

Minutes  
Inland Waterways Users Board Meeting No. 85  
USACE Vicksburg District Office Building  
Main Multi-Purpose Conference Room  
4155 Clay St, Vicksburg, MS 39183  
November 3, 2017

[Note: The following minutes of the Inland Waterways Users Board meeting No. 85 were approved and adopted as final at Inland Waterways Users Board meeting No. 86 held on March 1, 2018 at the Embassy Suites by Hilton Chattanooga-Hamilton Place located at 2321 Lifestyle Way, Chattanooga, Tennessee 37421.]

The following proceedings are of the 85<sup>th</sup> Meeting of the Inland Waterways Users Board held on the 3<sup>rd</sup> day of November 2017, commencing at 8:00 o'clock a.m. in the U.S. Army Corps of Engineers (USACE) Vicksburg District Office Building, Main Multi-Purpose Conference Room, located at 4155 Clay Street, Vicksburg, Mississippi 39183, 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. 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, Crouse Corporation.

MR. WILLIAM M. WOODRUFF, Kirby Corporation.

Board member, MR. G. SCOTT LEININGER, CGB Enterprises, Inc., did not attend the Board meeting. MR. LANCE RASE, CGB Enterprises, Inc. attended the Board meeting in place of MR. LEININGER.

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. DAVID J. LEACH, Deputy Assistant Secretary of the Army (Project Planning and Review), Office of the Assistant Secretary of the Army for Civil Works (ASA (CW)), Washington, D.C.

MS. LAUREN K. BRAND, Associate Administrator for Intermodal System Development, Maritime Administration (MARAD), U.S. Department of Transportation, Washington, D.C.

MR. NICHOLAS A. MARATHON, Economic Analyst, Transportation and Marketing Division, Agricultural Marketing Service, U.S. Department of Agriculture (USDA-AMS/TMD), Washington, D.C.

There was no official representative of the Office of Coast Survey, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, Silver Spring, MD present at the meeting.

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:

MR. THOMAS P. SMITH, Chief of Operations and Regulatory Division, Headquarters, U.S. Army Corps of Engineers, Washington, D.C. 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. 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 substituting for 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.

Program speakers in scheduled order of appearance were as follows:

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, VA.

MS. THOMAS P. SMITH, Chief of Operations and Regulatory Division, Headquarters, U.S. Army Corps of Engineers, Washington, D.C.

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

MR. MICHAEL D. COX, Chief of Operations, Rock Island District, U.S. Army Corps of Engineers, Rock Island, IL.

MR. STEPHEN R. FRITZ, Chief, Mega Projects Branch, Pittsburgh District, U.S. Army Corps of Engineers, Pittsburgh, PA.

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

MR. DAVID F. DALE, Director of Programs, Great Lakes and Ohio River Division, U.S. Army Corps of Engineers, Cincinnati, OH.

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

MR. STEPHEN R. FRITZ, Chief, Mega Projects Branch, Pittsburgh District, U.S. Army Corps of Engineers, Pittsburgh, PA.

MS. ROBYN S. COLOSIMO, Assistant for Water Policy, Office of the Assistant Secretary of the Army for Civil Works (ASA (CW)), Washington, D.C.

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

MR. BRIAN J. TETREAULT, Navigation Systems Specialist, U.S. Army Corps of Engineers, Engineer Research and Development Center, Coastal and Hydraulics Laboratory, Vicksburg, MS.

DR. MARK F. SUDOL, Director, Navigation and Civil Works Decision Support Center, Institute for Water Resources, Alexandria, VA.

In response to questions raised during the proceedings, additional information was provided by the following individuals:

MR. DENNIS O. NORRIS, Chief of Operations, U.S. Army Corps of Engineers, Mississippi Valley Division, Vicksburg, MS.

There were no public comments provided during the public comment portion of the meeting and no written public comments were received prior to or during the meeting.

### PROCEEDINGS

MR. KENNETH E. LICHTMAN: Good morning, and welcome to the 85th meeting of the Inland Waterways Users Board meeting being held today in Vicksburg, Mississippi. My

name is Kenneth Lichtman and I am the Alternate Designated Federal Officer (ADFO) for the Inland Waterways Users Board. I am representing Mr. Mark Pointon, Executive Secretary and Designated Federal Officer of the Users Board who was unable to attend today's meeting.

Before we start the meeting, we are obligated to have representatives on the Board take the Oath of Office in accordance with the rules and regulations of the Federal Advisory Committee Act of 1972, as amended. All members of the Board, with the exception of Mr. William Matthew Woodruff were sworn in at the last Board meeting held in Portland, Oregon this past July [Inland Waterways Users Board Meeting No. 84 was held in Portland, Oregon on July 19, 2017]. Therefore, I will ask Mr. Woodruff to join Mr. Thomas P. Smith, Chief of the Operations and Regulatory Division at USACE Headquarters who is representing Major General Donald E. Jackson, USACE Deputy Commanding General for Civil and Emergency Operations, in front of the flags so that Mr. Smith can administer the Oath of Office.

