance account. The total amount of money that was added to the navigation Operation and Maintenance account was $404 million. The Navigation General account was $8 million; the Deep Draft Harbor and Channel line item received $334 million, Inland Waterways received $25 million; Small, Remote and Subsistence Harbors received $20 million; Donor and Energy Transfer Ports received $10 million; and Remaining Items received $6.2 million, and $2.7 million of that additional $6.2 million is directed toward the Monitoring of Completed Navigation Projects.

You can see the total additional funding included in the House version of the FY 2018 Energy and Water Appropriations bill is just under $675 million compared to the additional $750 million included in the FY 2017 Energy and Water Development Appropriations Act.

Next slide. There is a provision in the House version of the FY 2018 Appropriations bill that provides for six study New Starts, of which at least one of those needs to be dealing with navigation, there has to be one dealing with flood risk management, and one has to deal with aquatic ecosystem restoration. The remaining study New Starts are to be split between navigation and flood risk management.

Also there is a provision for two construction New Starts, and they can be in any of the three major businesses lines, those being navigation, flood risk management, or aquatic ecosystem restoration.

Subject to your questions, that concludes my presentation on the FY 2017 Energy and Water Development Appropriations, the FY 2017 Work plan, and the President's FY 2018 Budget request.

CHAIRMAN HETTEL: Jeff, thank you very much for your presentation.

Your slide, titled "FY 2018 President's Budget Highlights" concerning the Construction account; I would like to refer to that as the "President's Budget Lowlights". For example, the $175 million that is directed to the Olmsted Locks and Dam project would only draw $26.25 million out of the Inland Waterways Trust Fund, while our estimates of the amount of Inland Waterways Trust Fund revenues collected from the fuel tax would be approximately $110 million in FY 2018.

Add to that the $57 million beginning balance in the Trust Fund as of October 1st of last year that you show in today's report on the status of the Inland Waterways Trust Fund, at the end of Fiscal Year 2018, the Inland Waterways Trust Fund would have a balance of $140 million.

Another lowlight of the President's Budget request is the additional money that he is looking forward to depositing into the Trust Fund, $1 billion over ten years. If that were to succeed, it means in FY 2018, the Trust Fund would have a balance of $240 million.

The inland waterways navigation industry certainly have not volunteered to increase our user's fee for the money to sit in the Inland Waterways Trust Fund and not be utilized. Hence, as I stated earlier, the appropriations included in the House and Senate versions of the FY 2018 Energy and Water Development Appropriations bills certainly understands the value of the inland waterways system, and hopefully the Administration at some point in time will also recognize that value and schedule the Trust Fund dollars to be spent wherever we make our recommendations. All this will be part of our recommendations on the President's FY 2018 Budget request.

MR. McKEE: Thank you, Chairman Hettel. I am not surprised at that comment. Duly noted. The budget is the Administration's budget taking into consideration of all of the Civil Works projects and programs that need to be funded, funding that we are looking at, and the requirements to reduce the federal deficit. Your comments are duly noted that you would like to see more money directed to the inland waterways system and the projects under construction.

One quick note on the Inland Waterways Trust Fund, as you indicated, the balance at the end of FY 2016 was $57 million. The FY 2017 work plan, with the additional funds that we put towards the Inland Waterways Trust Fund projects, we will actually draw just over $117 million from the Trust Fund to supported continued construction at inland waterways projects. We anticipate that the revenues deposited into the Trust Fund, the U.S. Treasury projection of revenues for FY 2017 is $107 million, so that would be a decrease of about $10 million in the balance of the Trust Fund, so we expect the balance at the end of FY 2017 in the Trust Fund to be about $47 million.

Then taking into account the $26 million in Trust Fund dollars directed to the Olmsted Locks and Dam project in FY 2018, and the U.S. Department of Treasury projection of revenues deposits into the Trust Fund in FY 2018 of approximately $105 million, based on Department of Treasury's estimate of next year's revenues.

We are looking at the end of FY 2018, projecting conservatively $47 million going into FY 2018, the $105 million being added to the Trust Fund during FY 2018 and the $26 million going out of the Trust Fund, we estimate a yearend balance at the end of FY 2018 of approximately $126 million.

Again, Mr. Chairman your point concerning the high carryover at the end of FY 2018 is noted.

MR. HANSEN: Jeff, if I can just add a comment.

MR. McKEE: Yes sir.

MR. HANSEN: If I can just comment quickly on a couple of things.

First of all, regarding the funding of the Olmsted project, it is important for this Board to recognize that in putting together the President's Budget, we make every effort to ensure that we request funds that will fund the Olmsted project at a capability level of effort. It is essentially our highest priority construction project in the entire Civil Works program. Okay. You can say it is an equal priority with critical dam safety projects, but we basically do everything we can to make sure that that project has a capability level of funding.

Regarding the user fee that has been included in the last several President's budgets, well, at least the last two President's budgets, the Administration has proposed an increased user fee. We did so again this year. I am not sure what the legislative vehicle is going to end up being for that. It would be handled by the Congressional authorizing committees. And the previous Administration had also proposed a user fee.

But some of the comments made here earlier this morning help explain why we did that. The comment earlier about LaGrange Lock and Dam, we are concerned about LaGrange Lock and Dam. We think there is a legitimate need there for an investment, and it is on the horizon as a need that we are going to have to meet. The Upper Ohio River Navigation project is on the horizon. In the very near future we are going to have to figure out what to do with that.

If you start adding up the demand signals from other projects, and other projects out there, and you do the math of the ongoing work and where the appropriations are putting the money on Olmsted, Lower Monongahela, Kentucky Lock, and Chickamauga Lock, you very rapidly can see that the

balance in the Inland Waterways Trust Fund is not going to be sufficient to enable that work to go through.

Having said that, I understand that Chairman Hettel's comment and frustration about the imbalance between saying, "Hey, the Administration wants to increase the user fee, and yet it isn't proposing to use the money that is already in the Trust Fund." I appreciate that. That is an awkward situation that we have to work through, but the rationale fundamentally is still looking long term, we look like we have to do something to make more funds available for anticipating construction in the future.

Thank you.

MR. MECKLENBORG: Mr. Chairman. Just a couple of comments.

First, I want to ask Mr. McKee what is the relationship between the FY 2017 work plan and the FY 2017 Budget. Is it that once the Congressional appropriations committees do their thing, then the Corps develops the work plan that either is or is not consistent with the President's Budget?

MR. McKEE: That is correct. The FY 2017 President's Budget is the Administration's budget that is submitted to Congress. Congress then takes that budget, reviews it, and they will pass their appropriations. What you will see when you look at the appropriations bills, you will see a column with the President's Budget figures, and then you will see corresponding columns for the congressional appropriations.

In a "no Congressional earmark" period like the one we are currently in, you will see those numbers generally matching, unless there has been a reduced capability, in which case you may see a smaller number and an explanation under the "Statement of Managers" section of the appropriations bill. At the end of the individual accounts, you will see what are called "Remaining Items" or programmatic type of things, where the Congress gives us additional funds. The Congress cannot specify the funds by a specific project, instead they give us those general categories that I showed you on the slides for "navigation", "inland waterways", "coastal deep draft harbors and channels", and so on, and then that goes back to the Administration, to then apply those funds within the requirements and parameters and instructions that the Congress sets forth and add the appropriations to the specific projects.

If you go back to the slide dealing with Construction appropriations, the slide titled "FY 2017 Work Plan Highlights – Construction" you will see that we increased funding of the Olmsted Locks and Dam project by $25 million, we increased funding to the Lower Monongahela River project by $82 million, we increased funding to the Kentucky Lock project by $39 million, and we increased funding to the Chickamauga Lock project by $37 million, because of the additional construction dollars that Congress added to the FY 2017 appropriations.

So, yes, the work plans are the result of Congress appropriating additional money and the Administration applying those funds where it best sees them.

MR. MECKLENBORG: Okay. That was very helpful. I would ask a further question as to whether any of the additional Investigations funds might be applied to the Pre-construction Engineering

and Design analysis of the LaGrange Lock project or the broader Navigation and Ecosystem Sustainability Program or "NESP" on the Upper Mississippi River and Illinois Waterway.

MR. McKEE: With respect to the LaGrange Lock project, the funding for design of LaGrange Lock project would come out of the Construction account, because it is not a new construction project, it is a major rehabilitation project. For major rehabilitation projects, the study for the major rehabilitation report is done in the Operation and Maintenance account. Once that major rehabilitation report is approved, any new funding to do the Pre-construction Engineering and Design would be provided in the Construction account.

That is a little bit different than the procedure for a new project, such as the Upper Ohio Navigation Study, where there is a feasibility study and then your Pre-construction Engineering and Design analysis is funded out of the Investigations account, and then you move into the Construction account to fund the physical construction of the project.

That being said, ultimately when we do move into construction those Pre-construction Engineering and Design costs are split between the Inland Waterways Trust Fund and the General Treasury. In both cases, the Pre-construction Engineering and Design phase is paid 50-50 percent between the General Treasury and the Inland Waterways Trust Fund.

In this case, the funds to do the Pre-construction Engineering and Design would have to come out of the Construction account, and we would need a construction New Start by the Congress.

If you go back to the last slide I showed, the one titled "FY 2018 House Appropriations Bill – Navigation Provisions", which showed two construction New Starts in FY 2018, we would need to have a new construction start to move ahead with the LaGrange project.

MR. MECKLENBORG: Can you use one of those two construction starts that are provided in the House appropriations bill for the LaGrange project?

MR. McKEE: That would be a potential option now, based on what the Senate ultimately comes up with in their appropriations bill, what the conference between the House and Senate produces, and what is ultimately passed by the Congress. The Congress will tell us how many New Starts we have. It is then up to the Administration to decide amongst flood risk management and navigation and aquatic ecosystem restoration which projects best compete for those New Starts.

While it certainly would be eligible to compete as a New Start, there is no guarantee that the LaGrange project will get that New Start designation.

MR. MECKLENBORG: Ok. Does that apply to the new lock structure that was authorized under the Water Resources Development Act of 2007 for LaGrange [Title VIII of the Water Resources Development Act of 2007, Public Law 110-114, signed into law on November 8, 2007, authorized the construction of a 1,200 foot lock at LaGrange as well as one other site on the Illinois Waterway and five sites on the Mississippi River], or are you talking about the major rehabilitation at LaGrange?

MR. McKEE: I am only talking about the major rehabilitation project at LaGrange at this point in time. I wanted to address the LaGrange Lock Major Rehabilitation project first, and then move onto the NESP project.

MR. MECKLENBORG: So what about NESP?

MR. McKEE: Okay. So NESP is an authorized project. We are still in the Investigations account where we are doing Pre-construction Engineering and Design. NESP would be eligible for any of those funds that were shown in either the "General Navigation" category or the "Inland" category in the Investigations account to do Pre-construction Engineering and Design analysis.

Again, they would have to compete with all of the other studies, Feasibility studies, as well as Pre-construction Engineering and Design for those additional funds that are provided by the Congress. But in answer to your question, they would be eligible to compete for those dollars, yes.

MR. MECKLENBORG: Okay, thank you. With that being said, my company is a large company, and I am familiar, through the Waterways Council's activities, with a huge segment of the shipping community and navigation industry, would very much encourage the Army Corps of Engineers and the Administration to apply some Pre-construction Engineering and Design funds to the NESP program.

MR. McKEE: Understood sir. Thank you.

CHAIRMAN HETTEL: Jeff, just a few comments, one for you and one for Mr. Hansen. I believe you referenced the estimated deposits into the Trust Fund for this fiscal year of $105 million. As we see on your next report, as of the end of June of this year, we are tracking right at the FY 2016 deposits, which I believe totaled $112 million. So we are about $7 million off on what you project and what we see actually taking place.

And, Mr. Hansen, to your comments on the future balances of the Inland Waterways Trust Fund, we certainly agree with your comment, that with the projects we have coming up on the horizon, that it puts the Trust Fund in jeopardy, which is all the more reason why we cannot accept these increases in costs that we are seeing at the Kentucky Lock project of $393 million and increased costs at the Lower Monongahela River project for FY 2018 of $57 million.

You just cannot keep coming back to the well, because the well is running dry.

MR. HANSEN: Mr. Chairman, we share your concerns about the project cost increases, absolutely, sir.

MR. McKEE: Mr. Chairman, for the record, the U.S. Treasury projections of Trust Fund revenues for the current fiscal year, FY 2017, the anticipated fuel tax receipts are projected to be $107 million. The U.S. Treasury projects fuel tax receipts for next fiscal year, FY 2018 to be $105 million.

But your comment is noted, yes sir.

In my next presentation on the status of the Inland Waterways Trust Fund, you will see where we were in FY 2016 in terms of fuel tax receipts and yes indeed, there were $111 million in fuel tax receipt in Fiscal Year 2016.

Are there any other questions, before I move on to the status of the Inland Waterways Trust Fund?

MR. MATT RICKETTS: I have a question.

MR. McKEE: Yes sir.

MR. RICKETTS: In your comments earlier, are we to understand that it is the concern of the Administration regarding the long-term funding capabilities of the Kentucky Lock, Chickamauga Lock, and Lower Monongahela River Locks and Dams projects that drove the decision to not allocate any dollars from the Inland Waterways Trust Fund in the Fiscal Year 2018 Budget request for those projects?

MR. HANSEN: If I understand your question correctly, I think there are a couple of different things going on here. As you know, the Lower Monongahela River Locks and Dams, the Kentucky Lock and the Chickamauga Lock projects have not been included in the Fiscal Year 2018 Budget request, and that is because, on the basis of their benefit-to-cost ratios (BCR), they do not meet the 2.5-to-1 BCR threshold for inclusion in the budget.

Nonetheless, it is the ultimate action of the Appropriation committees in the House and Senate that result in the appropriation of funds that are being allocated to those projects and spend down and actually have, at the end of the day, the impact to the balance in the Trust Fund.

When we look at the actual appropriations, combined for those projects, taken together with the out-year impacts, the demand signals of other projects in the future that we see as potentially coming online, such as the Upper Ohio Navigation Study and a whole list of other projects that are spelled out in the Capital Investment Strategy, it is the totality of those demand signals that we think we need to try to address. Does that answer your question?

MR. RICKETTS: I think you did with the 2.5 BCR requirement. Where does that come from?

MR. HANSEN: The 2.5-to-1 benefit-to-cost ratio is in writing in the back of the press book for the Corps' budget, so you can see it. Just physically where to find it, that is where it is, along with many other factors that are the criteria for inclusion in the President's Budget concerning construction projects.

The actual 2.5-to-1 number itself is somewhat arbitrary. The Administration had to create a threshold just to enable it to say, okay, this is what our cutoff is going to be.

The fact is that it is pretty infrequent when we consider New Starts that we are even able to work our way down to projects with a BCR of 2.5-to-1. For example, one of the proposed New Starts in the President's Budget is Boston Harbor, which I believe has a benefit-to-cost ratio greater than 4.0-to-1. Jeff, is that right?

MR. McKEE: Yes sir.

MR. HANSEN: So the 2.5-to-1 figure is arbitrary, but it almost doesn't even matter. If, hypothetically, we were to get to a point where we worked our way down through the list of potential construction projects to where we needed to go below 2.5-to-1, and we didn't have anything over 2.5-to-1 that was ready to go to construction, we would change it. It is by no means set in stone, and that is the type of budget criteria that is revisited every single year.

MR. RICKETTS: For the record, the 2.5-to-1 benefit-to-cost ratio matters when it comes to the Kentucky Lock, the Chickamauga Lock and the Lower Monongahela River Locks and Dams projects as they relate to inclusion in the President's Budget. These projects have already been started and are currently under construction, so maybe it goes back to the remaining-benefit-to-remaining-cost ratios (RBRCR) that you look at once you have started a project versus a brand new construction project.

MR. HANSEN: Yes. That is an excellent point, and there has been a long-running conversation with many interested parties, and within the Administration over many, many years as to the relative merits of using benefit-to-cost ratio or a remaining-benefit-to-remaining-cost ratio.

The President's Budget one year actually did use the remaining-benefit-to-remaining-cost ratio as a criteria for inclusion in the Construction account, and I forget what year that was, but it was in the early to mid-2000's, and there were some problems with that.

I think a lot of the dynamics that we are seeing here with the challenge of trying to figure out how to move forward with the Lower Monongahela River Locks and Dams, the Kentucky Lock and the Chickamauga Lock projects is that we are in the awkward transition from of an "earmark" environment to a "no earmark" environment, and those projects were started in a different environment, and every one of them has its own very complex history, so I do not want to generalize too much.

That is one of the things that you are seeing where these have BCRs that, if we are looking at the budget right now, and we have to ask ourselves where do we get the best bang for the buck for putting taxpayer dollars, if our metric that we are using across the board is benefit-to-cost ratios, should we be putting it on Boston Harbor with a 4-point-something BCR, or should we be putting it on a project that may have a BCR that is not too much above 1.0? The determination we make right now for this year's budget is we put it on the project that had the 4.0 BCR.

But I acknowledge your point. This is one of the very challenging policy considerations that we have to work through every year, and we do reconsider it every year, because your concern is valid.

MR. ROBERT J. INNIS: Just a quick question on that point. Are you considering the $400 million that has already been spent at the Kentucky Lock project to be lost because there haven't been any benefits received yet from the $400 million invested and that has already been spent on that project? That money has already been invested and there haven't been any benefits received by the taxpayers based on that fact. That money was spent without any benefit-cost ratios, is that right?

MR. HANSEN: I think what you are getting at is one of the arguments in favor of using the remaining-benefits-to-remaining-costs ratio instead of the benefit-to-cost ratio because the BCR does not take into account the sunk costs for a project already under construction.

We do not look at it in exactly the way that you describe it. What we try to do every time we budget for something, we try to fund a useful increment of work so that we get some tangible benefit from it.

We are not always able to do that because of the nature of the work. For example, if we have a giant concrete monolith, and it is going to take several years of work to get the work done, then we are not going to get one year's worth of useful increment out of it. But we try to do it so that you aren't in a situation where you put some money in it and haven't gotten a tangible benefit.

MR. INNIS: Agreed. That is where we end up when we continue not to fund these projects, the project construction costs are going to continue to rise, and the money spent is already gone. If you are looking at a project in which, most places would walk away from something that you just spent $400 million to try to get to a benefit-to-cost ratio and say it is not worth continuing forward.