MR. THOMAS P. SMITH: Please raise your right hand and repeat after me. I, state your full name.

MR. WILLIAM M. WOODRUFF: I, William M. Woodruff.

MR. SMITH: Do solemnly swear.

MR. WOODRUFF: Do solemnly swear.

MR. SMITH: That I will support and defend.

MR. WOODRUFF: That I will support and defend.

MR. SMITH: The Constitution of the United States.

MR. WOODRUFF: The Constitution of the United States.

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

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

MR. SMITH: That I will bear true faith.

MR. WOODRUFF: That I will bear true faith.

MR. SMITH: And allegiance to the same.

MR. WOODRUFF: And allegiance to the same.

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

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

MR. SMITH: Without any mental reservation.

MR. WOODRUFF: Without any mental reservation.

MR. SMITH: Or purpose of evasion.

MR. WOODRUFF: Or purpose of evasion.

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

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

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

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

MR. SMITH: So help me God.

MR. WOODRUFF: So help me God.

MR. SMITH: Congratulations. (Applause.)

MR. LICHTMAN: Thank you, Mr. Smith and congratulations, Mr. Woodruff.

Today's meeting of the Users Board in Vicksburg is the fourth such meeting of the Board in Vicksburg, Mississippi. The Board first met in Vicksburg in June of 1989 at Board Meeting No. 7. The second meeting of the Users Board to take place in Vicksburg occurred in May of 1996 at Board Meeting No. 26. The third meeting of the Users Board meeting to take place in Vicksburg occurred in February 2009 at Board Meeting No. 60.

For those in attendance at today's meeting who are fans of the history of the Vicksburg District, the Commander of Vicksburg District office at the time of the February 2009 Users Board meeting was Colonel Michael C. Wehr, who subsequently went on to serve as Commander of the South Pacific Division and Mississippi Valley Division before moving to USACE Headquarters in Washington D.C. this past September to serve as the Deputy Chief of Engineers and Deputy Commanding General.

We had an excellent tour yesterday of some of the outstanding research activities underway at the Engineer Research and Development Center. Many thanks go to Mr. Jeff Lillycrop, Technical Director of the Coastal and Hydraulics Laboratory, Dr. Jeffrey Eckstein, Deputy Director of the Coastal and Hydraulics Laboratory and Dr. Beth Fleming, Deputy Director of the Engineer Research and Development Center, and the scientists and researchers who took time out of their busy schedules to discuss and demonstrate their research activities in such areas as innovative infrastructure solutions, the development of ultra-high performance concrete for the repair of navigation structures, structural health monitoring, the Lower

Monumental Lock physical model, and the use of carbon dioxide as a barrier to the movement of Asian carp in waterways.

Before we start today's meeting, I am obligated to read for the record that the Inland Waterways Users Board was established pursuant to Section 302 of Public Law 99-662, the Water Resources Development Act of 1986. The Users Board provides the Secretary of the Army and the Congress with recommendations on funding levels and priorities for the 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.

The U.S. Army Corps of Engineers is the sponsor of the Board and provides the Executive Director of the Board [Major General Donald E. Jackson], the Designated Federal Officer [Mr. Mark R. Pointon] and all normal activities.

Currently, no one has requested to make a public comment before the Board and no written statements have been submitted for the record. If anyone wishes to make a public comment or submit a statement for the record at the designated time during the meeting, please let Chairman Hettel or myself know during the break in these proceedings.

These proceedings are being recorded and a transcript of the meeting will be made available after the meeting.

I would now like to call upon Colonel Michael C. Derosier, Commander of the Vicksburg District office who will then invite up Major General Richard C. Kaiser, Commander of the Mississippi Valley Division for some opening remarks.

COLONEL MICHAEL C. DEROSIER: Good morning, everybody. I will be brief. Surely my future history will not be as illustrious at General Wehr, but I just wanted to welcome you to Vicksburg, the key city here in the south. I have the distinct privilege this morning of introducing to you Major General Rick Kaiser, Commanding General of the Mississippi Valley Division and also the President of the Mississippi River Commission.

Major General Kaiser comes to us from Afghanistan, where he served as the Commander of the Combined Security Transition Command – Afghanistan [CSTC-A], prior to that, as many of you know, he served as the Commander of the Great Lakes and Ohio River Division in Cincinnati Ohio.

Sir.

MAJOR GENERAL RICHARD G. KAISER: Thanks, Mike. Good morning everybody and welcome to Vicksburg. Toni -- raise your hand. Colonel Gant [Colonel Antoinette Gant], the current Commander of the Louisville District was in Afghanistan with me so we are both suffering with the weather down here, because right now in Afghanistan and

Kabul, it is probably really nice. So if you felt like you were in a bathtub when you walked outside this morning it does.

Look, I am preaching to the choir because everybody in this room knows how important America's waterways are. I appreciate your continued efforts to work with your congressional leaders to make sure they understand and support everything we need to be able to do with our waterways.

I have had the opportunity to talk to a lot of people and remind them that \$4.1 trillion of our economy operates in and along these waterways. That is significant and is tremendously important to our Nation's economy and security. We can't feed the world, as we are called to do, if we don't have waterways that are open to navigation. We know this. There is a lot of good work that has been going on, and I appreciate the dialogue that we have at these meetings. It is good to be back and see many of the folks that I have worked with over the last few years. I know we have challenges on the inland waterways system, and I know we just had some big challenges at Lock and Dam 52 as you would expect for a structure that old. That is why it is so important, as we move forward together as a body, to make sure that we get those critical projects funded and complete.

I will tell you, the Corps of Engineers, under the current leadership, has asked all of us to find those roadblocks to progress. Whether it is a policy that needs to be changed or law or the bureaucratic processes that stop us from getting things done in a timely manner. That is our charter to you. I have had the good fortune of having all of my commanders in town the last few days, and that is one of the big topics we talked about, how do we move forward? How do we get Chickamauga Lock done? How do we get Olmsted finished? That is what we're trying to do.

The other thing I would tell you is you have a big supporter here in Vicksburg. I just signed a Memorandum of Understanding with RIETF, the River Industry Executive Task Force, to maintain open communications. That is our goal. If you have not seen that memorandum, I have signed it and it should be off. I think Lynn Muench [Ms. Lynn Muench Senior Vice President, American Waterways Operators, Inc. (AWO)] is trying to get that thing together with our Coast Guard friends.

Thank you for being here today, and I know that you should have hard questions for us about where we stand on certain projects and where we are going. If you don't like the answers you hear, then we will work with that. All right. Again, we need your help to continue working with our congressional leaders to push forward these critical projects for our Nation. Thanks again for taking time out of your busy schedules to being here today and participating in these important discussions.

Finally, if you have enough time while you are in Vicksburg, I highly recommend you do a tour of the battlefield. This should resonate with you. During the Civil War, you might ask, "Why was there a siege here in Vicksburg?" The answer was that whoever controlled the river, controlled the outcome of the war. Vicksburg was the last critical spot on this magnificent river with high bluffs where whoever owned that land controlled the Mississippi

River. That was why it was so important. If you have the chance, even though the weather is not really nice, get out to that battlefield and take a tour and you will appreciate how important, once again, not only this river, but all of activities associated with the river are to our economy and this Nation.

Again, thanks for being here. Enjoy the dialogue. And, again, ask us some hard questions because that is why we are here. Thank you. It is good to see you, and please enjoy the rest of the day. Thank you.

MR. LICHTMAN: Thank you, General Kaiser. Now, I would like to turn to Mr. Smith, Chief of the USACE Civil Works Operations and Regulatory Division at Headquarters who is representing Major General Ed Jackson to make his opening remarks.

MR. SMITH: Well, good morning everyone. It is a privilege General Jackson asked me to sit in for him today. Even though my passion, background and career have been in the Army Corps of Engineers, I just recently returned to the Corps and took on the role as the Chief of Operations and Regulatory Division and I just love stuff like this and I love the people we work with and the mission.

Before coming to the meeting I asked General Jackson, "What it is you usually say at these meetings?" And he said, obviously, be gracious and to thank in this case, the Vicksburg District and the Mississippi Valley Division for all their support of the meeting and all of the people who came to the meeting. He said to be welcoming and kind and stuff like that, but I thought I would at least offer one additional insight as to the type of things he and General Semonite [Lieutenant General Todd T. Semonite, Chief of Engineers and Commander, U.S. Army Corps of Engineers] are doing.

You never really just get to do one thing as the Chief of Engineers or as the Deputy Commanding General for Civil and Emergency Operations, but in the last few weeks, it has been as close to it as I have seen in and around the Corps for quite some time. They are all in on ensuring that our responses that started in Texas and went on to the Gulf Coast and then Florida and then the Virgin Islands and Puerto Rico are going well. I know many of you are following that on the news. The accumulation of the effect of that has a tremendous amount of need for General Jackson and the Chief to be going to Congress and talking about things, particularly some of the challenges in Puerto Rico. The Corps' response to the hurricanes has got almost 1,000 military and civilian employees deployed.

We are dealing with over one and a half billion dollars (\$1.5 billion) of response money and some way of counting it. And those are some of the same leaders that you would be normally dealing with at the District and the Division offices, like I say, both in uniform and civilian. There is an impact. We can do that well and it has an impact here.

I would just share with you something the Chief [Lieutenant General Semonite] has been sharing with us at Headquarters, which is, because of the level of interest in our government of getting this emergency response right, he has recently been in meetings with people like Mick Mulvaney Director of the Office of Management and Budget (OMB) and with

senior leaders from multiple agencies from across the federal government, and to him that is a tremendous opportunity to build relationships similar to what we do here and to break down some of the mystery as what we do as the Corps of Engineers, so he and General Jackson, right now, are seizing the opportunity to communicate what we do. It may not be about a specific inland waterway project, but these are the opportunities and the relationships that pay off when some issue matriculates up to the senior leadership level and there is a relationship and they remember that three star General Semonite was sitting next to Mick Mulvaney talking to him about issues and stuff. I just wanted to share that with you that they are in the right place today and they know we are in the right place here, and I am grateful that I get to participate in this forum for the first time.