MR. HANSEN: The history on this is pretty interesting, and if you go back to -- if you look at how most federal capital investment projects are constructed, Congress has said that you need to fully fund your capital investments, so if the Army is going to build a building or the Navy is going to build a ship, you are supposed to appropriate all of the money for that building or that ship all upfront, and that is because early -- way back in the history of this, the Federal Government was left with three ships that were half done, sitting in a shipyard somewhere, and somebody decided, well, that we are not getting a whole lot for those ships. That is, in fact, the standard.

The Congress specifically carved out water resources development projects as an exception to that standard, for the Army Corps of Engineers, the Bureau of Reclamation within the Department of Interior, and I believe the Natural Resources Conversation Service within the Department of Agriculture, although I am not positive about the last one.

There is a clear Congressional intent there that we should be funding these projects incrementally year-by-year, and that subjects those decisions every single year to new decisions in the President's Budget, and to the decisions of the Congressional appropriations committees.

Inherent in that decision-making process is the possibility that something is not going to be fully funded all the way to its conclusion without some slowdown in funding.

MR. INNIS: Agreed. However one of the big issues is, when we are looking at the costs for these projects, the cost of the entire project is being escalated. The sunk costs are not being taken out, correct? What has already be spent should be removed as either a fixed cost that does not escalate, looking at the benefit-to-cost ratio in some form, because the whole project is being escalated as if that $400 million has not been spent, and that is one of the things that I think is going to affect the BCR substantially.

MR. HANSEN: Fundamentally what you are getting at is you are saying, well, we think we should be using the remaining-benefit-to-remaining-cost ratio, is that correct?

MR. INNIS: That is one point, but my other point is if we are just going to use the BCR, we should not be escalating the cost of the entire project, the money that has already been spent, because $400 million is $400 million. The only cost of the project that should be escalated is the remaining portion of the project. You could still use the BCR, if that is the method you want to continue, but we should not escalate the sunken costs portion of the project.

MR. HANSEN: Got it. Understood. I am tracking your rationale. I take your point. Thank you.

MR. MECKLENBORG: To build upon Mr. Innis' point, I think there is an aspect of fundamental unfairness that is inherent in the approach that is being taken relative to the Trust Fund dollars as they are applied to these projects. We are going to end up with three "bridges to nowhere" as a result of this approach, and that is unacceptable to the inland waterways navigation carrier and shipper communities.

MR. MONAHAN: Listening to the dialogue on the benefit-to-cost, reflecting on I view as a flawed process that starts with the study where the BCR is derived from as it concerns inland waterways projects.

It is my understanding that the Corps is restricted from looking at all of the other multiple benefits and beneficiaries of the locks and dams, whether it is local water supply, recreational boating, flood control, et cetera, and that really understates the true value of the inland waterways system.

When you say it is an arbitrary number, a benefit-to-cost ratio of 2.5 as a threshold by which to evaluate the worthiness of project for budgeting purposes, and you have a flawed process on the front end, I think it is incumbent upon us to fix that study process to ensure we are deriving the correct benefit-to-cost ratio.

The discussion also included the example of Boston Harbor. Is that an apples and oranges comparison, comparing a deep draft, coastal navigation project to an inland navigation project? I don't understand the process for the harbor evaluations. Maybe that has been a discussion at a prior Board meeting.

MR. McKEE: With respect to the calculation of navigation benefits, the majority of the benefits associated with a proposed improvement, whether it be a deep draft coastal project or an inland waterways project, are based on transportation cost savings, whether they are transportation cost savings on the coastal project or the inland project. It is transportation cost savings.

With respect to the use of benefit-to-cost ratios, benefit-to-cost ratios are one metric that can be used across the different business lines, so you can see a flood risk management project with a benefit-to-cost ratio, and there is competition across the business lines for those different construction projects.

Does that help answer your question in terms of are they analogous or --

MR. MONAHAN: It does. I just want to make sure that using the benefit-to-cost ratio is an apples to apples comparison across the projects. If it isn't an apples to apples comparison, then I want

to understand why not. But if you are telling me that the project evaluation process is consistent and equitable, that's fine.

However, once again, if the study processes is flawed, then, when we arrive at a benefit-to-cost ratio, we are potentially setting ourselves up for failure even before the projects have started.

MR. McKEE: If you are comparing inland waterways and coastal navigation projects, the project evaluation process is very consistent. It is transportation savings. In a case of an inland project, if you improve the channel, you can carry more cargo on the barge, resulting in a lower transportation cost and a savings in transportation costs. If you increase the size of a lock and you don't have to cut tows, you reduce the delay time and the wait time, and you have a savings in transportation costs there.

With respect to improvements at coastal ports, typically you are able to load your vessels deeper, so your transportation savings are being able to carry more commodities on each ship movement, so they are analogous in that way.

If there are no more questions for me, I would like to make two brief clarifications, one on the benefit-to-cost ratio threshold of 2.5-to-1. That is at a discount rate of 7 percent, and that needs to be noted, when you calculate those things.

The second clarification concerns the Boston Harbor Deepening project. That project was a New Start in the FY 2017 work plan, not the FY 2018 Budget.

MR. HANSEN: That is correct.

MR. RICKETTS: Concerning the benefit-to-cost ratio of 2.5 and the 7 percent discount rate, are those mandated by the Administration? Is that what is used?

MR. McKEE: Yes sir, that is correct.

MR. RICKETTS: Okay. I think, just to be clear, on at least what we are all getting at, back to your question, Mr. Monahan, concerning the Boston Harbor example versus the Kentucky Lock project, you are using the BCR as your criteria, and you are comparing a new construction start to a project that has already started, it is not comparing apples to apples, because you are not giving the project that is already started any benefit for the dollars that have already been spent.

If you are using remaining-benefit-to-remaining-cost on projects that have already been started, you do give yourself the benefit of the dollars that have been spent. I think that takes care of the problem when you compare new construction projects BCR's versus a project that is already under construction remaining-benefit-to-remaining-cost ratio, you obviously get much higher figures, and it may be a way for this 2.5 figure to come in to some degree.

MR. INNIS: Speaking of the deepening project for Boston Harbor, do you look at the drafts of the vessels using the harbor? The majority of the vessels that are coming into the port are sized appropriately for what is currently there. There are some imports and exports that can be transported on larger vessels. But most of the coastal transportation vessel sizes are based on Boston Harbor, so you are not escalating all of the vessel sizes or commodity tonnage. Is that correct?

MR. McKEE: That is correct sir. We were looking only at those commodities that would move in ships that would take advantage of that deeper channel. We would not count anything going through, your general cargo ships or your barges or anything else. The harbor deepening project is based strictly on commodities that would move in larger ships in the deeper channel.

MR. INNIS: Thank you.

MR. McKEE: Moving on to my presentation on the status of the Inland Waterways Trust Fund and the status of inland waterways construction projects, next slide, please.

You can see we have already discussed the beginning balance of $57 million that was in the Trust Fund as of October 1st of last year, 2016. You can see fuel tax revenues to date in FY 2017 (through June 30, 2017) are just under $80 million, at $79,538,870, and the interest on the funds in the Trust Fund are 408,612, so the total revenue in the Trust Fund this year is $79,947,482. When you add the beginning balance in the Trust Fund of $57,350,502 to the $79,947,482 you get a total revenue in the Trust Fund of $137,297,984, as of the 30th of June.

In terms of transfers to the Corps of Engineers, you can see a transfer of $37,600,000, and it was transferred to the Corps in the June timeframe. This is the line with the dollars that would have been obligated to continue work at the Olmsted Locks and Dam project, as well as some of the other inland waterways projects as a result of the FY 2017 work plan.

As I indicated earlier, we expect to see ultimately at the end of the year that $37.6 million rise to $117 million, based on funds that we have allocated for funding in the FY 2017 appropriations and FY 2017 work plan.

The current available balance in the Trust Fund is $99,697,984. At the Corps of Engineers we have $37,875,000.

Next slide, please. This slide is a graphical representation of the cumulative amount of the fuel tax revenue collected by month for the last several fiscal years beginning with Fiscal Year 2012 and continuing through the first nine months of Fiscal Year 2017. As Chairman Hettel indicated a few minutes ago, as of the end of June we are very close to where were in a similar point in time last fiscal year, at approximately $80 million.

Looking at the graph you can see the revenues, if you look at the figures for FY 2015, half the year (October 2014 to March 2015) when the fuel tax was at 20 cents per gallon and half the year (April 2015 to September 2015) when the fuel tax was at 29 cents per gallon, and then in FY 2016 the fuel tax rate was 29 cents per gallon. And the revenue figures for FY 2017 also reflect the 29 cents per gallon fuel tax. [The increase in the fuel tax from 20 cents per gallon to 29 cents per gallon which occurred as part of the ABLE Act (Section 205 of Title II of Division B of Public Law 113-295, the "Achieving a Better Life Experience of 2014" also referred to as the "ABLE Act of 2014"), dated December 29, 2014, with the fuel tax increase to 29 cents per gallon effective as of April 1, 2015].

Next slide, please. This slide displays the Trust Fund revenues as of the most recent three months, April, May and June, for the Fiscal Years 2012 to 2017 Again, the FY 2016 and 2017 figures

are identified above the bars in the graph, and you can see that the 2017 revenues are tracking very close to the 2016 revenues.

Next slide please. This slide displays a summary of the last five fiscal years [Fiscal Years 2013 to 2017] and next fiscal year (2018) for the President's Budget request and the eventual allocations to various inland waterways construction projects. In the column on the far right is Fiscal Year 2018.

In terms of allocations in Fiscal Year 2017 and I discussed this during my presentation on the FY 2017 work plan, for the Olmsted Locks and Dams project $250 million, for the Lower Monongahela River Locks and Dams project $83 million, for the Emsworth Locks and Dam Major Rehabilitation project $1 million, for the Kentucky Lock project $39 million, and for the Chickamauga Lock project $37 million. For the Lockport project you see there is a credit of $550,000 associated with a reprogramming of those funds. In the far right hand column you can see the FY 2018 Budget request of $175 million for the Olmsted Locks and Dam project.

Next slide. I will go over some updates of projects in the Mississippi Valley Division, the Lockport Pool Major Rehabilitation project on the Illinois Waterway and the Inner Harbor Navigation Canal Lock Replacement project on the Gulf Intracoastal Waterway in New Orleans. Then I will give a brief update on the Emsworth Locks and Dam project near Pittsburgh. I will defer the briefing on the Olmsted Locks and Dam project and the Lower Monongahela River Locks and Dams project to Mr. Michael Braden, Chief of the Olmsted Division within the Louisville District, and the briefing on Kentucky Lock and Chickamauga Lock projects to Mr. Don Getty, Project Manager of the Chickamauga Lock project in the Nashville District.

Next slide, please. For Lockport Pool Major Rehabilitation on the Illinois Waterway, no real changes to report concerning the Major Rehab project. Again, you see a credit in the amount of $550,000 in FY 2017. There is no anticipated funding requirements in FY 2018. The physical construction of the project was completed in March of 2017. We expect to fiscally close out the project in September of 2017.

Next slide. For Lockport, this shows the project milestones associated with the construction of the Stage 1C Powerhouse Forebay Wall. There have been no changes to the project schedule since the last Users Board meeting.

Next slide. For the Inner Harbor Navigation Canal (IHNC) Lock Replacement, on the Gulf Intracoastal Waterway, since the last Users Board meeting in Charleston, West Virginia this past May, the Agency Decision Milestone meeting for the General Re-evaluation Report was held on the 21st of June 2017, and we expect, in terms of a final accounting with the Port of New Orleans, we expect that closeout to occur in August of this year.

Next slide. For IHNC Lock, there have been no changes since the last Board meeting.

Next slide, please. Again, for the Great Lakes and Ohio River Division project updates, I will just be briefing on the Emsworth Locks and Dam project near Pittsburgh. With respect to the Emsworth project, we added $1 million to the project, $500,000 from the General Treasury and $500,000 from the Inland Waterways Trust Fund to the project in the FY 2017 work plan, and you can see a resulting decrease in the remaining balance of the project. We do not expect any more funds to be allocated to

the project. Work now is revolving around the development of plans and specifications to fix two sets of emergency bulkheads and to move out and get that contract awarded.

Next slide. For the Emsworth project schedule, there have been no changes to the project schedule since the last Board meeting.

Subject to your questions, that concludes my presentation on the status of the Inland Waterways Trust Fund and inland waterways construction projects.

CHAIRMAN HETTEL: Thank you Jeff for your presentation. I do have a request, and I know you are not going through the four priority projects [Olmsted Locks and Dam, Lower Monongahela River Locks and Dams, Kentucky Lock and Chickamauga Lock], that we will receive a briefing on each of those projects later in the meeting, but I would like to request from the Corps, when we look at these projects we see Fiscal Year 2014, 2015, 2016, 2017 and 2018 allocation, and 2018 Budget.

For the next Users Board meeting, can you report back to the Board as to how much Trust Fund dollars were spent up-to-date for Olmsted, Lower Monongahela River, Kentucky and Chickamauga Lock, in total?

MR. McKEE: Yes sir, absolutely.

CHAIRMAN. HETTEL: Thank you.

MR. McKEE: Not hearing any other questions or comments, thank you very much for your time and attention.

MR. POINTON: Next on the program, Mr. Steven Riley is going to continue with a presentation on improvements to the LPMS (Lock Performance Monitoring System) and waterborne commerce data, and the web viewer that we have been developing.

MR. STEVEN D. RILEY: Good morning. I am Steven Riley, and I will be presenting on behalf of Dr. Mark Sudol. First off, I would like to say thank you. I appreciate the time we have been given here by the Board to demonstrate the tools we are developing.

The main purpose of this morning's briefing is to let you know that we are testing our products and we are seeking feedback. With that in mind, I will go ahead and get started.

The first of the three products that we have been working on at the Navigation Data Center and at the Institute for Water Resources is the WISDM (Water Infrastructure System Data Manager) Version 3.0 Public Viewer. This is specifically for the Navigation business line, with the intent that we also publish all Corps business lines. This is now up and running in the Cloud, and we will actually provide a demonstration of that today, and the URL will be forwarded out to the Board members, if it has not already been sent out.

One caveat on this viewer is that it is going through a testing environment, so that means you will only be able to access it from your actual offices. We have locked this down to the URL so basically you will only be able to access it from your own internal offices, so you won't be able to

access this on your cell phone yet, until we get more testing from you and then we will go ahead and do that.

The second of the three products is the open data platform which we are trying to employ. We are doing that with the help of Socrata, and that actually is up and running on the Cloud and available right now. We can access that information from anywhere.

The third product that I will be talking about today is the Corps Locks website which we are trying to move to the Cloud. This move to the Cloud has been delayed slightly for a few days. We will be using the WISDM Public Viewer as a testbed for our Cloud environment, and that has necessitated the Corps Locks website move to the Cloud take a back seat for just a few days.

The Corps Locks website, again, we will provide that link over the next few days when it is available. The Public Navigation Viewer is available at the following link: http://dmz-waf3-elb-1381667724.us-gov-west-1.elb.amazonaws.com/pbb/, and we will also send that out. The Socrata data viewer is available at the following link: https://data.navigationdatacenter.us/ and is easily accessible from the current Navigation Data Center website.

I will begin with the Socrata data viewer, the existing navigation website. You can find the open data initiative here, and any of the content at the top of the screen. For the purposes of this demonstration we are interested in lock usage. We also have a button that will take you to the lock information on the side of the screen here.

The long-term intent would be to get rid of this site in favor of all the new technologies we are developing and updating to be accessed easier.

This is our open data platform. We have unlocked, no pun intended, the lock section of this website. Everything else is still closed, so if you are looking for ports and waterways information that will be coming soon.

As we flip through the locks, we have actually added more important pieces of information at the top of the screen, so we have tonnage, stoppage, and usage information on all of the locks in the system, and the tools we have set up here allow you to filter based on the time, and that will subsequently filter through all the information below to show values for the timeframe and the river, lock, et cetera, and the information displayed.

The other nice thing that we have done here, we have listened to the Board's request for a long-term storage of the vessel queue information that is available on the Corps Locks website. Here is a demonstration of that feature.

We have gone ahead and right now, as you can see, it has all of 2017 up to June, and we will continue to expand that actually back through the previous years, as well.

We have also listened to some of the requests made about the fields available on this, so we have added direction, delay in minutes, processing minutes on empty and loaded barges, as well as the geo type of the chamber. These features are available to the public starting today.

Our other major rollout today would be the performance-based budgeting information. What we have here is the lock status, lock queue, Notices to Navigation Interests (NTNI), and the financial data for all of our navigation projects.

If you have seen Dr. Sudol's presentations in the past, you might remember that there were additional slides. Our intent is to start off small and roll this out to the public.

All of our products are being developed in an iterative process, so if there is anything you test or need or see a problem with, let us know and we will fix it or roll it out the next version.

Just quickly here, you can see lock status, actually I have Bonneville Lock and Dam on the screen right now since we visited there yesterday and today it was mentioned that there was an extended outage on the Columbia-Snake River System during the winter of 2016 and into early 2017. As you can see, we had an almost 60-day outage there as part of the system notices.

Again, this is Bonneville Lock and Dam, and this shows the current vessel queue, and recent vessel lockages. This is the sort of information you can find on the website.

Subject to your questions, that concludes my presentation on the Lock Performance Monitoring System and the Waterborne Commerce Statistics data.

MR. POINTON: Are there any questions for Steven? I would ask that if you have any questions for Mr. Riley you also copy Dr. Sudol in your correspondence. We have a number of people that are helping with this effort. Mr. Riley is the technical lead, for lack of the better term, but Dr. Sudol is the overall project lead.

MR. MECKLENBORG: I would like to thank Steven and his team for their efforts in this initiative. I think their efforts and this initiative is going to make a significant difference to our industry, and benefit our industry and our vessel movements and cargo shipments. Thank you.

MR. RILEY: Thank you.

MR. POINTON: Thanks, Dan. Next on our program is Ms. Sheryl Carrubba, who will giving a presentation on the 2017 Extended Lock Maintenance Closure on the Columbia-Snake River Waterway. Ms. Carrubba is the Senior Navigation Program Manager for the Northwestern Division, which includes the Portland and Walla Walla District offices. Ms. Carrubba's presentation is based upon information provided from the Portland and Walla Walla districts concerning this extended lock closure and her presentation is designed to give you an after action report (AAR), if you will, on what they did, what worked well, what didn't, and some lessons learned.

MS. SHERYL CARRUBBA: Good morning Ms. Murdock-McDaniel, Chairman Hettel, Board members, other Federal agency representatives, fellow Corps employees and other attendees. For the record my name is Sheryl Carrubba. As Mark indicated I am the Senior Navigation Program Manager for the Northwestern Division, based in Portland.

When the Users Board last met in the Pacific Northwest in August 2014 I had the opportunity to be one of the presenters on the bus ride from Portland to Walla Walla, and I talked about what we

thought we were going to do concerning the long-term extended lock closure. Today I am going to talk about the extended lock closure but with the perspective of the closure from a rearview mirror on what we actually did, what went well, what we learned and what we can do differently in the future.

Next slide. I will begin with a quick overview of the Columbia-Snake River System. I got a lot of this information from Kristin Meira of the Pacific Northwest Waterways Association and Mr. Shawn Campbell of the U.S. Wheat Associates and some of other speakers on the site visit yesterday. To begin, the Columbia-Snake River System extends 465 miles from the mouth of Columbia River at Astoria, Oregon to the port of Lewiston, Idaho.

The largest exports moved on the Columbia-Snake River System are wheat, oilseeds (soybeans and flaxseed), forest products, corn, and other chemicals and related products.

The largest imports are iron and steel, manufactured equipment, building cement and concrete.

The largest internal commodities moved on the Columbia-Snake River System are wheat, aggregate, forest products, distillate, residual and other fuel oils and lube oil and grease.

Next slide. Commodities move down the Snake River to the Columbia River for export. Between 2011 and 2015, commodity tonnage on the Columbia-Snake River System averaged approximately 57 million tons per year. Export tonnage averaged approximately 36.6 million tons per year. Import tonnage averaged approximately 14.6 million tons per year. Internal and coastwise tonnage averaged approximately 14.7 million tons per year.

Next slide. The Columbia River Grains and Seed Oil Exports information is from the U.S. Department of Agriculture, Grain Inspection, Packers and Stockyards Administration, Federal Grain Inspection Service. This slide shows the amount of grains and oilseed exports by quarter for the years 2014 through 2016 and the first two quarters [January to March and April to June] of 2017.

I draw your attention to the last quarter of 2016, the bar at the far right of the graph. If you look at the quarter from October to December of last year, you can see grain and oilseed exports exceeded 10 million tons. It looks like some of the grain that was destine for export went out quicker in preparation for the extended lockage closure.

This year, which is shown by the red bars, looks like it is going to be a banner year. We heard that same sentiment yesterday when we visited with Mr. David Grillot at the TEMCO Kalama Grain Terminal in Kalama and these statistics seem to support that belief.

Next slide. This slide gives you an overview of the work that we performed during the extended closure. We added two more projects to the list of projects included in the extended closure, those being the Bonneville Lock and McNary Lock since we first briefed the Users Board on the extended lock closure in 2014.

At the Bonneville Lock and Dam, the lock closest to Portland, or looking at it another way, the lock furthest downstream on the Columbia-Snake River System, we added an eight week closure to the list of projects included in the extended closure to upgrade the original 30 year old lock control systems.

At the McNary Lock, we made repairs to the downstream lock gates. These repairs were determined to be needed while performing routine maintenance at McNary Lock in 2015, during which the lock was dewatered, the coating on the gates was removed and extensive cracking was discovered. Some repairs were made during that maintenance closure in 2015 and again during the maintenance closure in 2016, and again during the extended closure in 2017.

Next slide. For Bonneville Lock, this slide shows a "before" and "after" picture of the control panel and the control system upgrades. All of the work was completed by in-house staff, as they discussed at yesterday's visit to Bonneville. The staff purchased Programmable Logic Controller (PLC) monitoring equipment and components in 2015 and they did all the design and execution including routing cables, installing electrical panels, and software programming.

The system was a swap-out as much as possible to reduce the amount of down time. Like the presenters said yesterday, the staff did a lot of on-site training, so their maintenance going forward will be easier.

Next slide. The Dalles Lock is the next lock upstream from the Bonneville Lock. The Dalles Lock had probably the most extensive repairs and replacements done during this extended closure.

We thought at the beginning of planning this extended closure, this would be the long pole in the tent, so to speak. They replaced the downstream gate gudgeon hardware, and included anodes that was work remaining from the 2010-2011 extended outage. They replaced the upstream gate completely, and then they upgraded the 60 year-old power distribution system and the operator interface controls.

Moving upstream to John Day Lock, no extensive repairs were planned for the lock. Maintenance crews used the extended outage to clean and check equipment, paint, change gear box fluids, perform preventative maintenance activities and conduct dam safety inspections.

Next, McNary Lock. McNary Lock was the other lock that was added to the list of projects that was included as part of the extended closure since the 2014 Users Board meeting. As I said a little bit earlier, during routine maintenance in 2015, significant cracks were discovered on the downstream gate. These repairs were made to the downstream gate as well as gudgeon line boring and pin replacement, replacement of bottom seals and replacement of timber fenders.

Moving to the Snake River, the first lock on the Lower Snake River is Ice Harbor. Those of you who were on the bus trip back in 2014 remember that we stopped at Ice Harbor Lock. The vertical lift gate on the lock was replaced in 1995, but the hoisting machinery wasn't replaced at that time, and the new gates are heavier, so it increased wear on the gears and bearings. In 2012 they found they were failing. They had bought the gear boxes in case they couldn't make it through this outage, but they did and they replaced critical components of the operating machinery and controls and the bull gear ring.

Moving upstream to Lower Monumental Lock, Lower Monumental had work similar to Ice Harbor. They replaced the vertical lift gate in 2011, but the machinery replacement was not funded at that time, so they replaced the mechanical components that operate the gate and repaired the sheave.

Next is Little Goose Lock, which included extensive repairs to the gudgeon and pintle bearings. Similar to Ice Harbor and Lower Monumental, the district was intensely monitoring the gate gudgeon,

quoin, and pintle system, and they had pre-purchased the gudgeon to minimize disruption if a failure occurred prior to the extended outage. Right before your 2014 visit to Walla Walla, that is exactly what happened. It failed and the lock had to be taken out of service for about three weeks to replace that gudgeon. During this closure the district completed the replacement of the components of the downstream miter gate. The project involved replacement of the remaining original gudgeon arm and linkage, replacement of the pintle assembly for both leaf gates, structural repairs including resurfacing the quoin and miter, and repairs to repairs of cracks.

Next slide. So how did it go? Did it all go according to plan? No, but overall we think it was a success story, but we did have a little bit of delay in opening two of the locks, Ice Harbor and Little Goose.

Bonneville, The Dalles, John Day, McNary, and Lower Granite were all able to open on schedule, or a little bit before schedule. But at Ice Harbor and at Little Goose they had some delays, minor at Ice Harbor, but more extensive at Little Goose.

Throughout the extended closure, when we were getting through this period, we were aggressively communicating this all the time to the stakeholders to make sure that they understood where we were. Even though we did open on time at The Dalles, we started telling our stakeholders probably about four weeks ahead of time it was going to be -- there wasn't any float left in the schedule so that they could be prepared, and that is exactly what happened.

Next slide. What were the reasons for some of the delays in the schedule? Well, yesterday you heard about the weather challenges that we had. In 2017 there were 21 named storms in the United States, and eight of the early storms went right through the Northwest, some right up the Columbia River Gorge, and they dumped record amounts of snow and ice up the Columbia River Gorge and into eastern Washington. Even more importantly, in the Northwest, there was record ice buildup on the roads.

The picture on the left of this slide is the upstream gate being delivered to The Dalles on December 8th, which was just before the winter took the system out. Ominously, it was also the first day of snow for the winter.

Over the next several weeks, there were times when the work was slowed because of all the ice buildup. You can see in the picture on the right of this slide an example of that. Even more than that, sometimes the State Police had to close down Interstate 84 and the contractors couldn't even get onto the job site to do the work.

Next slide. The weather also damaged some of the work that was ongoing, or some of the components. This is at McNary Lock. We had dewatered the tainter valves, which are normally underwater, and they were subjected to cold humid environmental conditions while they were dewatered for repairs, there was ice buildup, and there was even more damage when the temperatures dropped suddenly. The staff did interim repairs, but now these are on the replacement list for future years.

At Ice Harbor Lock there was delay in the return to service. I don't have a picture of that, but after they replaced all the gears and machinery, there was some noise and vibration, and the engineers

were really not comfortable with it, so they delayed the re-opening a few days to do some internal testing to make sure it was safe to operate. It cleared safe operation, but it did require them to come out just a little bit late so that we could be sure.

At Little Goose Lock, shown here about the middle of January, it suffered the most ice buildup. The contractors fell behind schedule, and they really were unable to accelerate their schedule enough to regain it. Ultimately, the Walla Walla District project managers and the contracting staff worked extensively with the contractors, but finally they ended up terminating the contract and awarding a new contract to Knight Construction to complete the work.

The contractor was able to make up some lost time, but not all of the lost time, and part of that was because there was a work deficiency discovered also onsite that they had to repair. The lock was finally able to return to service on April 10th, which was just about three weeks later than intended.

Next slide. So what did we learn? Right away there were AARs or After Action Reports started for all the disciplines involved in the work, and what went well. Would the work be contracted or managed or executed any differently to reduce or avoid risks. These are kind of typical questions you ask yourself after every major project. Like I said before, overall we would call it a successful effort, and there were a few things that really did go well for us.

We felt we had great internal alignment within the Corps. Using risk reduction and system reliabilities as a driver, we got good alignment between the Districts with the Division's programs folks and with the stakeholders and with USACE Headquarters.

The engineering and project management work got done early. They developed realistic schedules. They were probable, but not optimistic. They got the contracts all awarded in 2016, with the exception of one that I mentioned earlier, and that helped the contractors get as much prefabrication and much prepositioning of the equipment, machineries, and control boards onsite so that they were really off to a running start when we shut the system down.

I would be remiss if I didn't say that another good thing that we experienced was great stakeholder support. The communication plan that was jointly run by the Districts, implemented by the Districts during the planning for the closure and during the closure was extensive, and it appeared to be well-received by all stakeholders.

We started talking to the stakeholders about our needs, about the risks and reliabilities of the system about three years ahead of time at various public meetings like the PNWA and with the members of the Users Board at the last Board meeting held here in 2014, and then as soon as we got the President's Budget for FY 2016, we had the first official meeting in May of 2015.

Then we started bi-monthly updates through the rest of 2016. Starting in October of 2016 we had monthly updates, weekly updates, and then there were site tours hosted by each district.

Then as soon as construction started, everybody got a phone call every Thursday morning where we took questions, and then we published a written synopsis. During each of those phone calls, each project manager would get on and talk to them about exactly what was going on with the contract, what was going on with the schedule, and heard the concerns and addressed them.

Then about a month after we finally got everybody returned to service, we had an AAR meeting with the stakeholders, and we briefed them and tried to get some feedback.

Next slide. What you see on the slide is a questionnaire that we handed out at the time, and we also posted it on the website so that people could have time to prepare their responses.

We wanted this information for a couple of different reasons. We wanted to better understand the uses and the amount of usage of the river. As you heard yesterday, over the last few years, the use of the river and how we move grain has evolved over time, so we need to make sure that we understand how the river is being used, so our understanding when we are making decisions is evolving.

We want to understand the second and third-order economic impacts. We can use more and more waterborne commerce statistics and the value of the grain to get a first-order impact, but we don't really have a good way to gauge the second and third order impacts unless we ask what else is going on.

It has been presented to me that stakeholders on other river systems also want coordinated outages, so we want to take what we learned here and share that information with my peers across the country in what we did right or what we did wrong so that they can drive down the risk of economic damage during their closures.

Finally, as a matter of course, we want to preserve the institutional knowledge so that the experienced engineers and the newer engineers and project managers coming behind us can learn from this experience.

Next slide, from the external comments that we received, and I have a few slides on that, everybody understands that system reliability is important to commerce. Everybody clearly understood the risks. They supported the planned shut down, but the shutdown did affect the bottom line of the users of the system. The shutdown really did affect the bottom line in a significant way for a lot of users who could not avoid the impacts.

Next slide. Some of the reported impacts that we received as part of the external comments were as follows. Some respondents reported that some wheat and grain shipments went early, and at a reduced profit, because the grain was shipped before the market price settled. There was a loss of revenues. There was a loss of contracts. There was certainly a loss of marketability in some sectors because the system being shutdown disrupts the flow of commerce.

There were layoffs, and there were reductions in dividend distributions for shareholders.

We have been told that there was a permanent loss of market in the petroleum industry to rail alternatives because even a two-week shutdown, sometimes customers would rather pay a few cents more for an uninterrupted flow of cargo rather than have to wait for even two weeks on a normal maintenance cycle to receive shipments -- even that short term disruption seems like too much some days.

Finally, there were disruptions in the tourism excursion trips and excursion trips that had to be rerouted because we had the delays in returning the Snake River locks to service, and we heard there

was at least one case where a trip had to be rerouted, alternative modes of transportation between stops, and so forth.

Next slide, some other questions and reflections on the scheduling of extended closures involving multiple projects. This is an area that we probably need to spend more time thinking about, thinking about the impact on the regional resources, the length of the closure, and balancing the use of annual maintenance against the need to conduct an extended closure.

When you have a system wide effort like we just undertook, what are the impacts on the regional resources, the construction resources, and is there an associated risk to the capability of the industry, are we stretching the capability of the industry too far? Because we were working with big dam projects and big lock projects, it is not common, routine construction, so there is the issue of the availability of experienced construction talent when you have six out of the eight locks all under various stages of repair and maintenance out at the same time.

What is the proper length of the closure? Is 14 weeks too long? Should the Corps apply more resources and dollars to accelerate the schedule in order to reduce the impact? Or, on the other hand, should the work drive the schedule? There probably is some happy medium in there.

Could slightly longer annual maintenance closures reduce the need for the extended closures?

Next slide. Ideas, questions and reflections continued. Especially after this winter we asked ourselves, is construction during the winter time really the best idea?

Does the work period by working in the winter time increase the risk of construction delays, increase exposure to unsafe working conditions, or add project risk in any way?

Should contractors be better vetted for capability?

And lastly, are tourism and excursion vessels properly accounted for in the Lock Performance Monitoring System data? Some respondents to our post closure survey indicated that they did not believe that they were properly accounted for in the Lock Performance Monitoring System data.

Next slide. Some final thoughts. Communication is two ways. Transparency is a big goal for the Corps of Engineers. The Corps is obligated to communicate needs assessments, risks, problems and scheduled maintenance and it is important for the Corps to understand and consider stakeholder concerns and impacts of extended system wide closures.

Subject to your questions or comments that concludes my presentation on the extended closure of the locks on the Columbia Snake River system this past winter. Thank you for your time and attention.

MR. POINTON: Any questions for Ms. Carrubba? Mr. Konz.

MR. DAVID KONZ: Thank you. David Konz, Tidewater Barge Lines. This is more of a comment. I appreciate the recap of the extended lock closure. I just wanted to say publicly a big thank you to the Corps for all the communication efforts that went into this extended closure.

This was the second extended closure that I have been through. I thought the first closure back during the winter of 2010-2011 was great for the communication effort of the Corps. But the Corps did an outstanding, excellent job keeping us informed of the progress of this closure. Especially, as you pointed out during your presentation, with the winter we had, and The Dalles dam, there were times there when the contractors could not get to the freeway.

I want to thank all of you for everything. Then the follow-up, too, to hear our concerns after the closure was completed, that is much appreciated by the stakeholder and navigation community that were impacted by this closure.

MR. POINTON: Thank you Mr. Konz. Are there any other questions or comments for Ms. Carrubba? Hearing none, thank you very much, Ms. Carrubba.

MS. CARRUBBA: You are welcome.

MR. POINTON: Mr. Fewell.

MR. MIKE FEWELL: Just a couple of general comments. The more lead time and advanced notice we receive on lock closures, the better. It puts the users of the waterways system and the navigation industry, the shippers and the carriers, in a difficult situation that we have to find additional shore side storage in the areas that we ship to. That happens to everybody shipping in that area, so there is a very limited availability of storage tanks, and everybody is trying to get into them.

The other thing is we are buying and selling products on a monthly allocation, quarterly allocations, so the opportunity is really not there to pre-stage products to ship early. A lot of our customer base -- their whole supply chain is set up on just-in-time delivery. We cannot flood them with barges because it may take them two weeks to -- they need two weeks of run time to use a large quantity, so if we pre-stage and ship to them early, that barge can be tied up for months at a time.

Just to reiterate, the more lead time we have to react to a lock or dam closure, the better off it is going to be.

MR. POINTON: Thank you, Mr. Fewell. Any other comments. Hearing none, we will move on in the program.

Next on the program is Mr. Jeffrey Stamper. Mr. Stamper is the Technical Manager within the Inland Navigation Design Center (INDC) headquartered in the Rock Island District. Mr. Stamper will be presented on the subject of the "Standardization for Navigation Infrastructure" initiative that has been underway in the Corps for about a year. Mr. Stamper will be presenting on behalf of Mr. Andy Harkness and Mr. Fred Joers, who are also on the staff of the Inland Navigation Design Center. Mr. Stamper, when you are ready please proceed.

MR. JEFFREY L. STAMPER: Thank you, Mr. Pointon. Good morning Ms. Murdock-McDaniel, Chairman Hettel, Board members, other Federal agency representatives, fellow Corps employees and other attendees. I appreciate the opportunity to present an update on the Standardization

for Navigation Infrastructure Initiative underway in the Corps. For the record, my name is Jeffrey Stamper. I am from the Rock Island District, although I sit in the St. Louis District.

Next slide. Standardization of Navigation Infrastructure. What exactly does that mean? That is a very good question. That is a very broad subject, but when Lieutenant General Semonite issues a charge or a directive to you, you do it. You figure out how to do it, and that is where we are right now.

Standardization in general fits within the Corps' "Transforming Civil Works" concept, so that is a good thing. We have a top down charge. Standardization of lock and dam infrastructure is included in the USACE Campaign Plan, so that is also good.

Focus on 100-year implementation to save on future operation and maintenance, so it has a long-term focus.

We are looking for short-term gains, but it is a long term plan.

It has an enterprise approach, so it is USACE-wide, and that includes MVD, the Mississippi River Division as well.

The last bullet on the slide reads, "Integrate Asset Management Philosophy." What exactly does that mean? Generally speaking, it is a risk-based approach and service-based. Ms. Carrubba mentioned about service to the industry and getting the locks returned to service as soon as possible. We believe in that as well.