Again, thank you and I look forward to the rest of the meeting.

I will now invite each one of our Federal observers to make their opening comments. First we will hear from Ms. Lauren K. Brand, Associate Administrator for Intermodal Systems Development in the Maritime Administration within the U.S. Department of Transportation. Ms. Brand.

MS. LAUREN K. BRAND: Thank you very much Mr. Smith. It is always a pleasure to attend these meetings of the Inland Waterways Users Board. First off I would to let everyone know that we are changing the name “Intermodal Systems Development”, which a lot of people in the public do not understand, to “Ports and Waterways Programs”, because that is what we do at DOT. As part of that I just wanted to mention a couple of the things.

The TIGER [Transportation Investment Generating Economic Recovery] Grants have closed. We received 31 port applications out of 500. We will be reviewing those and seeing how they compete with the modal applications. INFRA [Infrastructure for Rebuilding America] grants closed yesterday, so we don't have a count yet on the applications; we expect less than we received for TIGER, but expect about 250 INFRA grant applications. It's always good to be working with those on ports and waterways.

The National Waterways Foundation, if any of you haven't seen it yet, about two days ago issued a report titled “The Impacts of Unscheduled Lock Outages” [available at the following web address: [http://www.nationalwaterwaysfoundation.org/documents/low%20res%20Lock%20Outage%20NWF\\_FINAL\\_REPORT%202017.pdf](http://www.nationalwaterwaysfoundation.org/documents/low%20res%20Lock%20Outage%20NWF_FINAL_REPORT%202017.pdf)]. MARAD co-sponsored this report through a cooperative agreement to help pay for it. The research was conducted by the Center for Transportation Research at the University of Tennessee and the Vanderbilt Engineering Center for Transportation and Operational Resiliency at Vanderbilt University.

The study looked at four geographically different locks on the inland waterways system [Markland Locks and Dam on the Ohio River, Lock and Dam 25 on the Mississippi River, LaGrange Lock and Dam on the Illinois Waterway, and Calcasieu Lock on the Gulf Intracoastal Waterway] and attempted to answer the question, “If there were an unscheduled outage that occurred for a period of one year or more, what would the impact be to the transportation system?”

We consulted with the Army Corps of Engineers and gave them a chance to look at the draft report as well as some other federal partners before the draft was issued. The analysis concluded -- they did a really good analysis of the four locks that were studied and the analysis concluded that some of the locks do not have parallel rail service that could pick up the slack. The report concluded in all cases that there aren't enough railroad employees to pick up the slack. The report stated that there are six times the amount of traffic moving on the waterway as there are on any of the rail systems that parallel these markets. The report talked about agricultural exports. The report talked about the coal business. The report talked about the fact that there are not enough truck drivers or trucks to handle the freight that would have it move.

I am hoping the Corps uses this report as something that would support their position, because it comes from a separate, independent federal agency. Although, we are partners, we are independent. I am hoping you view this report in a positive light. If you have any comments, positive or negative, please let me know. If you have not seen the report, you can google "National Waterways Foundation, Impacts of Unscheduled Lock Outages" and the study link will come up or just give me your card and I will send you the link this afternoon. Thank you.

MR. SMITH: Thank you, Ms. Brand. I will now ask Mr. Nick Marathon from the U.S. Department of Agriculture, Agricultural Marketing Service, to offer his opening remarks.

MR. NICHOLAS MARATHON: Mr. Smith, Chairman Hettel, Board members, fellow federal observers and guests. Thank you for the opportunity to be here today and attend today's meeting of the Inland Waterways Users Board. My name is Nick Marathon and I represent the Transportation and Marketing Program of the Agricultural Marketing Service.

It has been a remarkable year for U.S. agriculture. The latest estimates show that we will have a record soybean crop and a near record corn crop. Forecasts also indicate that soybean exports could be at record levels. This could lead to increased barge traffic on the inland waterways system, as the inland waterways system transports about half of the soybeans delivered to coastal areas for eventual export to foreign countries.

We are starting Fiscal Year 2018 with some projects that will show the importance of the barge transportation and the inland waterways system to the U.S. agricultural industry.

We are working with the Texas Transportation Institute and the University of Tennessee on a number of projects. I would like to talk about one project in particular today, that is a project with the University of Tennessee that will look at the benefits of the Tennessee River on the northern Alabama poultry market. This is important to the agricultural industry as Alabama is the third largest poultry producing state in the nation, only behind Georgia and North Carolina, and lower feed costs are important to the industry. This project will look at increasing barge traffic for domestic uses of grain. This project could provide insights into expanding barge transportation opportunities to servicing domestic markets as most studies of waterways transportation look at grain barge transportation as supporting export bound shipments of grain to serve export markets.