Next slide. To implement this initiative, the Inland Navigation Design Center will lead and build a joint integrated team. An effort like this does take a team.

Establish a national standardization framework. What does that mean? We really need a plan. It is a very difficult thing to do without standardization across all of USACE projects on a component by component basis, so we need a plan moving forward, and you will hear about some of the parts of the plan throughout my presentation.

An undertaking of this magnitude can't be done in a vacuum, so we have an oversight group. We are really good about that in the Corps, having groups oversee our work, and our Senior Oversight Group will provide a long term focus and vision for this initiative. I will get describe some of their roles and responsibilities in greater detail in upcoming slides.

With respect to our resources, you may or may not know a great deal about the Inland Navigation Design Center. We rely on virtual resources in the various districts that have navigation missions. There are only six of us. Mr. Pointon already identified two members of the Inland Navigation Design Center, Mr. Andy Harkness and Fred Joers, and there are four technical managers, of which I am one.

With six people you can't get a lot of work done, so we rely on the resource base and capabilities that is available throughout the USACE. It is a joint effort between the Engineering Division and Operations Division, so we will bring in Inland Marine Transportation System folks to the table to help us. We utilize subject matter expertise throughout the Corps of Engineers, and we

coordinate with ERDC, the Engineering Research and Design Center, for their Research and Development efforts.

Next slide. This is the composition of the Senior Oversight Group. I won't read all of the members of the Senior Oversight Group, but it is composed of 20 persons from across the Corps including members of the Inland Navigation Design Center, the heads of various offices in the Mississippi Valley Division and the Great Lakes and Ohio River Division, various offices at USACE Headquarters, the Engineering Research and Development Center, the Inland Marine Transportation System and representatives from the USACE Division offices.

Next slide. Their advisory body is the INDOC, which stands for the Inland Navigation Design Oversight Committee. The Inland Navigation Design Oversight Committee generally oversees the INDC, the Inland Navigation Design Center. The Senior Oversight Group would be a component of them.

Next slide. In general, the Senior Oversight Group come up with topics of interest, topics for standardization. They would monitor our progress as we move forward. They review our products. And, most importantly, we share and communicate.

Standardization. It is an enduring process, and what that means, it will be integral to our business. It will be a daily consideration as I sit at my desk as far as standardizing components across USACE projects, processes, inspection standards, that type of thing.

At the top of that in the circles is the starting point where priorities are determined from the Senior Oversight Group. From those priorities, you can't attack all of them at once, so we will have "TAG" teams, Technical Analysis Groups that will look at those priorities and determine which ones we should move forward with. That list of priorities would be approved or endorsed and sent over to the INDOC, the Inland Navigation Design Oversight Committee, where they would approve the list of priorities, and we would come out with interim guidance to the field on standardization issues and opportunities, and then eventually roll this into knowledge management, as Ms. Carrubba said we have got to keep this going, so when we come up with good ideas and things to standardize, we need to put it in our guidance documents and manuals and general regulations. This continues on with all those ideas that the Senior Oversight Group comes up with.

Next slide. For the Guiding Principles, I want to hit on a few of the highlights and bullets here. The first bullet, "Consistency in facility usage for customers." This is the industry. Ideally showing our projects, knowing where all the pins are, knowing where the yellow lines are, knowing where the red lines are, the length of the guide walls, you are communicating in the same manner, so you know what to expect from the lock. That is really important. It is important to me, and I think it is important to the USACE, standardizing those processes.

The second bullet, "Reducing Life Cycle Costs" is very important. Below that I would like to add a bullet that is not on the slide and that is "Improving Service through Standardized Components." A way of improving service is restoring a lock to service conditions after an outage either by standardized components, standardized spare parts, and those concepts.

The fourth bullet, "Reduce Inventory and Storage Requirements" is also very important. If we could standardize our machinery across several adjacent locks, storing one widget that would replace a component when it goes out, we could definitely be more responsive and reduce our warehousing and storage requirements.

Next bullet I would like to highlight is "Standardize Repair by Eliminating Site Specific Designs." This sort of happens when you bring a mandatory center like the Inland Navigation Design Center on board to work on a project and in the past you would have had designer preferences. They would like to do things in a particular way, they would like to do it this way. As we move forward, we will have standardized designs which designers will implement, rather than have to invent them.

And the last bullet throughout all of these efforts, "Leverage Technology." We will leverage technologies to help us.

You may be familiar with BIM, which is an acronym for "Building Information Modeling." I would like to talk a little bit about BIM. At a given lock, we can have this essentially a CAD model. "CAD" stands for Computer Aided Design. That is probably not giving it the credit it deserves, but it has databases behind it where you can essentially mouse over various areas of the lock and it will provide pop-up data on repairs or designs that can help with future designs.

And of course focusing on our Research and Development efforts.

Next slide. For the Implementation Path, across the bottom of the slide is a timeline. In year 1 we start, and we are in year 1 currently, and then next year, and actually starting now, is working on the tools to get through this. The priorities that come from Senior Oversight Group. The implementation, those small wins that I mentioned, we actually have some of those in the last slide. Then long-term implementation, one of those goals in long-term system approaches where systems can be components across a system. It can be adjacent locks. It can be an entire waterway, like the Illinois water way is a great example to be standardized from a machinery standpoint, gates, and I have some examples on that.

Next slide. For Implementation Considerations, again, a few bullets on this slide that I would like to highlight. "How and what to standardize." I mentioned this a few times. What does this mean? We can go by river. An entire river can be standardized. It is a pretty lofty goal. Geographic area. By Division office. By component. There is a lot of ways to look at this, and there are some early wins in these areas.

And the last bullet. I would like to edit this bullet. It says "Balance innovation with standardization." The word "balance" is not really a good term. Innovation and standardization can conflict with each other. Standardization might be designing one gate operating machine, like a direct rotating cylinder that could be used for 10 different miter gate heights, but by over-designed for some, but be very efficient in replacing -- I guess we could stockpile one repair unit. That might not be the most innovative approach, but it helps with standardization and restoring service.

Balance there is not the best of terms, just recognize that innovation and standardization can conflict with each other.

Next slide. This slide lists some examples of ongoing standardization efforts. The first example listed, "Standardize miter gate anchorage inspection, risk analysis and repair guidelines", is very important to me. Miter gate anchorages, in a little more detail, is basically what holds the miter gates to the lock wall. We have had numerous problems across USACE with these anchorages cracking and shutting down a lock, and it is something that we need to get a better handle on.

The next example, "Interchangeable bolted components for miter gates on the Upper Mississippi River Locks" is an initiative to restore a lock to service, given an incident or allision at the lock which results in cracks in the gates, so we would be able to return the lock to service faster.

The next example, "Uniform bulkhead slots and bulkheads for the Upper Ohio River" is patterned after an initiative on the Upper Mississippi River that was completed. That initiative is actually the last example on this slide.

The next example is "Use of interchangeable bold components on the upper miter gates for the Illinois Waterway." We are applying the technologies we developed and applied to the miter gates at locks on the Upper Mississippi River and transferring those technologies and methods and research to the locks on the Illinois Waterway.

The next example, "Sustainability and standardization study for selected mechanical and electrical components" is in progress. This initiative is one where by selecting components that we believe standardization can help the Corps with its business. I believe examples of those components include lock wall lighting, lubrication, and energy savings.

The last example listed, "Interchangeable lock bulkheads on the Upper Mississippi River and Illinois Waterway" has been completed. This concept has been applied within the Mississippi River Division, the Great Lakes and Ohio River Division, and the Northwestern Division. The example cited are interchangeable lock bulkheads. Lock bulkheads are very expensive, so if we can have a standardized set of lock bulkheads to share among several locks, we can reduce costs, and those cost savings can be applied to other component rehabilitation efforts or repairs to keep the locks in better operating condition.

Subject to your questions, that concludes my presentation on the Standardization for Navigation Infrastructure.

CHAIRMAN HETTEL: Jeff, I have a question for you. On your second slide you mentioned integrating an asset management philosophy into this initiative. I am going to go back to the last time we were out here in the Pacific Northwest for our Users Board meeting in Walla Walla, and Mr. Jim Hannon, Chief of the Operations Division at the time, was moving forward with the Corps' what they called their "Asset Management Plan." Is this "asset management philosophy" that you refer to in your slide to follow the "asset management plan" that Mr. Hannon produced, or is that something different?

MR. STAMPER: I believe they are related. I think the plan has to do with the presentations developed by Mr. Doug Ellsworth and Mr. Bob Leitch, concerning the condition ratings of components. Once the components were evaluated and rated based on their condition and from an economic standpoint, which includes service, we would design those.

If you took that list and you evaluated say the tainter valves at McNary Dam, for number one, you have to look at the tainter valves at surrounding locks at the same time, even though they may not be a higher priority. From a standardization standpoint, we can address all of them at one time reducing design costs, making them not exactly Xerox copies of each other, but where maintenance practices can be applied to both and lessons learned can be applied across projects.

CHAIRMAN HETTEL: So is the asset management plan being incorporated across the Corps currently? Question Number 2, if it is being applied in the Corps currently, is it being incorporated by district, division, or the entire navigation program?

MR. STAMPER: I am going to have to reach out to others to help answer that question.

MS. MURDOCK-McDANIEL: This is Andrea Murdock-McDaniel. I think I can answer that. Yes, we are implementing asset management processes across the USACE, and there are -- I was looking at the whole life cycle of our equipment from beginning to the end, and I was looking at both incorporating what are the condition of the different components that we have out there, but also what are the risks associated with the failure of those components, and that is how we are prioritizing what you look at first. Where we have a high risk of failure of a certain component or a certain aspect of the project that is where you can try and address that possible component.

In general, yes, we are. In fact, we are also, with the FY 2019 Budget, we are incorporating asset management into our operation and maintenance 2020 to try to make investments based on that risk and project condition.

CHAIRMAN HETTEL: Would that eliminate districts and divisions fighting for the same operation and maintenance dollars? You would have, as Jeff has stated, a condition rating for a particular lock, and an assessment that a particular component needs to be taken care of first, because this is the most important item throughout the whole list of assets.

MS. MURDOCK-McDANIEL: It really isn't as simple as pushing a button and the answer comes out, because there are still, you have nuances of different aspects of a project that might cause it to be a priority for other reasons than just what its condition might be, but it is looking at trying to have transparency when we are comparing apples to apples, and we can look at what that performance is for those projects, both on a component basis, and also on the project basis for the purposes of which they are performing.

When we have a multi-purpose project, you are looking at whether they are for navigation, hydropower, all of those things, and taking that into consideration, the purposes of those projects, and looking at those different project purposes and benefits, whether they are navigation, hydropower, or a different business line, and taking those aspects into consideration when you are looking at where you are prioritizing.

But you are trying to compare apples to apples, and have transparency on what it costs to do things, and also how they are performing against the maintenance schedule and maintenance standards and other things.

CHAIRMAN HETTEL: We are up against the break, but I have got to ask this last question. If we are truly following that procedure, whether it is risk of failure or economic consequences, all of the above, and you get this list of priorities, would not that pretty much take care of your operation and maintenance needs throughout the system, and it would be determined by that asset management plan, rather than by district or division, on which locks get repaired first, or maintained first?

MS. MURDOCK-McDANIEL: We are looking at asset management as sort of providing the information that informs the decisions on those priorities. Again, there are other aspects of a project that there may be reasons, schedules, other reasons why you are performing a piece of work before another, but it is really to basically inform decision-makers about what the conditions are, what the requirements are so that they can make those priorities.

CHAIRMAN HETTEL: Thank you.

MR. POINTON: Are there any other questions for Mr. Stamper or Ms. Murdock-McDaniel? If not, we are at the point in the meeting where we are scheduled to take a break. We are slightly a little bit behind schedule, so let's go ahead take a break and return back here at 11:45 a.m. and we can reconvene the meeting.

(Whereupon a recess was taken.)

MR. POINTON: All right. We are going to reconvene the meeting. I would comment that we now have two individuals that have indicated they would like to make a public comment at the end of the meeting. We will get that on the agenda.

Next on the agenda we will have an update on the Olmsted Locks and Dam project on the Ohio River. Mr. Michael Braden, Chief of the Olmsted Division in the Louisville District will be providing the update. Thanks Mike, please go ahead with your presentation. Following his update on the Olmsted Locks and Dam project, Mr. Braden will provide an update on the Lower Monongahela River Locks and Dams 2, 3, and 4 project. Mr. Braden, please proceed when you are ready. Thank you.

MR. MICHAEL E. BRADEN: Thank you, Mark. Good morning Ms. Murdock-McDaniel, Chairman Hettel, Board Members, Federal observers, fellow Corps employees and other attendees. For the record my name is Michael Braden. As Mark has indicated I am the Chief of Olmsted Division in the Louisville District. On behalf of Mr. David Dale, Programs Director in the Great Lakes and Ohio River Division Programs Director, I will be presenting a briefing on the Olmsted Locks and Dam project and the Lower Monongahela River Locks and Dam project and Mr. Don Getty will be presenting an update on the Kentucky Lock project and the Chickamauga Lock project.

The picture you see here on this cover slide is a picture taken of the Olmsted Locks and Dam in late 2016. You are slightly upstream of the dam, looking downstream, with the Illinois bank of the river shown in the upper part of the photograph. When this photograph was taken four of the five tainter gates had already been set in place, and you can see the twin 1,200 foot locks to the right of the tainter gated portion of the dam.

Next slide. The bottom line on the front is the current schedule. The project is ahead of schedule. Our current operational date is 2018. That is four years ahead of our baseline schedule of an operational date of 2022.

Our project completion date is 2022, which is four years ahead of the total project completion date originally scheduled for 2026.

With respect to project costs, currently we are under budget. Our TEP, or Total Estimated Price, is $336 million under budget. The TEP is updated on a monthly basis. If you look at the next line item, the TPCS or Total Project Cost Summary, we are $153 million under budget, and that reflects our FY 2017 update.

For the benefit of some of the new board members and the people in the audience, I would like to quickly provide definitions of five distinct cost points that may make these presentations a little bit more understandable.

Each of these projects have a fully-funded authorized cost. For the Olmsted Locks and Dam project the fully funded authorized cost is $3.1 billion. We also track a total project cost. For the Olmsted project right now the total project cost is $3.06 billion, and that project cost figure is certified by our Mandatory Center of Expertise for Cost Engineering which is located in our Walla Walla District office.

We also carry every other year an uncertified Total Project Cost update which is prepared by our regional office. That is where we get the $153 million under budget, which includes risk and contingencies as well.

And then our final cost number is our TEP, Total Estimated Price, and that estimate to completion is $336 million under budget. That cost estimate is based on all of the costs that we have actualized or predicted, forecasted in the future. This cost figure does not include unknowns, which are addressed by contingencies.

At the bottom of this slide you see the keys to our progress on this project. The keys to achieving these performance metrics is pretty simple.

First, we have received efficient funding to our capability levels since 2013 which has allowed the project development team to effectively plan and execute our annual work plan.

Second in the execution of our annual work plan we have been able to take advantage of advantageous river conditions which has allowed us to work outside of the contractual low water season of June 15 to November 30 in order to advance of project schedule.

Yes, sir. Chairman Hettel.

CHAIRMAN HETTEL: Mike, if I may, for the benefit of the new board members, the dollar figure next to Total Estimated Price, the dollar figure of $336 million, and the dollar cost figure next to Total Project Cost Summary of $153 million, those are both estimates of cost savings.

MR. BRADEN: Yes sir, that is correct. Those cost figures represent cost savings. In fact, as General Toy has pointed out, in most presentations, those numbers are shown in red, and most people associate a number shown in red as being a bad thing. But in this case red is good thing. It is to highlight your attention that those cost figures represent savings in costs.

CHAIRMAN HETTEL: I certainly understand and appreciate that and I think it is great that you are saving money and driving this project to a speedy conclusion. I have a follow on question. The cost savings that you are projecting, what does that mean regarding the funding going forward, do the cost savings you project reduce the amount of funding you need in the out-years, is that correct?

MR. BRADEN: Yes sir, conceptually that is correct. From a programming perspective, the reduction in that funding comes from our certified total project cost estimate, and our next certified cost estimate will occur in April of 2018. At that time, when the estimate is developed, it will show a lower project cost estimate figure. Based on that project cost estimate, from a programming standpoint, we can reduce that out year funding.

What we know from reality is, we have been trending towards this $336 million savings for several years now, and most of the risk associated with that is now behind us. What we should be looking at in the out years in FY 2019, FY 2020, FY 2021, is there is a lot of contingency money available, from a programming standpoint, in those years that we do not expect to use.

CHAIRMAN HETTEL: This may not be the correct terminology, but is that kind of like a cash flow? You have got that funding available, but you are not going to use it, so hence you would apply it towards your needs in the out years to complete the project, is that correct?

MR. BRADEN: Can you restate that one more time?

CHAIRMAN HETTEL: Okay. All the funding that you have received, your total estimated price now is going to be $336 million under the $3.06 billion cost figure, correct?

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: Where is that money currently sitting? Is that money in the hands of the Corps?

MR. BRADEN: No sir, it is not.

CHAIRMAN HETTEL: Okay. So that will reduce your out year need for funding?

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: When can we apply those cost savings so we can get a better look, as Mr. Hansen referenced, to those other projects in the portfolio in the out years? The sooner we reduce the Olmsted number, the more funding from the Trust Fund that will be available to be applied to the other projects.

MR. BRADEN: Correct. The certified project cost estimate is prepared every two years. In the case of the Olmsted Locks and Dam project, the certified project cost estimate is prepared in the even-numbered years, so the last certified project cost estimate we developed was 2016.

The original authorized fully-funded project cost was $3.1 billion. Our 2016 certified cost estimate was $3.06 billion. When that certified cost estimate was developed we took $40 million off the future programming for the Olmsted Locks and Dam project. We will officially do that when we publish the next certified project cost estimate. In 2018, that will be the next opportunity to retire some of the costs associated with the risks and contingencies that we have been carrying on the project.

What we do know is that it is likely that 2018 certified total project cost estimate that the numbers will be significantly lower, and we are currently engaging with Mr. Dale at our Division headquarters office and saying that we expect that these costs to cover these contingencies that has been allotted for the Olmsted project in FY 2019, 2020, and 2021 will not be needed.

How do we start informally working in the out years across the other IWTF projects is still to be determined.

CHAIRMAN HETTEL: I would just reference, the sooner the better.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: Thank you.