We look forward to working on these projects and these projects should be finished by the end of next calendar year, 2018.

Mr. Smith that concludes my remarks and thank you again for the opportunity to participate in today's meeting and yesterday's tour of the Engineer Research and Development Center facilities. Thank you.

MR. SMITH: Thank you, Mr. Marathon. We do not have a representative from the National Oceanic and Atmospheric Administration in attendance at today's meeting so I will now turn to the representative from the Office of the Assistant Secretary of the Army for Civil Works [ASA(CW)], Mr. David J. Leach, Deputy Assistant Secretary of the Army (Project Planning and Review), for his opening remarks. Mr. Leach, when you are ready sir.

MR. DAVID J. LEACH: Good morning. My name is David Leach. I met several of you last night. It is certainly a pleasure to be here this morning to attend today's meeting of the Inland Waterways Users Board. I just assumed the new role of the Deputy Assistant Secretary of the Army for Project Planning and Review. That would be Doug Lamont's old position, so I will be taking on his prior responsibilities and I have some big shoes to fill, as you know. Mr. Lamont is still with us.

A brief update from the Office of the Assistant Secretary of the Army. The President has nominated Mr. R. D. James to be the next Assistant Secretary of the Army, Civil Works. Mr. James is going through the Senate confirmation process as we speak. That may take a month. It may take three months. It is unknown at this point, it depends how quickly the Senate moves on Mr. James' nomination. In the interim, Mr. Lamont continues to serve as the Senior Official Performing the Duties of the Assistant Secretary of the Army for Civil Works in the ASA's Office and will continue in that position that until such time as changes are made. Having said that, it is a pleasure to be in attendance at today's meeting of the Users Board and look forward to the meeting and discussions. Thank you.

MR. SMITH: Thank you, Mr. Leach. I will now turn to Mr. Martin T. Hettel, Chairman of the Inland Waterways Users Board, for his opening remarks. Mr. Hettel.

CHAIRMAN MARTIN T. HETTEL: Thank you, Tom. Good morning everyone here at our Inland Waterways Users Board Meeting No. 85, held today in Vicksburg, Mississippi.

The Users Board would like to thank the Vicksburg District for the accommodations for today's meeting and for the logistical planning and support for our visit yesterday to the Engineer Research and Development Center.

As Major General Kaiser stated a few minutes ago, we have some serious problems at Lock and Dam 52 [located at Ohio River mile 938.9 below the point in Pittsburgh, Pennsylvania and 42.1 miles above the junction of the Ohio River and the Mississippi River at Cairo, Illinois].

Everything the Louisville District and the Great Lakes and Ohio River Division has been experiencing with the failure at Lock 52 just shows the need to upgrade our inland waterways system and bring it into the 21st century.

I would like to provide some statistics here for the benefit of the members of the Board and the other people in attendance at today's meeting. Since we first experienced the failure of the dam at Lock 52 on September 6th, we had an eight day total river closure. Then after Lock 53 was put into operation, we experienced two 24-hour closures at Lock 53. This was followed up yet again by another four day closure at Lock and Dam 52. In total, we experienced 14 days of a total river closure in the highest traffic area of the inland waterways system.

From September 6th through October 31st, there have been 1,117 tows moving 11,574 barges that have been delayed by an average 58.83 hours. This amounts to 2,738 lost boat days and 28,372 lost barge days. These lost barge days equate to taking approximately 2.4 million tons of capacity out of the system.

While these delays are a cost to shippers and carriers, what we don't track is how many tons of materials have been transported by either rail or truck to facilities that could not wait for their products while they sat in the Locks 52 and 53 area. Worst yet are the production facilities that had to shut down due to the fact they could not get their needed products by any other means of transportation and sent workers home with no pay. Needless to say, we need the Olmsted Locks and Dam project to become operational as soon as possible.

We heard the President standing on the banks of the Ohio River last June and state how our country could not afford to see a five day total closure at the New Cumberland Lock last year. Well, here is another example of the need to upgrade our inland waterways infrastructure as we have just seen 14 days of a total river closure.

So which facility is going to fail next?

Is it going to be the 109 year old lock at Elizabeth, Pennsylvania [Monongahela River Lock and Dam 3 located at Monongahela River mile point 23.8 from the point in Pittsburgh, Pennsylvania]?

Is it going to be the LaGrange Lock [located at Illinois Waterway mile point 80.2 from the junction with the Mississippi River] that is falling apart before our very eyes, or is it going to be Chickamauga Lock and Dam [located at Tennessee River mile point 471.0 from the junction with the Ohio River] with problems of concrete growth?

I personally believe, and I believe the Board members feel the same way, we cannot afford to see any of these facilities fail and must find a way to build these projects sooner, with reduced expenditures to prevent failures in the future like we have experienced at the dam at Lock and Dam 52.

Enough of my revelations on the conditions at Lock and Dam 52. The Users Board's 2017 Annual Report on recommendations to Congress and the Assistant Secretary of the Army

for Civil Works on priority projects will be the next task for the Board. Information from this meeting will support our recommendations in our Annual Report.

While reading through the presentations for today's meeting, there was one important report that has not been included and that is the report on efficient funding numbers for our priority projects. However, Mr. Jeff McKee and I had a conversation last week in Washington, D.C. and Mr. McKee agreed to provide these funding numbers to us in order to include them in our Annual Report.

Lastly, while the dates have not been set for our meetings in 2018, in order to bring the new Board members up to speed on our priority projects, we will schedule a meeting in Paducah that will cover site visits to Kentucky Lock and Dam [located at Tennessee River mile point 22.4 from the junction with the Ohio River] and Olmsted. We will schedule a meeting in Pittsburgh that would cover the Lower Monongahela project; probably schedule a meeting in Chattanooga that will get us out to Chickamauga Lock and Dam; and a meeting in either St. Louis or Peoria to cover our number one major rehabilitation project, that being LaGrange Lock.

That will conclude my brief remarks. I would certainly like to open the floor up to other Board members for any comments they may have. Hearing none, that concludes my opening remarks. Thank you.

MR. LICHTMAN: Thank you, Chairman Hettel.

Next on the program is the approval of the minutes of the Board's last meeting, Meeting No. 84, held in Portland, Oregon, on July 19th, 2017. The minutes were sent to the Board members before the meeting and are also included in Tab 2 of the read ahead notebooks that were distributed to the members of the Board prior to the meeting. Can I get a motion from the Board to approve the minutes of Board Meeting No. 84?

MR. DANIEL P. MECKLENBORG: I move we approve the minutes.

MR. LICHTMAN: Thank you, Mr. Mecklenborg. Can I have a second?

MR. MICHAEL J. MONAHAN: Mike Monahan. Second.

MR. LICHTMAN: Thank you, Mr. Monahan. Hearing a motion and second to approve the minutes of Inland Waterways Users Board Meeting No. 84, all in favor of approving the minutes of Inland Waterways Users Board Meeting No. 84, please say "aye".

THE BOARD COLLECTIVELY: Aye.

MR. LICHTMAN: Any "nays"? Hearing none. The minutes of Inland Waterways Users Board Meeting No. 84 have been approved unanimously. Thank you.

Next on the agenda, we will have Mr. Michael Cox, Chief of the Operations Division at the Rock Island District, who will give a briefing on the coordination of future closures on the Illinois Waterway system.

MR. MICHAEL D. COX: Thank you. Mr. Smith, Chairman Hettel, Board Members and distinguished representatives and guests, it is a pleasure to be here today to talk with you about the scheduled consolidated closures that we are planning to do on the Illinois Waterway in 2020. I plan to give you a little bit of background, our current status and our way forward including some coordination activities and some challenges ahead.

Next slide. This is just one reminder of the need for continued and accelerated infrastructure maintenance. This is a photo taken at LaGrange Lock. The Users Board toured the LaGrange Lock in the fall of 2015, and as a result of that we started some aggressive planning and coordination activities to anticipate receiving funding for an authorized major rehabilitation and major maintenance project at LaGrange Lock. We also started coordinating with industry about that and the other significant major maintenance activities along the Illinois Waterway. I will get into those activities in a minute.

At the industry's prompting, we started doing some serious coordination to see what we could do to consolidate all of the closures on the Illinois Waterway to minimize the impacts to the navigation industry. We wanted to do this so we could be on the same page, exchange information and ensure we understood each other's perspectives, issues and concerns.

We looked at all of the work coming up in addition to LaGrange, and determined the best year for consolidating all of these closures was 2020. We have already done a lot of rescheduling, including postponing dewatering of Peoria and LaGrange Locks that were originally scheduled for this fiscal year. I will get into a little bit of the coordination for the major rehabilitation planning about LaGrange before I get into the other activities.

In Fiscal Year 2016, we received funding and awarded a contract to construct bulkhead slots to allow the dewatering and major rehabilitation at LaGrange Lock. Those bulkhead slots were constructed in Fiscal Year 2017. We also awarded a miter gate contract for miter gates at Starved Rock and Marseilles in Fiscal Year 2016. We are expecting delivery of those miter gates later this fiscal year.

The Rock Island District and the Mississippi Valley Division have collaborated and agreed to focus and prioritize LaGrange as one of our top priority projects. We have prioritized funding and have already started work on the scope of this work and design for this effort. We are also heavily engaged with the Mississippi Valley Division and the Headquarters to secure funding and authority for this work.

We have also recently submitted a request for continuing contract authority to spread the cost of this major rehabilitation project over multiple years to allow a contract award as soon as possible.

All of this work has enabled us to be in a position to award a contract for major rehabilitation and major maintenance work this fiscal year as long as we get authority and funding.