MR. BRADEN: Next slide please. This is an artist's rendering of the completed Olmsted project. We use this diagram to convey progress on the project, with the locks and approach walls being shown as completed. The last remaining major feature of work is the Olmsted Dam, which, as most of you know, is being constructed using the "in-the-wet" construction method.

There are two major aspects to the construction of the dam. There is a tainter gate section of the dam in the portion of the river closest to the locks, and then to the left of the tainter gated section of the dam is the navigable portion of the dam. The relevance of the navigable pass is given the high elevation change in the Ohio River in this stretch of the river.

About six months out of the year we can lower the dam and traffic can pass the project without having to use the locks. It is a tremendous opportunity for shippers to move upbound or downbound without having to be relegated to the standard 3x5 barge configuration during those times, and can get their shipments up the Paducah area, which is really the hub of the inland waterways transportation system, with barge configurations up to 35 barges or even larger.

Starting on the right-hand side of the slide and beginning with the yellow box, and then we will work our way counter-clockwise around the slide. Looking at the yellow box titled "Operations Facilities." We have two operations facilities, two buildings, a maintenance building and a Lockmaster's office, to support the operation of the Olmsted Locks and Dam project. The contract for the construction of those operations facilities was awarded in February of 2017. Those two buildings, the lockmaster's office and the maintenance shop, are scheduled to be completed in May of 2018.

In the center of the slide is a yellow box titled "Tainter Gates." Tainter Gate No. 5 was delivered to the project site in early June, and the slide reads that Tainter Gate No. 5 is scheduled to be erected on August 11th.

You will see a lot of dates on the slide, but currently we are experiencing some high water on the river and it is impacting some of our activities on the river. There are certain river elevations where we cannot set these features. That elevation is 296. Currently we are experiencing a three or four week delay on advancing some of these "in the wet" features.

While they are critical activities, they are not critical path activities to the operational start of Olmsted. I want to be clear about that.

Right now we're forecasting Tainter Gate No. 5 will be erected and placed on the 25th of August.

We will set Service Bridges No. 5 and No. 6 in December of this year. They do not require low water conditions to set those features. In fact, higher river elevations helps us set those two features. For both Service Bridges 5 and 6, the precast has been completed and they are sitting on barges out on the river as I speak.

Training Walls 1-A, 1-B, 6-A, and 6-B will be set in the October and November timeframe respectively. Training Walls 1-A and 1-B have been completed and are in the precast yard. Training Walls 6-A and 6-B both have one concrete lift left to do prior to their completion.

Moving to box at the top of the slide titled "Navigable Pass" we successfully set Navigable Pass Shell No. 11, our last full-sized shell on the project, on June 16th of this year. Navigable Pass 12-A, our last shell of any kind on the project, completed its precast operation earlier this week, so it is sitting in the precast yard completed as well. We are 80 percent completed with that right now.

There are two smaller elements that make up the right side of the Navigable Pass portion the dam called Right Boat Abutment 2 and Right Boat Abutment 3. Both of those features are also complete, and they are moving down the skid way towards the river right now.

On the left side of the slide you see the box titled "Left Boat Abutment." This is a feature that we advanced by removing the cofferdam. We started the unwatering of that back in June, the 29th of June. It is now unwatered. We are now tracking finishing the cast-in-place by October 31st. It was scheduled to be finished by the 28th of October, but we had some new subcontractors mobilized onsite and we had a 48-hour safety stand-down to make sure that we could get that work completed in a safe manner.

Moving to the bottom of the slide you can see a couple of boxes titled "Wicket Lifter" and "River Dikes" which describe the activities associated with completing a few elements to support the operational aspect of the project.

With respect to the wicket lifter, the wicket lifter vessel will raise and lower wickets of the navigable pass portion of the dam. We are expecting the maintenance crane to be shipped from Appleton Marine Incorporated in Appleton, Wisconsin down to the Conrad Shipyard in Morgan City, Louisiana who is fabricating the barge at the end of July. Then in August Appleton Marine will ship the

wicket lifter crane to Conrad. Conrad will then assemble the wicket lifter and then deliver the wicket lifter to the Olmsted project site by late December 2017.

To the right of the box titled "Wicket Lifter" is a box titled "River Dikes." We have a series of river dikes to help control sediment transport and helps with navigation. Dikes Nos. 1 through 4 are complete, upstream on the Kentucky bank. We will move out with the award of a SATOC (Single Award Task Order Contract) contract for dikes Nos. 5 through 7, which are on the downstream Kentucky bank in the spring of 2018, and then we will complete all the dike work on dikes 8 through 13, which are located on the upstream Illinois side of the river, which we have to have to be able to hold pool, and that will be done in the spring of 2019. Actually, those tows go over the top of those dikes in a pool situation.

Next slide. I have a couple of pictures taken during the 2017 high water season to illustrate some of the progress made so far this construction season at the project site.

Picture 1, looking upstream, shows the setting down of Navigable Pass Shell No. 11. You can see a white object there on the left-hand side of the photo about halfway down. That is the last Kentucky-most wicket gate. Between that white object and then the sheet pile cofferdam to the right, we have about 60 feet. That is all that remains in completing the dam at the Olmsted project.

Picture 2 shows the Left Boat Abutment cofferdam prior to the unwatering operation. It is complete. It is adjacent to the fixed weir cells on the Kentucky bank. That is where the critical path of the project runs through. Once we complete the cast in place work on the cofferdam, the riverside pylon is cut off and that facilitates setting our last shell on the project, and that is Navigable Pass Shell 12A.

Picture 3 in the bottom left-hand corner shows one of those unusual precast elements, which is Right Boat Abatement 2, which sits on top of Right Boat Abatement 1, which was set a number of years ago. As I said a few minutes ago, that precast work is complete and it is moving down the skid way to the river right now.

Picture 4 shows a fledging osprey that made its home on top of the catamaran barge prior to setting Navigable Pass Shell No. 11. It is a protected bird. We saw it and obtained a permit. We had eggs in that nest sitting on top of our strand jack. The permit said that we could dispose of the nest and the eggs. But the folks at the project site took advantage of our seasonal maintenance of the strand jacks, and we simply moved that strand jack, moved it over a few feet and started one of our auxiliary strand jacks in its place, so this fledgling had the best seat in the house to watch the setting of Navigable Pass Shell No. 11 be successfully set on the bottom of the river.

Finally, picture number 5 is the picture that I hope you remember when you leave here today. That is Tainter Gate No. 5, the last tainter gate on the project that moved through Kentucky Lock. This is an important picture because it is the last offsite piece fabricated and delivered to the project this season. It also demonstrates a risk mitigation strategy that we were only able to implement with efficient funding we received from this Board.

We received this tainter gate, Tainter Gate No. 5, 375 days ahead of schedule. It was originally scheduled to be delivered in 2018. We received it in 2017 at no additional cost to the project. This was

just communicating with the vendor and aligning his needs and his fabrication and floor space with our efficient funding stream.

It also shows -- it stresses the importance of the Kentucky Lock, because this tainter gate transited Kentucky Lock. It also shows a mission that only the river system can achieve. You can't move that tainter gate to the project site using any of the other modes of transportation. We understand what today's mission is, we are not sure what tomorrow's mission will be that our locks can possibly serve.

CHAIRMAN HETTEL: Mike, I have a question for you. You piqued my interest when you said upstream Illinois dikes 8 through 13 are needed to enable you to hold pool.

MR. MIKE BRADEN: Not to hold pool. We cannot install them until we can hold pool.

CHAIRMAN HETTEL: Okay.

MR. BRADEN: So the tows go over the top of those dikes, so we can't put them because right now certain times of the year we --

CHAIRMAN HETTEL: Thanks for that clarification.

MR. BRADEN: Yes, sir. Next slide. I show you this slide to illustrate the plan to complete the project. On the top left-hand side of the slide you can see the tainter gate section of the Olmsted project. The bottom right-hand corner you see the navigable pass portion of the project with the navigable pass wicket gate shells, along with paving blocks downstream.

Everything highlighted in light blue is scheduled for construction during this 2017 low water season, which runs from June 15th and ends November 30th. The one item in dark blue is technically scheduled outside of that window on paper is scheduled for set down during the 2018 construction season. I can tell you right now confidently that all of these pieces will be set in calendar year 2017.

The project delivery team understands the precarious nature of [Ohio River] Lock and Dam 52, and what we have committed to is that we will have our project ready to hold pool at the start of low water season 2018 if need be.

Next slide. For the Time and Cost Scorecard – 2017. Bottom line, top left-hand corner, you want your earned value greater than your planned value and actual value. That means you are ahead of schedule and under budget.

You see the project schedule completion and operational milestones in the upper right hand corner of the slide versus our original performance baseline that was presented in the Post Authorization Change Report, of March 2022 and April 2026, versus our current schedule of October 2018 for the dam to be operational and March 2022 for completion of the project.

The bottom left-hand corner of the slide shows our current Total Estimated Price or our current cost estimate compared to that project cost with risk that was presented in the Post Authorization Change Report (PACR). The graph does show a slight uptick for this recording period in the last

month. Although the dam contract costs continues a steady decline of about $2 million every month, we have identified a new need for a dedicated tow boat to push our wicket lifter, and so that caused the project cost to come up. The result between the plus and the minus are about a $3 million increase over last month.

In the lower right hand corner of the slide you can see our major activities schedule. Currently our major activities right now will be installing some installation piles and setting down the Right Boat Abutment; unwatering the Tainter Gate Bay No. 4 and Tainter Gate Bay 5; erecting Tainter Gate Bay 5; and then starting the cast in place work for the Left Boat Abutment.

Next slide. I talked a little bit earlier about different cost points on the project. Here are a couple graphs just to make sure that we have a good trend analysis. Our total project cost, which is a combination of certified estimates on even-numbered years and the regional estimates on the odd-numbered years, you can see how it tracks from the Post Authorization Change Report back in the 2012 timeframe through FY 2017.

Keep in mind, with the total project cost, it includes programming for risk contingency, so you can see it is reduced as the project moves along. There are hundreds of millions of dollars of contingency in that project cost estimate.

If you look at the bottom graph on that slide, the TEP or Total Estimated Price over the last 12 months, which is our current estimated cost without contingency, but we have a very good trend analysis of those costs. It continues a steady decline over the past year. Currently we are tracking at $2.764 billion.

Next slide. We have two outstanding challenges to the project to make sure we finish strong. We have equipment onsite that is all Government-owned equipment because we have a cost reimbursable contract, with over 10,000 discrete items with an original acquisition value in excess of $150 million.

Both the FAR, the Federal Acquisition Regulation, and the FMR, the Federal Management Regulation, identify a deviation and waiver process to give a direct sale authority to the project so we can sell some of the equipment and return those funds and offset future programming.

We have now heard back from the General Services Administration (GSA) who oversees the Federal Management Regulation. They have confirmed they believe that is a statutory basis, so they will not entertain a waiver from that. What we have experienced, using the typical GSA disposal methods with the hydro equipment that we have is very inefficient. It does not generate a large return on our investment.

Concerning the FAR, we have received a request for "drafting services" from the House of Representatives Appropriations Sub-committee addressing the direct sales authority and returning any proceeds to the credit of the contract.

If the legislative fix does not come about, this will represent a $25 million cost increase as we will have to fully depreciate all of the equipment used on Olmsted to the cost of that contract.

The second item is a series of out-year marine work packages. What we have looked at and seen is as we get ready to be operational next year, there is some work that we need to get done in a very quick manner to make sure that once we are operational we minimize any impacts to the industry once we start using Olmsted.

The first work item are some miscellaneous miter gate repairs and flushing of culverts to prepare them to make sure we have good flow through the system. We produced a J&A, Justification and Approval, and that has since been approved. Our current dam contractor is now working to move the bulkheads down, unwater the chambers, affect those repairs, and flush the culverts.

The second work item is the construction of four upstream mooring cells and the partial demolition of [Ohio River] Lock and Dam 53. Both of those features are on the direct navigation channel for Olmsted, and the last thing we want to do is turn Olmsted and make it operational and then have outages while the construction contractor goes in there and completes those.

That J&A is currently on its way to the PARC (the Principal Assistant Responsible for Contracting) and to Mr. Hazlett (Mr. Stuart A. Hazlett, Director of Contracting, USACE) at Headquarters for consideration. If approved, we will start affecting those work packages this low water season and early next spring, so that we can hopefully have that work done, or at least have it done to an extent that it won't impact navigation once we go operational.

Subject to your questions or comments that concludes my briefing on the status at the Olmsted Locks and Dam project. Yes, Mr. Chairman?

CHAIRMAN HETTEL: Mike. Excellent report. Thank you. Just to clarify, your Total Estimated Price, you mentioned the $2.764 billion figure.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: On the financial report prepared by Mr. Joseph Aldridge, he reports a total project cost of $3.059 billion. Once you receive the certified cost estimate in FY 2018, am I understanding that once it comes to you guys onsite that would drop it down to the $2.764 billion figure?

MR. BRADEN: Sir, the price will not drop it down to $2.764, because the very skilled cost estimators at the Center for Cost Engineering at Walla Walla are very conservative, and they take into account the possibility that bad things might happen, so the new certified Total Estimated Price will fall somewhere between the two numbers. They will retire some of the risk, but they won't retire all of the risk. They will still make some assumptions that, for example, you can have a significant piece of equipment that failed, you can have some circumstance dictate that you would need contingency funds.

CHAIRMAN HETTEL: So Walla Walla doesn't take into account the 80 percent confidence level?

MR. BRADEN: They absolutely do. That 80 percent confidence level drives that risk, so that is what they do. Our current estimate is based on everything we know. They will then turn around and we have a risk register, and they will use a Monte Carlo simulation method and say these are the things you

don't know that could happen on your project. It could generate either additional schedule or additional costs.

What we have in our back pocket is we have been tracking this project for about four or five years, and we have been able to avoid using either the schedule contingency or the cost contingency. We believe we are on a track based upon that past performance that we are going to be very close to that $2.764 billion. We update that number every month. Any known cost, as soon as we observe that known cost is going to occur, such as the cost of this new boat, we immediately roll those costs into in total project cost. There are no lagging costs impact. As soon as we recognize it, whether it is a change order, or a contract modification, or we award a contract that has savings on it, those additional costs or those cost savings are rolled right into that TEP number.

CHAIRMAN HETTEL: I guess my 80 percent confidence level was hoping that the difference between the $3.059 billion and $2.764 billion, Walla Walla would come out with an 80 percent of that number.

MR. BRADEN: No, but the difference --

CHAIRMAN HETTEL: It doesn't work the same way, I take it.

MR. BRADEN: No, but we fully expect the number to be under $3 billion.

CHAIRMAN HETTEL: Okay. The last question I have, and then we need to move on. On your last slide, where you identify the challenges to completing the project, you reference the demolition of Lock and Dam 53 --

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: -- and construction of four upstream mooring cells. In your professional opinion, have we seen the last time we will lock through Lock 53?

MR. BRADEN: Sir, right now, in the best case scenario, before Olmsted came about, Lock and Dam 53 is approximately a mile upstream of Olmsted. You could expect that Lock 53 may come out in a given year for three or four weeks for maintenance. Since we have largely completed the locks and most of the dam at Olmsted, just from the head buildup on Olmsted, we think there is a very low possibility that Lock 53 would come back out and need to be used this season.

What we are going to do in the October timeframe is we are going to look at where we are with the status of the construction of Olmsted, and how confident we are that we can reliably get to where we need to be with holding pool at Olmsted, and then we are going to make a business decision, do we go ahead and start demolishing Lock 53 based upon a slight chance that we may need it for a few days at the end of 2017.

CHAIRMAN HETTEL: Okay. The problems we are facing at the dam at Lock and Dam 52, should we need the Lock and Dam 53 dam to go up, and we are running into the same problem we have with the dam at Lock and Dam 52, can you hold pool with Olmsted --

MR. BRADEN: We cannot.

CHAIRMAN HETTEL: -- at Lock and Dam 53?

MR. BRADEN: We -- I don't think that this low water season that Olmsted or Lock and Dam 53 will come into play to assist Lock and Dam 52. We do have a contractor at Lock and Dam 52 on standby with a ringer crane and a wicket lifter box so that as the river drops – and we may see this next week -- as the river drops out and we get ready to go to operation, we have got all the resources there to get that dam up and make sure navigation passes through there.

At Olmsted right now, if we tried to do remedial measures to hold pool with what we have at Olmsted, it will end up costing us more than it does saving us, because it will delay operations at Olmsted next year, so we will be faced with that situation again.

CHAIRMAN HETTEL: Thank you.

MR. POINTON: Any further questions or discussion concerning the Olmsted Locks and Dam project? Hearing none, we will move on to the update on the Lower Monongahela River Locks and Dams 2, 3, and 4 project. Mr. Braden.

MR. BRADEN: Thank you Mark. In reading the minutes from the last Users Board meeting, I think we were tasked with making sure we had consistent nomenclature. In reviewing the slide deck today, I think we still have a little room to grow on that. Steve Fritz, the project manager for the Lower Monongahela River project is coming down to visit the Olmsted project with his team in August, and we will certainly synchronize our slide decks and get that nomenclature squared away.

Next slide. Bottom line up front for Lower Mon, they are currently tracking the current schedule as the project becoming operational November 2022, and project completion in October of 2023. That is not only on schedule, it is ahead of their baseline risk-informed schedule of 2027.

A clarification on the line item titled "Current Cost." They are under budget, and they show the Total Estimated Price at $1.2 billion. In fact, looking through the presentation, their Total Estimated Price without contingencies is $1.108 billion. Their total project cost is $1.2 billion, which includes contingencies. That does not include the construction of the land chamber or the relocation of the Port Perry Bridge.

Key factors affecting the project schedule and cost. The project received $82 million work plan money in FY 2017. They are currently tracking the award of the River Chamber Completion contract Options 1 and 2 in the August 2017 timeframe.

Currently the project received zero dollars in the President's FY 2018 Budget request, and that raised their FY 2018 capability from $105 million to $135 million. The basis for that increase is every year the Corps publishes a Budget EC (Engineering Circular), and the directive in that Budget EC is that for projects that aren't included in the President's Budget request, project delivery teams should request funding for the cost of construction Supervision and Administration (S&A) and the cost of Engineering and Design (E&D) during construction associated with the life of the contracts that have been awarded.

That will include programming to cover S&A and E&D costs beyond FY 2018. That is the genesis of that cost increase in capability.