Next slide. This chart shows a schedule of the maintenance work that is planned for the locks on the Illinois Waterway from Fiscal Year 2017 to Fiscal Year 2023. I do not expect you to be able to read the PowerPoint slide, but you have this chart in your read ahead materials. On the left hand side of the chart is the Fiscal Year 2017 work that has already been completed. The colorful spot right in the middle, where you see the red and yellow areas, those represent the six locks that will be affected by the consolidated closures in 2020, and I will talk about those in a minute.

One other item we are looking at rescheduling is the upper guide wall repair work that we are scheduled to implement at Starved Rock this fiscal year. We are looking at the criticality of that work to see if we can postpone that work and incorporate that into the consolidated closures in 2020. We will know that within a month. If we are able to do that, then we won't have any major restrictions along the Illinois Waterway in 2018, so that would be good news.

The information sheet in your read ahead materials describes the other maintenance work that is needed at the facilities on the Illinois Waterway. This includes installation of bulkhead slots at four of the locks on the upper Illinois Waterway [Brandon Road, Dresden Island, Marseilles and Starved Rock], installing miter gate anchorages and sill construction. The reason for this work is we are installing new miter gates, and where we can, we are looking to convert from horizontally framed miter gates to vertically framed miter gates.

That requires more cost and work upfront, but we are doing this to ensure reliable service and expedited maintenance in the future because this will enable us to do future maintenance primarily in the wet which would result in fewer lock dewaterings.

Our timeline and schedule is led by our program management office in the Rock Island District. This fiscal year, we are also awarding a contract for bulkhead slots at Starved Rock and Marseilles in preparation for construction of those in 2019 as indicated in the chart. In Fiscal Year 2020, we are planning to award a contract for bulkhead slots at Brandon Road and Dresden Island. Those are the other two locks that are affected by the 2020 closure.

All the way on the right, you will see some major maintenance activities, significant closures at two locks in Fiscal Year 2023 [Brandon Road and Dresden Island]. We are going to do similar work with installing new miter gates, miter gate anchorages and sills at those locks. We are postponing that work until 2023 because industry has indicated while any closure will have a significant impact, if we give them up to three years to prepare for it, they will be in much better shape, so that is why that work is postponed until 2023.

I have already talked about some of the on-going coordination with industry. We have done a significant amount of coordination for almost two years now specific to this consolidated closure effort. As I said, our program management office has the lead on

scheduling and logistics to keep all of us on the same page. Our senior leaders across all offices within and outside of Operations are keeping this a very high priority and keeping all of our technicians working on this. We are continuing to coordinate with industry and have been very successful. We have had face-to-face meetings. We have distributed information sheets very similar to what you have in your read ahead materials. We have had conference calls and we have solicited input through e-mail distribution lists. We have been very successful and we are going to continue doing this.

Next slide please. This slide shows some of the information that we have been gathering to help educate ourselves and the industry regarding the best time of year to implement these consolidated closures. This chart shows the number of barges per month that transit Lagrange Lock and Dam, with January on the left and December on the right. This slide shows the recent five year average for the period from 2012 to 2016. It is a very good visual tool showing the times of the month where there is peak traffic. You can see the increasing trend, with more traffic in October, November and December, during harvest season.

We have a lot of additional information too, including the number of empty barges and full barges traveling up-bound and down-bound. This is very good information to help us understand the impacts that industry will experience depending on when our closures will be scheduled.

Next slide, please. We have done a lot of other information gathering and analysis to help us come up with a risk-informed decision. Our risk assessments include a lot of information to better identify the potential impacts and consequences and help us learn ways to mitigate those risks.

For example, we have done hydraulic analysis. We know that the LaGrange lock walls overtop with floodwaters every year. Sometimes many times a year. As you can imagine, the risk is greatest during springtime and during the fall months. Looking at that information, we were able to see that if that was the only information we looked at, the best time for the Corps to close the locks with the least risk of overtopping and impacting the contractor because of floodwaters would be August through November. However, as you saw in the previous chart, if we started getting into November and December, we would impact industry greater. We had to try to find a way to balance the risks across the portfolio.

Therefore, we have decided to schedule our closures in the July through October timeframe.

We are assuming some risk of flooding early on, but if those floods don't come, we will be able to execute the dewatering successfully and open the lock before the peak season in November and December.

We are also looking and coordinating to ensure that we have enough capability, and right now the Corps of Engineers is going to provide all of the heavy-lift crane capability to ensure that we can do the gate work, the miter gate work that is necessary.

The Rock Island District currently has two heavy-lift cranes in our fleet, and in 2020, we will have a third, because one of our cranes is being replaced later this fiscal year and we have done a cost assessment and a risk assessment and we have determined and got approval to postpone disposal of the replaced crane for two years, until after 2020. That will give us the adequate capability that is needed to execute the heavy-lift part of the consolidated closures.

We are also coordinating with the Great Lakes and Ohio River Division and all of the other Mississippi Valley Division District offices to look at their heavy lift capability, their fleet and their resources to ensure that the inland waterways system has adequate backup since all of our resources are going to be tied up on the Illinois Waterway. We want to make sure that we can do other scheduled maintenance throughout the inland waterways system and also respond to emergencies when needed.