CHAIRMAN HETTEL: Mike, we need -- I want to take some time to discuss that.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: In November of 2016, the efficient funding figure for FY 2018 for the Lower Monongahela River project was $77 million. Then six months later in May of 2017 Mr. McKee informed me that the efficient funding level went up to $105 million, and that additional $28 million was to move forward the Charleroi dam stilling basin work.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: When I looked at the out year number funding for Lower Mon by moving that forward by $28 million, it actually increased the total cost of the Lower Monongahela River project by $22 million.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: I do not have a problem if you want to move funds and move this project to the left, as long as it doesn't increase the total cost of the project, that point number one.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: Point Number Two, two months after Mr. McKee gave me that $105 million figure, General Jackson sends me a note telling me the efficient funding level has increased to $135 million, which you just referenced the increase of $30 million to cover the costs of Engineering and Design during construction and the cost of Supervision and Administration during the life of the contract.

MR. BRADEN: Yes, sir.

CHAIRMAN HETTEL: Basically what you are asking us to do is fund salaries for the next eight years upfront. With where the Trust Fund is, and trying to fund these other projects, I do not think we can support, giving the Corps' upfront money, to fund labor costs through 2024, when those dollars can be used elsewhere in another project to completion, or to fund things to move other projects further along. I do not know about the rest of the board, but I cannot support that.

MR. MECKLENBORG: Well, that I would ask is that approach -- has that approach been employed in other projects on a consistent basis? If it has, then I guess that's one thing. But I would agree with Chairman Hettel that if we're shepherding funds, that if that is not necessary to do, it would be certainly a higher priority in our view that those funds would go to actual construction efforts at some of the other locations. I guess that is a couple questions, so the first one was, do we do this consistently?

MR. BRADEN: It is my understanding that this has been in past Budget EC's. It is not new. What is new is we now -- our next three top priority projects are not in the President's Budget, so that is the trigger for it, that these aren't in the President's Budget, and that dictates -- this guidance comes into play on the Lower Monongahela River project.

MR. MECKLENBORG: Are you going to do that with respect to similar items for Kentucky and Chickamauga?

MR. BRADEN: I will let Mr. Getty address that issue during his presentation.

MR. MECKLENBORG: Okay.

CHAIRMAN HETTEL: I still struggle with funding approximately $4.2 million annually for the next seven years for labor costs for a project, as you stated, that is not in the President's Budget, and depending on where the Army decides to spend our Trust Fund dollars that are appropriated through Congress, may or may not get funded. If it does get funded, well, then go for the $4.2 million a year. Don't ask me for $30 million upfront as a savings bank for labor costs. I would love to have my boss say Marty, here's eight years of your salary upfront. Draw from it each year. I just want to let you know it's there.

MS. MURDOCK-McDANIEL: I guess I get asked this question. It is my understanding that part of that need is because we have multiple contracts now to do that oversight and S&A versus the original plan that might have been one contract, but I am not sure if that is accurate.

MR. MONAHAN: I would like to understand that difference, because I guess now I am completely confused. Point Number 3 on the slide says the additional $30 million is an impact to costs and schedule because of the zero budgeting in Fiscal Year 2018 from the President. So, what is it? Is it $30 million for that, or $30 million for future engineering?

MR. BRADEN: It's for Supervision and Administration and Engineering and Design during Construction. That is a poorly-phrased bullet. Essentially I believe the intent, and I am speculating now, because I don't write policy for Headquarters, but I believe the intent is if you have a contract out there, and then in a subsequent year you don't receive project funds, which get funded on an annual basis, then it pulls staffing off that project, from an administrative point of view, then you start looking at doing contract modifications and de-scoping the contract to keep that office viable between fiscal years. The intent is that you don't want to create the situation where, at the district level, we are making a choice between having administrative staff in place versus having a construction contractor advancing the contract. That is speculation on my part, but I think that is the reason.

MR. MONAHAN: Well, I would ask for clarification on this number so we have a very clear understanding of what we are talking about on that additional $30 million cost figure.

With that being said, I have another question, from the standpoint of this overhead, I don't clearly understand how overhead is allocated between new construction and O&M from the standpoint of Headquarters, and then what would be considered local overhead costs. Are there two different allocations? Is there a difference? If so, I would like to understand what they are, and is there a standard allocation across the Corps, or is that project specific.

MR. McKEE: Two things. First, with respect to the Lower Monongahela River project, the Lower Monongahela River project, much like the Olmsted project, had been in the budget every year. The Budget Engineering Circular says that if a project is in the budget every year, then your Engineering and Design during Construction and Supervision and Administration costs are budgeted on an annual basis for that particular budget year. We were doing that with the Lower Monongahela River project as much as we are doing it with the Olmsted Locks and Dam project.

What happened was the Lower Monongahela River project is no longer in the budget. We have two ongoing contracts. We have the River Chamber Completion contract, and we have the monolith contract. Without the project being in the budget, as Mr. Braden explained, you are at risk now for future out-year Engineering and Design and Supervision and Administration costs to continue on those contracts.

The Budget EC is very specific. If you are in the budget, you budget those costs on an annual basis. If you are not in the budget, then you get those costs all upfront, along with the contract costs for the particular contract that you awarded. It is not for the entire project. It is only for contracts or the contract options that are being awarded.

We have come to this point in time where we have funding for the current fiscal year, FY 2017, through the work plan, the $82 million. It includes the funds to award the contract options. It included funds to do the Engineering and Design during Construction and the Supervision and Administration this year.

The project was not included in the FY 2018 Budget, and the intent is to catch up in FY 2018 with not only the cost for Supervision and Administration of those two contracts in FY 2018, but the balance to complete those two contracts, the Engineering and Design and Supervision and Administration associated with those contracts. It is because it got caught in between.

If you go back and look at Kentucky Lock and Chickamauga Lock, because they haven't been in the budget for years, whenever we have given them money in the work plan, we have given them the sufficient funds for all of the E&D and S&A for the life of that base contract, or the life of that option that was awarded in the particular year to get through the out-years.

I think that is as simple as I can explain why we have this $30 million bogey out there all of a sudden on the Lower Monongahela River project. It was an issue that was raised by the committees, as well. The Appropriations Committees' staff came to us and said, what's the story, since you are no longer in the budget? Do you have your funding? If not, how are you going to continue to administer these contracts?

This is an attempt to get that funding, and that is why it has been expressed as a capability in Fiscal Year 2018. Otherwise, when we get to Fiscal Year 2018, we are not going have E&D and S&A to fund FY 2018 or the out-years.

MR. MONAHAN: As we work our way through the House and the Senate on the FY 2018 plus-ups, it is my understanding that it is looking favorable we will receive funding. If that is the case, then that $30 million would not pertain for 2018, is that correct?

MR. McKEE: The issue is, right now if we look at efficient funding for Olmsted, Lower Mon, Chickamauga, and Kentucky Lock, and let's go back to the $105 million figure that I gave Chairman Hettel the last time I talked to him, if you were to fund all of those, we would basically draw the Trust Fund down to nothing.

Now this is an additional $30 million, which would be split 50/50 with the General Treasury, that would mean that you would have go forego construction either on Lower Mon, an aspect of work on Lower Mon, or Chickamauga or Kentucky in order to be able to afford that $30 million in FY 2018.

I think that is what Chairman Hettel's concern is, because if you fund this higher labor upfront, it means you can't do other contractual work, which would move the project forward.

CHAIRMAN HETTEL: And increase the cost of the project if you don't find it. Mike, I am sorry, let me make sure I clarify one of your statements to Jeff.

You mentioned the FY 2017 Engineering and Design during Construction, and Supervision and Administration was appropriated through the funding Congress gave the Corps. I do not believe in FY 2017 that the Lower Monongahela River project was included in the President's Budget request either.

MR. McKEE: No it was not, sir.

CHAIRMAN HETTEL: Now, because the Lower Monongahela River project was not included in the FY 2018 Budget, you are requesting $30 million to cover all the Engineering and Design during Construction and Supervision and Administration when you did not do that in FY 2017.

This resorts back to what I told Mr. Hansen, you are going to the well too often, and asking us for $30 million, when it did not take place in FY 2017, but, now it has to take place in FY 2018.

MR. McKEE: Sir, it goes back to what I said a few minutes ago. In the budget guidance Engineering Circular, if you were in the budget every year, you budget only the Engineering and Design during Construction and Supervision and Administration for that particular year. Let's go back Fiscal Year 2016, the year before. The Lower Monongahela River project was in the budget, and we budgeted in FY 2016 only for the FY 2016 Engineering and Design during Construction and Supervision and Administration. When we got to FY 2017, the Lower Monongahela River project was not included in the budget. Now we have previously funded contracts that would be ongoing in FY 2017, but we did not have the share of Engineering and Design during Construction and Supervision and Administration to fund it.

What happened was we delayed the award of some of the contract options, and we used some of the money that would have gone to the options to help fund the Engineering and Design during Construction and Supervision and Administration until we received funds when Congress passed the omnibus appropriations act on the 5th of May (Public Law 115-31). Part of the funds we gave in the $82 million was the Engineering and Design during Construction and Supervision and Administration component for FY 2017. We did not give the project any funds to continue beyond FY 2017, because we were trying to get all the work we originally planned.

Now we are faced with the Lower Monongahela River project no longer in the budget. We know we have $30 million in Engineering and Design during Construction and Supervision and Administration costs in FY 2018, 2019, 2020 to get through the River Chamber Completion contract and the monolith contract.

That is why now we are trying to come back the way this should be funded in accordance with the budget guidance Engineering Circular in accordance with what Congress wants us to do, in the event that should Congress decide next year that they are not going to give us any additional money, we can still afford the contract going forward, rather than, as Mr. Braden indicated, de-scoping the contract in order to be able to fund the Engineering and Design during Construction and Supervision and Administration costs.

CHAIRMAN HETTEL: The flip side of that argument is you could do the same thing in FY 2018 that you did in FY 2017.

MR. McKEE: Assuming we get a work plan. If Congress does not give us a work plan, we are out of luck.

CHAIRMAN HETTEL: Congress doesn't give you the work plan. Congress gives you the funds to do your work plan, correct?

Mr. McKEE: That is correct sir. I meant to say they have to appropriate the additional funds.

CHAIRMAN HETTEL: I think we are pretty confident that through the Senate and House Appropriations Committees that you will get that funding. Even if we don't get a budget passed or an appropriations bill passed, you fall back to the Continuing Resolution, and you still have funds to fund the Engineering and Design during Construction and Supervision and Administration costs in FY 2018 without asking us for $30 million upfront.

We have to get our recommendations concerning the President's Budget request to the House and the Senate. Two things. Number One, I do not like the idea of coming at this upfront when you have done it before without asking us for $30 million. Number Two, moving the Charleroi Dam stilling basin forward and adding $28 million does not reduce the total cost of the project. It actually increases the total cost of the project by $22 million.

I am at the point where I am just going to say that our budget request to the President should be the original $77 million. Why would we move something forward that will add $22 million to the total cost of the project, and then on top of that, fund labor for the next three or four years when you have been able to accomplish it in other ways in previous years is beyond me.

MR. BRADEN: Can I speak to the one point Chairman Hettel made? That $22 million moved to the project to the left. It did not increase the project cost. If we showed that is unplanned additional monies that was an administrative mistake.

CHAIRMAN HETTEL: I understand.

MR. BRADEN: Okay.

CHAIRMAN HETTEL: The numbers that Mr. McKee gave me did increase the project costs by $22 million, the number that you gave me on additional funding.

MR. McKEE: The intent was for the Lower Mon --

MR. MONAHAN: Given the dialogue here, for the record, and going back to some of the comments that Mr. Hansen made earlier, I think moving forward in Fiscal Year 2019 and beyond, I want to urge the President and the Office of Management and Budget (OMB) to reconsider this zero funding strategy for the Lower Monongahela River project, the Olmsted project, the Kentucky project and the Chickamauga project that results in wasted Corps resources for planning contingencies and ultimately increases the cost of each project as we have articulated here.

It is mind-boggling in the case of the Lower Monongahela River project that you are talking about a 28.5 percent increase in FY 2018, and we are talking about not having enough resources, and this all evolves from the original President and OMB recommendation, and this has gone on, it is my understanding, for the last couple years.

Mr. Hansen, I would urge us to strongly get with the President and OMB and change this practice.

MR. HANSEN: Point taken. This is an issue that I am going to take some time to make sure that I understand.

A point of correction, though. You mentioned zero funding for Olmsted, and that is not accurate. We fund the Olmsted Locks and Dam project to capability and if the capability increases, we find the money to fund that increase.

MR. MONAHAN: Can we do that for all the projects?

MR. HANSEN: I will get back to you on that.

MR. McKEE: Mr. Monahan, going back to your second question on the slide. Different districts have different overhead rates, depending on the district. When you are setting up a construction field office, you are going to have a specific overhead rate for that construction field office. It is not uniform across the board. It is very specific to the different districts and different construction offices that are overseeing the construction.

MR. MONAHAN: I understand that, and I think we should, as a Board, understand what those allocations are for specific projects, understanding that there may be a difference between districts or divisions.

MR. McKEE: We can provide breakdowns on any of the projects for how much is Engineering and Design during Construction, how much is Supervision and Administration, project management, construction contracts, real estate, et cetera.

MR. MONAHAN: Thank you.

CHAIRMAN HETTEL: I do not think we got to a position of where you think you can do what you did in FY 2017 in FY 2018 and not request $30 million.

MR. McKEE: We will take it back and work it for you.

CHAIRMAN HETTEL: Thank you.

MR. BRADEN: Next slide. This slide shows an overview of the Lower Monongahela River Locks and Dams 2, 3, and 4 project to acquaint the new Board members of the Board to the project if they are not already familiar with the project.

On the left-hand side of the slide you can see the pre-project condition, on the right-hand side you can see the post-project condition. There are three distinct phases to the project. Construction of the dam at Braddock, Lock and Dam No. 2, has been completed.

Currently we are in the midst of completing the river lock chamber at Charleroi, Lock 4, in the bottom lower right-hand picture.

The last critical phase on the project will be removal of the dam at Elizabeth, Lock and Dam 3. Once we breach that dam so there is increased capacity, we can then start reaping the benefits of the completed project.

With respect to the financial costs of the project, once again, the Section 902 limit is $1.76 billion and the Total Project Cost is $1.2 billion which includes contingencies.

Next slide. This slide shows the scheduled completion dates for some of the physical features on the project. The construction of the Monoliths Numbers 22 to 27 work at Charleroi (Lock 4) is scheduled for completion in FY 2019. The stilling basin at the dam at Charleroi is scheduled for completion in FY 2021. The construction of the Charleroi river chamber is scheduled for completion in FY 2023. Dredging of Pool 3 is scheduled to be completed in FY 2022. And finally, the removal of Lock and Dam 3 at Elizabeth in FY 2023, once again, the breaching of the dam and the start to realizing the benefits of the project, not necessarily leaving the remaining part of the dam unused.

CHAIRMAN HETTEL: Mike, one question that I have for you and I have a little bit of a concern with, and maybe you might not be able to answer this, but maybe Steve Fritz can, and we can get the answer from him at the next meeting. Dredging Pool 3 in 2022 and the removal of Lock and Dam 3 in 2023. What is the risk of that dredging activity and the possibility of the channel silting in again before you get a chance to remove the dam at Lock 3?

MR. BRADEN: Sir I do not know the answer to your question but we can certainly get that answer to the Board.

CHAIRMAN HETTEL: Thank you. Please do. I would hate to see the Corps spend the money on dredging the channel in 2022 and remove the dam and find out that the channel has silted in, and then have to go back out do dredging again. That is something I think we would like to know the answer to.

MR. McKEE: The issue with dredging the pool between Locks 3 and 4 is once you remove the dam at Elizabeth, you are going to need to have that channel, so the dredging needs to be done before the removal of the dam, otherwise you will shut down navigation on the river above Lock 3.

CHAIRMAN HETTEL: Do you know how long it will take to remove the dam at Elizabeth?

MR. McKEE: Sir, I will have to check on that. I do not know the answer.

CHAIRMAN HETTEL: I would think you would do the dredging simultaneously up until the point where you have to remove the dam, and reduce the risk of the channel silting back in.

MR. McKEE: It takes some time. We will look at the coordination of those activities closely.

CHAIRMAN HETTEL: Again, we are trying not to duplicate efforts or increasing spending at the project. Thank you, Jeff.

MR. BRADEN: Next slide. Here you can see the Lower Mon ongoing and pending construction plan. You will see that it is color-coded to link to the construction activities shown in the picture on the left side of the slide.

At the end of this fiscal year, in August, we will be awarding Options 1 and 2 of the River Chamber Completion contract. You will see that Option 3 of the River Chamber Completion contract is currently scheduled for November 2017. Since the Lower Monongahela River project was not included in the President's Budget, we will be drawing on an FY 2018 work plan. We don't anticipate receiving funds through a work plan until the April, May 2018 timeframe, so the award of that option will likely push it to late FY 2018, similar to what is going on this year with the FY 2017 work plan.

Next slide. This slide shows a couple of photos of ongoing construction at Charleroi. On the left you can see the project site as the contractor continues to make progress on the construction of monoliths M-22 to M-27. On the right you can see the placement of lift number 8 out of a total of 9 lifts as the contractor continues work on the construction of monolith number M-7.

Next slide. Here is our time and cost scorecard. In the upper left-hand quadrant I will make one correction. It seems like at the last Users Board they started to report planned and earned figures without contingency. Although they may have been given that guidance, we need to fix that, because that would generate earned value metrics that don't make sense, and would never rise above a Cost Performance Index of 1, regardless of performance metric context.

We will work with Steve Fritz and his team, but the contingency numbers need to be put back into the plan at current value numbers for those expenditures.

In the upper right-hand quadrant you can see the project schedule versus the baseline schedule once again, focusing on the early operational date of 2022.

In the lower left quadrant you can see once again they have made adjustments. This is reporting correctly. We have our baseline cost with risk, which is our authorized project cost figure of $1.22

billion. Then our current Total Estimated Price figure, where they are using contingency appropriately. It looks like the Total Estimated Price is currently tracking at about $1.108 billion.

In the lower right hand quadrant you can see the major activities schedule, including the award of River Chamber Completion contract Options 1 and 2, the completion of the Stilling Basin model, and the Ready to Advertise date associated with dredging.

It should be noted that they will need to submit a formal acquisition plan with the Office of the Principal Assistant Responsible for Contracting, the PARC, for that dredging, so that did push that to the right with the current delivery date now showing as August 2017.

Next slide. Once again, this aerial photo gives you an overall view of the project site with the work on the River Chamber Completion contractor working on the left side of the photo and the M-22 to M-27 contractor working on the right side of the photo. The river flows from left to right.

Subject to your questions or comments, that concludes my presentation the Lower Monongahela River Locks and Dams 2, 3, and 4 project.

MR. MONAHAN: I have no further questions or comments on the Lower Mon project, but I would like to digress for a few minutes here to talk about the Upper Ohio Navigation Study. I would like to reference a letter from Senator Casey (Senator Robert P. Casey, Senator from Pennsylvania) to the Honorable Mick Mulvaney, Director of the Office of Management and Budget dated March 31, 2017.

In referring to the Upper Ohio Navigation Study, Senator Casey writes:

> *"The current study has taken nearly 14 years to complete and cost American taxpayers are over $17 million. I strongly urge you to approve the Upper Ohio Navigation Study without delay…According to the U.S. Army Corps of Engineers' own estimates, failure to complete this $2.6 billion project will cost the region an additional $430 million per site each year – a total negative impact of $1.29 billion annually…Independent studies indicate that nearly 200,000 jobs are maintained by activity on the waterways in southwestern Pennsylvania, which accounts for nearly 17 percent of the region's workforce."*

On May 18, 2017, Director Mulvaney replied back to Senator Casey's letter via letter stating that the *"Office of Management and Budget concluded that the Upper Ohio Navigation Study would benefit from additional economic analysis consistent with the level of analysis conducted for all Corps projects and to ensure a potential investment of this magnitude is fully evaluated for the American taxpayer."*

My question to Director Mulvaney is, "What does consistent with the level of analysis conducted for all Corps projects mean?" We have wasted 14 years and $17 million on the Upper Ohio Navigation Study already.

The definition of insanity is to keep doing what you have been doing, and expecting different results. I believe the Users Board deserves a detailed clarification from the Office of Management and Budget on how the Corps will be directed to do yet another evaluation.

It is my understanding we have a flawed study process that restricts the Corps from using forward market data on increased economic development of the rivers, restricts the value of multiple beneficiaries use of our locks and dams, whether that is local water supply, recreational boating, flood control, and underestimates the true economic multiplier benefit as noted in Senator Casey's letter of over 200,000 jobs that are maintained.

President Trump held a press conference in Cincinnati in July and stated, "We simply cannot tolerate a five-day shut down on a major thoroughfare for American coal, American oil, and American steel. I am calling on all Democrats and Republicans to join together, if that is possible, in the great rebuilding of America."

The May 18, 2017 letter from Director Mulvaney is clearly inconsistent with the stated objectives of the President.

I want to go on record that it would be a waste of taxpayer money and public partner money in the Inland Waterways Trust Fund to conduct yet another study of the Upper Ohio locks and dams. I would hope the President's own Budget office will provide approval to commence the Upper Ohio locks and dams construction process without further delay, and support the President and his commitment of renewing the inland waterways infrastructure.

I would urge Director Mulvaney to reconsider his May 18, 2017 letter to Senator Casey requiring yet another study, and allow the Corps and the Inland Waterways Users Board to move forward with funding requests, and proceed with the construction of the new Upper Ohio locks and dams immediately.

Thank you.

MR. POINTON: Thank you. Moving on with the program. Next on the agenda is an update on the status of the Kentucky Lock project. The update on the Kentucky Lock project will be given by Mr. Don Getty from the Nashville District. Mr. Getty serves as the Project Manager for the Kentucky Lock project. Mr. Getty also serves as the Project Manager for the Chickamauga Lock project and after he concludes his update on the Kentucky Lock project he will provide an update on the Chickamauga Lock project. Mr. Getty, please proceed when you are ready.

MR. DON B. GETTY: Thank you, Mark. Good afternoon Ms. Murdock-McDaniel, Chairman Hettel, Board Members, Federal observers, fellow Corps employees and other attendees. For the record my name is Don Getty. As Mark has indicated I am the Project Manager for the Kentucky Lock project and the Chickamauga Lock project. On behalf of Mr. David Dale, Programs Director in the Great Lakes and Ohio River Division Programs Director, I will be presenting an update on the Kentucky Lock project followed by an update on the Chickamauga Lock project.

Next slide. The bottom l up front, construction of the downstream cofferdam. There was a great deal of discussion at the last Users Board meeting in May about whether we could award the contract

options by May 31st and I happy to report those contract options were successfully exercised, and a lot of teamwork went into getting the funding to the Nashville District, both inside and outside of the Corps. We appreciate that. It saved us a lot of time and money by doing that.

Concerning our ongoing cofferdam construction, we are putting a lot of emphasis into trying to reduce the impacts to navigation. We have a Value Engineering proposal to eliminate underwater blasting which would increase safety and reduces the amount of lock closures. Our contractor is proposing to eliminate underwater blasting, which is going to significantly decrease safety risks, as well as reduce the number of lock closures so that is a very good thing.

That change is also going to result in a cost savings. The contractor's latest proposal is coming in at a little over $1 million in cost savings. The Government, receive 45 percent of that cost savings, so there will a $450,000 minimum cost savings to the project as a result of this proposal. This is another example of how value engineering really makes our projects better and less expensive.

Also, we are working with the navigation industry to reduce the impacts to the industry. We think we worked out a system to minimize the impact to vessels coming through the project while we are doing construction on the downstream cofferdam. We have a helper boat at the project site and that is worked out very well the last month, and it will be going 24/7 in the next week.

Another item to be aware of. The last bullet on the slide. "Level III Economic Update is proceeding full tilt." We have an economic update ongoing. We are updating the estimation of the project benefits. This will result in new benefit-to-cost ratio for to the project. We have already finished the update of the cost estimate for the project. The current effort is to update the project benefits.

Next slide. This slide provides an overview of the Kentucky Lock project and some of the major features of the project, including those items that have already been completed, those activities that are currently underway and those activities that are planned to take place in the future.

The item in the yellow box is our ongoing "Downstream Cofferdam" construction activity.

At the bottom of the slide, in the red box is our next contract to be awarded for "Site, Demolition, and Utilities", planned to be awarded in December 2017.

In the middle of the slide, you can see a red box which says "Downstream Excavation" which is a contract which we should be advertising and award by September 2018.

Those are critical contracts, but the critical path is the Downstream Cofferdam contract which we awarded in September of 2016. That is where we are putting most of our emphasis.

In the lower right hand corner of the slide you can see some of the major work items that have been completed and the current amount of obligations to the project through June of this year, that being $498 million. Our current expenditures are approximately $436 million out of that $498 million figure.

MR. RICKETTS: We are a little behind schedule, and I am getting tight on time. Could I ask you go to slide No. 8 which relates to the project cost estimates, and cover that a little bit out of order

and then go back to your normal order so that I can -- I know it's selfish, but so I can at least have the benefit of what you are going to educate us on there.

MR. GETTY: Slide No. 8. "Cost Estimate Comparison." This is a slide that was presented at the last Users Board meeting. Unfortunately I did not read the minutes from the last meeting until Monday, so I was not able to generate anything to address the questions and issues raised.

I broke them into three categories of issues here. One is the difference in the Total Project Cost versus what we were reporting before. The second was how we addressed the sunk costs. The third is how we addressed the cost differential inconsistencies.

First of all, I will point out at the bottom of the slide, the totals. The 2017 Total Project Cost Estimate shows a figure of $1.18 billion. That contrasts with what we reported as $1.25 billion. The difference is the $1.25 billion is a fully-funded cost, and it includes inflation. These costs are all first costs. That is what the note at the bottom of the slide says. Therefore, they don't include inflation. The reason we do that, it is very difficult to compare two cost estimates that are fully-funded. And if you are comparing apples to apples, first cost is the way to do that.

The reason why we fully-funded, to put in inflation you have to have a future funding stream, as well as future inflation factors, and there is a lot of uncertainty in both of those, and it is very difficult to apply those to two different cost estimates, one that was developed back in 1995 and one that was developed in 2016.

To get an apples to apples comparison, I think we need to compare first cost and not fully-funded costs. That is why it varies between $1.25 billion and $1.18 billion.

MR. RICKETTS: On the first cost number, the $1.18 billion, does that cost figure include dollars already spent?

MR. GETTY: It does, and that is what I was going to get to in sunk cost. The $1.18 billion cost figure includes all of the $426 million spent at the time this was cost estimate was developed in the fall, and those numbers are not inflated or brought to Fiscal Year 2017 numbers. Those are the actual numbers spent. As an example, on the highway and railroad relocation, you will see there is figure of $163.8 million. We had four construction contracts that totaled up to $163.8 million, the last one we awarded in 2005. Those are the actual dollars that we spent that have not been escalated, but they are included in that $1.18 billion figure. Those costs are not escalated.

MR. RICKETTS: It does, thank you.

CHAIRMAN HETTEL: Don, what you are telling me is the $393 million increase, and I think now it is $380 million, when you did your cost estimate, it was for the remaining items to complete the project, and you are not inflating the $426 million that has already been spent to 2017 costs, is that correct?

MR. GETTY: Yes sir, that is correct. The new cost estimate just looked at remaining items. It did not look at any of the sunk costs.

CHAIRMAN HETTEL: Okay. At our Users Board Meeting No. 82, it was reported that there was $402 million left to complete the Kentucky Lock project. You did a cost estimate on the remaining $402 million, and it almost doubled to now a total of $795 million.

MR. GETTY: That's close. On this slide we are comparing 1995 costs that did not have sunk costs to one that does have a sunk costs. It is not a one-to-one correspondence. But it's probably close to what you described, the remaining cost from the original estimate to what we have now and that increase, which illustrates how low our old estimate was compared to this new estimate that is, by design, conservative in nature. We have a low estimate being compared to hopefully a high estimate.

CHAIRMAN HETTEL: Agreed. I just struggle with a 100 percent increase in the remaining costs. Under the premise of "trust but verify" I would like to see if there is a way you could verify that cost with us, the Users Board, that the $402 million that was referenced at our Inland Waterways Users Board Meeting No. 82 of remaining cost to complete the Kentucky Lock project, what items increased to bring this cost up to the 200 percent increase. You are basically doubling the cost of the remaining items, the cost of the remaining items, so I would like to see those costs broken down for the Board so we can understand where the cost increases occurred, and so the Office of Management and Budget and Mr. Hansen can understand, and why delays in these projects continue to increase the costs. You said 1995 cost. We are in 2018. You are saying in 23 years the price doubled for the remaining items.

MR. GETTY: It certainly doubled from the 1995 estimate, yes. And that is apples to apples.

MR. MECKLENBORG: Don, I want to ask, for instance, the highway and railroad relocation, so I understand this relocation, have we already spent $163 million?

MR. GETTY: Yes sir. That has been completed.

MR. MECKLENBORG: And, likewise, have we already spend the $217 million on the lock monoliths?

MR. GETTY: No sir, we have not.

MR. MECKLENBORG: No. Okay.

MR. GETTY: We built the upstream lock monolith, but we have not spent nearly the entire amount to get there.

MR. MECKLENBORG: Okay. Thank you.

CHAIRMAN HETTEL: Just to make sure we are on the same path, Mr. Getty, we are requesting a breakdown of how the costs doubled from --

MR. GETTY: The remaining costs.

CHAIRMAN HETTEL: Yes, the remaining costs. Thank you.

MR. GETTY: I am trying to work out how. I am sure there is a way we can do that.

CHAIRMAN HETTEL: Thank you.

MR. GETTY: Are there any other questions? The only other thing is that at the last meeting we mentioned this $380 million cost increase. Last year's fully -- we update our costs every year and inflate those using inflation factors in the funding streams. Last year's fully-funded number was $874 million. We are comparing that with the new $1.25 billion cost figure. That is where the $380 million difference came from.

Are there any other questions or comments on this?

MR. MECKLENBORG: Mr. Chairman, I just wanted to ask from a timing standpoint, how long do you think the meeting will go for airport reservation type situations?

CHAIRMAN HETTEL: We have two more presentations. In the interest of saving time, Don, if you think there is nothing pertinent to reference on the remainder of the Kentucky Lock presentation, I am fine with moving onto your Chickamauga Lock update.

MR. GETTY: Next slide. With respect to Chickamauga Lock bottom line up front, it also had contract options set to expire the end of May. We were able to extend the option expiration date to 31 July at no additional cost, and they expect to exercise those options this week.

Chickamauga Lock has ongoing construction. Our lock excavation contract is a $31 million contract. That is what those options are associated with. It is going well and it is on schedule. There are no issues with that contract.

The big news at Chickamauga Lock is that we have advertised a lock chamber contract, it is out on the street now, with a bid opening planned for August 23rd. Things are going well on it as well.

We are also working a Post Authorization Change Report for 902 Exceedance, as is Kentucky. Kentucky is about two months behind Chickamauga for our 902 cost exceedance.

Next slide. This slide shows the overall project overview and some of the major activities that have been completed, are currently underway, or planned for the future.

The yellow box to the left of the slide shows the lock excavation contract that is currently underway. That contract should be finished about a year and a half from now.

We expect to award the lock chamber contract this September. The first part of that contract will be establishing the batch plant and setting up a concrete delivery system. They can be working concurrently with the lock excavation.

Next slide. Some photographs of the ongoing construction activity at the project site. The picture in the upper left of the slide is a picture of the dewatered cofferdam. The contractor is installing 44 large strand anchors to stabilize the cofferdam prior to rock excavation. The picture on the lower right, photo 3 is a close up photo of the placement of concrete for a rock anchor support block.

The picture in the upper right, photo 2, was taken during the Lock Chamber pre-bid site visit and conference associated with the lock chamber construction contract. It had a very good turnout. We had 22 companies represented, I don't know how many of them are prime contractors, but that bodes well very well for the competition on the bidding for that contract.

Next slide. This is our time and cost scorecard slide. We are just starting Earned Value Management at Kentucky and Chickamauga, so you won't see a lot on these slides until we go through several cycles.

Next slide. The Chickamauga Lock schedule, we plan to award the lock chamber contract in September, and that is a big focus of the project development team.

Next slide. I believe the Post Authorization Change Report or PACR was brought up at the last Users Board meeting, and you wanted some additional information on it. This slide shows is the schedule for the PACR.

Most of the PACR has already been done with the exception of the economic update. They plan to have the report completed by August, and then from August through next June are reviews of the report, first at the Division office, then at the Headquarters level, and then finally at the Assistant Secretary's office.

Subject to your questions or comments, that completes my update on the status of the Chickamauga Lock project.

CHAIRMAN HETTEL: Don, one more question for you. Kentucky Lock was not in the President's FY 2016, 2017, or 2018 Budget requests. Is that correct?

MR. GETTY: That is correct sir. Kentucky Lock has not been in the President's Budget since Fiscal Year 2011.

CHAIRMAN HETTEL: Do you have Engineering and Design during Construction and Supervision and Administration funded throughout the end of the contract?

MR. GETTY: We have requested budget amounts for those items. I was talking to Mr. McKee and Mr. Braden this morning about that issue. For the downstream cofferdam, our budget estimate was $39 million for the total contract, so we asked for $45 million, a three-year contract at $2 million a year. Yes, funds were asked for in the budget, but our high bids destroyed that, so we --

CHAIRMAN HETTEL: I understand, but just to clarify, you do not have Engineering and Design during Construction and Supervision and Administration costs funded through the term of this contract?

MR. GETTY: No sir. We asked for it and received it, but it just got overcome by events. We asked for it in the FY 2017 money, but --

CHAIRMAN HETTEL: But, as of today, you don't have it funded through the term of the contract?

MR. GETTY: We do now, yes sir.

CHAIRMAN HETTEL: You do now?

MR. GETTY: Yes sir, for the downstream cofferdam.

CHAIRMAN HETTEL: Okay. I am talking about through the term of the contract similar to the Lower Mon project.

MR. GETTY: Right. It has two years left on it, so it is not near -- it is just approximately $4 million, so it is not like $30 million.

CHAIRMAN HETTEL: You have an upcoming contract bid for the lock chamber. Is the Engineering and Design during Construction and Supervision and Administration costs covered --

MR. GETTY: That is for Chickamauga Lock. I was talking about Kentucky Lock.

CHAIRMAN HETTEL: Oh, okay.

MR. GETTY: Chickamauga Lock has a huge contract on the lock chamber, with a base contract with 13 options, so we are just asking for the Engineering and Design during Construction and Supervision and Administration costs for the base contract. Until we exercise those options --

CHAIRMAN HETTEL: To clarify, you do not have Engineering and Design during Construction and Supervision and Administration costs funded through the completion of the project.

MR. GETTY: For the respective awarded amounts, we do. The base contract is a very large contract.

CHAIRMAN HETTEL: Correct. So you don't need any more Engineering and Design during Construction and Supervision and Administration money through the completion of Kentucky or Chickamauga?

MR. GETTY: Through the awarded contracts, no sir.

MR. MECKLENBORG: Mr. Chairman, I think what he is saying is when he lets a new contract, then that will have a component that you are talking about, but he hasn't let the new contract yet, and so all that is in it is what is related to the prior contract.

CHAIRMAN HETTEL: Which is dissimilar to Lower Mon where they are asking for $30 million to fund the Engineering and Design during Construction and Supervision and Administration through the completion of the contract. The contract bid is let or not let.

MR. MECKLENBORG: I am speaking for Mr. McKee, but I think it is because they are letting the new option contracts that they are asking for the Engineering and Design during Construction and Supervision and Administration costs.

CHAIRMAN HETTEL: I am confused, because they said they hadn't even awarded the contract for dredging yet. The point I am making is it seems different for the Lower Monongahela River project than it does for the Kentucky Lock and Chickamauga Lock projects.

MR. McKEE: Mr. Chairman, there is no difference, other than the Lower Monongahela River project got caught going from a project that had been included in the budget to a project that was not included in the budget and the money that is being requested, that $30 million is only for awarded contracts and contract options that would be awarded in FY 2018. It is not for any options or any contracts after FY 2018. It is consistent with what Mr. Getty said, whereas whenever he programs money for a contract or a contract option, he includes all of the Engineering and Design during Construction and Supervision and Administration costs associated with those contracts and options that they anticipate awarding. The only reason he ran out of money is because he had to steal from Engineering and Design during Construction and construction Supervision and Administration to pay contract overhead.

CHAIRMAN HETTEL: Okay. I have an email from Major General Jackson that states that the FY 2018 capability would be increased from $105 million to $135 million in order to fund the out-year Engineering and Design during Construction and construction Supervision and Administration and contingencies on active contracts.

MR. McKEE: On active contracts.

CHAIRMAN HETTEL: Okay. That $30 million is to cover only the active contracts on the Lower Monongahela River project?

MR. McKEE: That is correct sir.

CHAIRMAN HETTEL: And the contract --

MR. McKEE: On contracts that are awarded in FY 2018.

CHAIRMAN HETTEL: The contracts that haven't -- well, we don't know if they're going to be awarded because they weren't included in the President's Budget.

MR. McKEE: Well, if you assume the $135 million, it assumes the awarding of all those contract options or contracts that are in that fiscal year.

CHAIRMAN HETTEL: Are you telling me you are going to need more Engineering and Design during Construction and construction Supervision and Administration when you start letting the remaining contracts for the removal of the dam at Lock and Dam 3, the dredging and everything else.

MR. McKEE: Yes, sir.

MS. MURDOCK-McDANIEL: I don't know if we are mis-communicating here, but I think it is how you budget the project. When you are developing the budget for a fiscal year, you put those costs in that fiscal year.

In the case of Lower Mon project, you have a zero budget, but you have ongoing contracts. It is similar to having a construction contract going on at your house, and you suddenly zeroed out the budget, there are still things that have to be finished for those ongoing efforts, and that is putting the budget in to do the oversight, but also the cost of the construction trailer, the electricity, all of the things that you have to have be there onsite to oversee those existing contracts.

It just so happens to be the timing of this that they did not have the funds for that remaining Engineering and Design during Construction and construction Supervision and Administration costs for that ongoing work for those remaining contracts that were underway.

The option would have been to stop everything, and that would have been a whole lot more expensive option, if you said you had no money to do anything. That is where that project is.

CHAIRMAN HETTEL: If I can clarify, Mr. Murdock-McDaniel, does the $30 million being requested have to be spent in FY 2018, and then it is done with it?

MS. MURDOCK-McDANIEL: It is for the remainder of -- assuming that you don't get another dollar on that project, what they are saying is, this is how much money we are going to need to be able to carry these contracts through their performance time. In this case it is going to be over more than one year.

You have to work with the dollars that you are getting now to continue to do that work, you don't have a new appropriation.

CHAIRMAN HETTEL: Again, to make sure I understand, and I'm sorry, we are asking for $30 million for Engineering and Design during Construction and construction Supervision and Administration costs through multiple years, and we can't request that on an individual year basis.

MR. McKEE: Current policy requires you to do it in advance if the project is not included in the budget. If the project is budgeted ever year, then you do it only for the particular year.

MR. POINTON: I think we probably have a take-back on this to try to clarify this a little bit further for you Mr. Chairman. We will work on getting something back to you on that as a do-out from this meeting.

The last presentation on the program is an update on the Gulf Intracoastal Waterway Brazos River Floodgates and Colorado River Locks Feasibility Study underway by our Galveston District office. Ms. Franchelle Craft, Project Manager for that study will be providing today's update. Ms. Craft, please proceed when you are ready. Thank you.

MS. FRANCHELLE E. CRAFT: Good afternoon Ms. Murdock-McDaniel, Chairman Hettel, Board Members, Federal observers, fellow Corps employees and other attendees. For the record my name is Franchelle Craft. As Mark has indicated I am the Project Manager for the Gulf Intracoastal Waterway (GIWW) Brazos River Floodgates and Colorado River Locks Feasibility Study.

At the last Users Board meeting there was some concern about our rationale for using a systems approach to examining the issues at the Brazos River Floodgates and the Colorado River Locks, and we indicated that the commonality of traffic between the two structures suggests that any substantial change at one project location has the potential to alter traffic patterns and operations at the other.

With the structures only being 40 miles apart along the GIWW, nine times out of ten you have vessels traveling through both structures, and with the 97 percent commonality at the Brazos River Floodgates, and 99 percent commonality of the traffic at the Colorado River Locks, we look at the system as a whole.

We understand that there are more time delays, more accidents, and more tripping at the Brazos River Floodgates, but if you only focus on one part of the system, you will just transfer those issues that you didn't think you had at the Colorado River Locks to the Colorado River Locks. ["Tripping" refers to the practice of breaking apart a tow and transiting one barge across the crossing and then returning to move the remaining barge across the crossing and then reconfiguring the entire tow and continuing their travel as one unit.]

We also want to capitalize on having a study New Start. By partnering with the Texas Department of Transportation, it affords us the opportunity to capitalize on this study New Start and look at both structures as a system and complete the study within the "3 by 3 by 3" planning process.

As you can see from this chart, the other issue at the last Users Board meeting was the Board did not think there would be enough benefits at the Colorado River Locks to carry the benefits at the Brazos River Floodgates. A preliminary analysis of the alternatives indicates that there is a higher benefit-to-cost ratio at the Colorado Locks, so that wouldn't be an issue when combining the projects as a whole.

The Open Channel alternative is currently the leading candidate at both locations, however we still have some information that we need to incorporate into the economic tool to complete the calculation of the benefit-to-cost ratios.

Currently the study is back at the "3 by 3 by 3." The "Tentatively Selected Plan" milestone is scheduled for December 2017 and a Chief of Engineers report in scheduled for June of 2019.

CHAIRMAN HETTEL: Ms. Craft. Taking the benefit-to-cost ratio assumption out of the picture, every professional mariner I speak to says the Brazos River Floodgates is the problem, but wouldn't have a problem at the Colorado River Locks. Transiting the Colorado River Locks is not nearly as hazardous as transiting the Brazos River Floodgates.

Taking the risk out of a possible accident or spill or whatever the case may be, to the professional mariner, it is all at Brazos, it is not at Colorado. I don't know if you have talked to professional mariners or not, but you ought to get their input on what they think would happen at Colorado should we straighten out the situation at Brazos. I would look to the professional mariners transiting that facility every day.

MS. CRAFT: We have a meeting scheduled to meet with the industry. We are going to get some names. We are going to do that.

CHAIRMAN HETTEL: I would definitely take the advice of the professional mariners into consideration. Everyone I talk to would love to see Brazos squared away, and not even worry about transiting Colorado. I think the professional mariner needs to be brought into this discussion.

Thank you.

MS. MURDOCK-McDANIEL: Mr. Chairman, if I could make one comment. We agree that we need to get the input from the industry. We have heard about the impacts because of the high allision rates at the Brazos River Floodgates. The way that lines up is a problem.

I think what they are trying to demonstrate, and perhaps something that the industry doesn't recognize, is that you have this commonality of the users between those two locks, and what we are looking at are the transportation savings as well as the benefit-to-cost ratio and what makes the project a viable project.

If you take care of the Brazos project, which we all agree is a high priority, and you just move that down the system for the other 97 percent that they go to the Colorado, you are moving that problem, or you are creating maybe a new problem you didn't think you have, whenever you get down to that lock.

With the high use of both of these locks, you are kind of moving that problem down for more delays if you are doing improvement in order to open up or do things at one lock versus the other.

CHAIRMAN HETTEL: I understand, and the only point I am making is that you may create more delays at Colorado, but it is a safer transit at Colorado than it is at Brazos. You take the risk out of accidents, spills, whatever the case may be by fixing Brazos. You may add delay costs at Colorado, but in my opinion, in professional mariners' opinion, the delays are better than trying to transit Brazos the way it is now.

Thank you.

MR. FEWELL: Just a couple comments. I agree wholeheartedly with Chairman Hettel's comments on this. We do not have a problem today at the Colorado River Locks in the big picture. There are a lot of times we wait multiple days to get through Brazos, and we fly right through Colorado.

I am very glad you are going to be at the annual GICA (Gulf Intracoastal Canal Association) meeting next week, because you will come away from that meeting with a whole list of people to talk to. As a shipper that is moving products through both of these locks on a daily basis, I don't see the concern with the Colorado Locks.

You mentioned something about "open channel." What do you mean by that?

MS. CRAFT: The open channel alternative is to remove the structure and correct the alignment at the Brazos.

MR. FEWELL: Okay. Is there still going to be a floodgate or something there?

MS. CRAFT: No.

MR. FEWELL: How are you going to control all the sediment problems you have today in the port of Freeport?

MS. CRAFT: Okay. When we went for an exemption, it was postponed until after the Agency Decision Milestone, and that was part of our SHIPSIM [a ship simulation model], so we are going back -- right now that is the risk we have to take, because we don't have that information. We are going back after the Agency Decision Milestone, and hopefully we will get approval and we can add that. With the "3 by 3 by 3", we don't have enough money right now to study that.

We are doing some H&H (hydraulics and hydrology) modeling, but SHIPSIM is what we were vying for to get that exemption. Hopefully after the Agency Decision Milestone we can get those going. Right now, that is just the risk that we have to document in the risk register.

MS. MURDOCK-McDANIEL: What I think Ms. Craft is saying is there is going to be additional information to inform on the hydraulic modeling that they are doing, but they are not going to go through the whole simulation to figure out what the problem is at this stage. They are putting that on the risk register. It is something they will have to deal with, and it will be a determining factor whether or not that's how -- what kind of structure, what kind of situation you are going to have there to take care of that cross current that we know comes off the Brazos there.

The open river condition, again, is one of the alternatives that they are looking at. At this point, for the open river you wouldn't have a lock at all, but you might have some other type of structure to deal with, so that is what they are going to have to come up with as they go through the next phase of the planning piece of this.

MS. CRAFT: And, additional modeling will show.

MR. FEWELL: The public meeting you are going to have with the navigation industry -- that public meeting with the carriers, you will be publishing a date for that meeting?

MS. CRAFT: It is not a public meeting. We will just invite them to Galveston or another location and we will just meet with them. We are collecting the information of who would like to be a part of it. But it is open to anyone.

MR. FEWELL: Okay.

MR. POINTON: Would you like an invitation, Mr. Fewell?

MR. FEWELL: Yes sir, most definitely. Thank you.

MR. POINTON: Are there any other questions or comments for Ms. Craft? Hearing none, thank you Ms. Craft.

Moving on to the next item on the program agenda, the public comment period of the meeting. We have two individuals that requested time to make a public comment. First is Mr. Scott Levy.

Just to remind everyone, the Federal Advisory Committee Act requires a public comment period, and speakers are limited to a three minute timeframe.

MR. SCOTT LEVY: Thank you. My name is Scott Levy. I host a website, bluefish.org.

I have been doing that for 17 years or so. This is what the site looks like. The main page that you will see, end up going to -- I guess I will turn my screen on here.

In the "Dams and Economics" section down here you will find things about dams and solar power and lock outages, and things like that. In the section titled "Salmon and Ecologics" you will see about fish runs and harvest and pollution.

At the top here in the section titled "People and Thoughts" where you will see information about legislation that is coming in, news, opinions, editorials, and things like that. There are about 10,000 stories on here since 1999.

My goal is to -- I don't have any skin in this game. I just got involved in this as a public citizen. Idaho salmon have plummeted in population since the 1970's when the lower Snake River dams were completed. As far as the biology, if you scroll down that page just a little bit, there is recently posted -- these biologists did a presentation and the decline in the fish population and how the dams are the problem.

Judges have thrown out the federal plan five times now, and the latest thing is now we have restarted the NEPA (National Environmental Policy Act) process, so they have taken public comments over the last year. The salmon are unusually important here in the Pacific Northwest. They received 375,000 comments last year. They are sorting through them. They are estimating it is going to cost about $80 million to go through this NEPA process.

The process is about the entire Columbia River System Operations. The Lower Snake is just a part of that. In 1999 the Corps authored a report [the Lower Snake River Juvenile Salmon Migration Feasibility Study, 2002]. A NEPA EIS (Environmental Impact Statement) was included that included the Lower Snake dam breaching in that EIS.

Since we are short on time I think I will jump to -- so I was very involved in that process. Last week I met with Lieutenant General Semonite. I went up to Michigan and visited the Soo Locks and Sault Ste Marie. I was impressed he had already read my comment. He summarized my 48 page comment. He said, so basically we can mitigate the impacts to irrigation, we can mitigate the impacts to navigation, we can mitigate the impacts to hydropower, but what we can't mitigate the impacts to the fish in the ecosystem. And I said, yeah, that's great. In 20 seconds you did it.

He also wants to hear from everybody that is interested in keeping those dams. I give a high -- a fair chance that the dam breaching on the Lower Snake will come out in this process. I think it will maybe be by the end of 2018 that will be decided.

There are ecologic losers, of course. There are also economic losers. The dams never should have been built. They never had a benefit-to-cost ratio above 1.0. They still don't. In 1945 they fudged

the numbers to show it. It was actually a false bunch of number jumbling. And they still have a very low benefit-to-cost ratio.

What I would encourage is if anybody is interested in making sure the General hears your comments, get a hold of him. He wants to hear your comments.

Basically I am just here to let you know that is going on. I can be reached at bluefish.org. Just go to the website and contact -- I act as the librarian. I don't have any cookies or anything. You can come on anonymously or whatever. I just do the research and do the best I can to answer your questions.

Thanks for your time.

MR. POINTON: Thank you, Mr. Levy. The next person who indicated that they would like to make a public comment is Mr. Rob Rich from the Shaver Transportation Company.

MR. ROB RICH: Thank you very much. I will try to keep my comments brief. I even have my watch here.

My name is Rob Rich with the Shaver Transportation Company, one of the barge lines on the river. We are thankful that the Inland Waterways Users Board has had the opportunity to come out to the Pacific Northwest and see our system. We ordered up some really good weather for you here. Hope you appreciated that. The rain will be back next week, I'm sure.

The work that the Corps of Engineers has done, not only over the last several decades on the river system, but specifically the last two extended outages, have been incredible, not only the engineering work, the structural work, the completion, but what it has done for our system, the reliability that it has added to the system.

And this is a system. We do have fish passage, we do have navigation, we do have hydropower, we have recreation, we have irrigation. We are all in this together, all of the various stakeholders in the way the system operates. It has been incredible to see the work that has been done out here and has allowed for other districts around the country to be able to look at it.

A couple things we want to point out. One was, there had been a comment made, we believe, to the Board that had to do with methane in the pools, something that I am actually just beginning to learn about.

The Columbia River pools out here, of course being fairly cool compared to tropical and subtropical water areas, and also fairly fast-moving by comparison, not having the rotting fiber issues in the water, we don't have that issue out here.

Apparently it had been brought up, and we wanted to make sure it was shared that a little bit of research of the pool activity we have out here, the Columbia-Snake River does not create that kind of issues as we have in the subtropical rivers.

The other opportunity is just to share the efficiency of our system. I am preaching to the choir here when it comes to that, but any opportunity to put products on the water, you have the lowest carbon footprint of any form of transportation, and when you've got hydropower mixed in that with no carbon footprint production, I can only imagine what it would be like if we had to move away from hydropower to some other non-zero hydrocarbon output form of energy production, or move into another form of transportation.

I will not knock rail, or I will not knock trucks. We all need every bit of our infrastructure system in our country. But when water is available, you have the best movement for the environment.

Thank you very much for your time and attention.

MR. POINTON: Thank you, Mr. Rich.

We are now at the point in the program when we allow Ms. Murdock-McDaniel and Chairman Hettel to offer final and closing comments. Ms. Murdock-McDaniel if you will offer comments.

MS. MURDOCK-McDANIEL: Thank you Mr. Pointon. I will be brief. I want to say thank you once again to the Portland District for being the host for this meeting and yesterday's site visit and to the Pacific Northwest Waterways Association and their hosting for us during the last two days. Thank you to all of the members of the Inland Waterways Users Board for your interest and support of the Corps activities.

MR. POINTON: Thank you Ms. Murdock-McDaniel. Chairman Hettel, closing remarks.

CHAIRMAN HETTEL: Thank you Mr. Pointon. I will be brief as well. As the new members to the Board may have heard today, I am not bashful from challenging the Corps, and I think we establish a very good collaboration and communication effort, because the Corps can come back and challenge us, and we shouldn't be offended when they come back and challenge us. Because I know Mr. McKee doesn't get offended when I challenge him. I think it is a great atmosphere between the Board members and the Corps of Engineers.

And on that challenging point, I want to bring up -- commend the Corps. At the last Users Board meeting we were within, I believe, six or seven days of these contract extensions expiring, once we had appropriations approved, and we were worried that the Corps couldn't react fast enough to exercise these options that would increase the cost for these projects.

You guys got it done. My hats off to you, Jeff, Andrea. I appreciate that, because we were looking at some pretty substantial increases in cost.

While I know the options on Lower Mon have not been exercised yet, we were able get another month or two into it without any increased cost. So it is always worth commending the Corps when we see something that goes right, and we appreciate your expeditious action in those last seven days from our previous Users Board meeting.

MR. McKEE: That was a team effort throughout. The districts really took the time and effort to plan everything in advance, do the Congressional notification so when the money got there, they could execute.

CHAIRMAN HETTEL: They did a fine job.

MR. MECKLENBORG: I also would like to commend the Corps for that effort, and appreciate Andrea and Eric being here for this, as well.

I would like to make a motion to adjourn.

MR. MONAHAN: I want to add my thanks. I really appreciate the hospitality of the Portland District. Job well done and time well spent. Thank you.

MR. POINTON: Do you second that motion to adjourn, Mr. Monahan?

MR. MONAHAN: I will second that motion.

MR. POINTON: All in favor of the motion to adjourn, say "Aye."

BOARD MEMBERS: Aye. (Unanimous)

MR. POINTON: Any nays? Hearing none, this meeting is adjourned. Safe travels everyone, see you at the next meeting of the Inland Waterways Users Board in Vicksburg, Mississippi.

(Meeting concluded at 1:25 P.M.)

C E R T I F I C A T E

STATE OF OREGON)

) ss.

COUNTY OF MULTNOMAH)

I, Amanda K. Fisher, a Certified Shorthand Reporter and Notary Public for Oregon, do hereby certify that, pursuant to Oregon Rules of Civil Procedure, the respective parties hereinbefore set forth, personally appeared before me at the time and place set forth in the caption hereof; that at said time and place I reported in Stenotype all testimony adduced and other oral proceedings had in the foregoing matter; that thereafter my notes were reduced to typewriting under my direction; and that the foregoing transcript, pages 1 to 175, both inclusive, constitutes a full, true and accurate record of all such testimony adduced and oral proceedings had, and of the whole thereof.

Witness my hand and stamp at Portland, Oregon,

August 4, 2017.

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AMANDA K. FISHER
CSR No. 3229
Notary Public for the State of Oregon
Notary Commission No. 933197
My Commission Expires: 10/29/2018

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