We are also identifying other deferred maintenance needs along the Illinois Waterway through our prioritization of maintenance list and through recommendation of periodic assessments and dam safety assessments, and see if any of that work can also be accomplished during the consolidated closures, because that will help us keep a more reliable system and will minimize impacts to the navigation industry.

In closing, I would like to say that I am very pleased with the coordination that has been going on. The input that we have been getting from other Corps offices and from industry has been vital in helping us to determine our way forward. We have some needs that need to be achieved before we can accomplish these consolidated closures.

First, we need a commitment from all of USACE at all levels. We have that now and we are working very hard to sustain that over the next couple of years.

We also need a new start for the LaGrange Lock major rehabilitation project.

We need continuing contract authority, as I have said, to allow us to award a contract as soon as possible and spread the cost over multiple years and we need adequate funding in Fiscal Year 2018 to award the contract.

I want to thank you very much for your attention and your interest in this project. I appreciate the opportunity to be able to give you an update today, and I am very confident that with our continued effort and your help, we are going to be able to achieve what we need to execute these consolidated closures. Subject to your questions that concludes my presentation. Thank you.

CHAIRMAN HETTEL: Mike, Marty Hettel here. Just a couple of points. Would you go back to your slide on the project schedule?

So if I understand what is shown on the slide, activities at Marseilles Lock, Starved Rock Lock and Peoria Lock are all major maintenance activities, is that correct?

MR. COX: Yes sir, that is correct.

CHAIRMAN HETTEL: Okay.

MR. COX: And Peoria.

CHAIRMAN HETTEL: Yes, Peoria. And the activities at LaGrange are both major maintenance and major rehabilitation activities, is that correct?

MR. COX: Yes sir, that is correct.

CHAIRMAN HETTEL: Very good. If you didn't do the major rehabilitation work, how long would you have to close LaGrange to perform the major maintenance work?

MR. COX: It would be less than 120 days, Marty, but we haven't come up with a number yet. I would say it might be in the 60 to 90 day range.

CHAIRMAN HETTEL: Okay. By doing the major rehabilitation work along with the major maintenance work, we may extend the closure by 30 to 45 days?

MR. COX: 30 to 60 days.

CHAIRMAN HETTEL: 30 to 60 days.

My second point, Mike, is in our recommendations on the President's Fiscal Year 2018 Budget request, as you saw, the Board recommended the first tranche funding in 2018 so you can move forward with the major rehabilitation work. I am sure our 2016 Annual Report also recommended funding for major rehabilitation work, and I am pretty confident that our 2017 Annual Report will do the same, so we are with you in trying to get this done at the same time you close down the lock for major maintenance.

MR. COX: Thank you very much, sir.

CHAIRMAN HETTEL: Mike, before you leave, I will probably date myself a little bit here. I met Mr. Cox in the early 2000s when we had the demonstration barrier going in up Romeoville [the Electric Dispersal Barrier located in Romeoville, Illinois designed to deter the passage of Asian carp and other aquatic nuisance species via the Chicago Sanitary and Ship Canal] so Mike has been not only what I consider a good friend, but a very knowledgeable individual at the Rock Island district that knows everything about the Illinois Waterway. If I ever have a question on the Illinois Waterway, the man I call is Mr. Cox.

Well, unfortunately, we are going to lose this knowledge as Mike is going to retire November 30th after 39 years of service with the Corps. I would like to take a moment for everybody to thank Mike for his service with the Corps and the Nation.

MR. MONAHAN: Marty, this is Mike Monahan. I do have one other item, I guess, awareness item for Mr. Cox as we go through the planning process on the major rehabilitation

project at LaGrange Lock. Mr. Cox mentioned the fact that the Rock Island District would potentially coordinate with other Corps Districts and Division offices for backup for the project and in case there is a failure or need, to make sure they get done in a timely fashion.

I would encourage the Corps to develop a plan sooner rather than later, and I would also like to encourage identifying third party contractors that could be used in the process versus just internal Corps resources. We are already constrained in a number of areas and I would like to make sure we have a clearly defined plan on what those backup resources are and if we need third party contractors, that that is done in a timely fashion for backup.

MR. COX: Thank you very much for mentioning that plan for redundancy Mr. Monahan. Having and identifying contractor capability as part of our plan is on our list of things to do. We are already working on that, and I have been using the cliché, “I don't just want backup, I want backup to the backups.” We are aware of that need and consider it an important part of our plan. Thank you very much for mentioning that.

MR. MONAHAN: Thank you.

MR. LICHTMAN: Thank you very much, Mr. Cox for the excellent presentation and informative follow up discussion. And best wishes on your retirement and thank you for your service and contributions to the Corps and the Nation.

Next on the agenda we will have a presentation on the Upper Ohio River Navigation Study by Mr. Steven Fritz from the Pittsburgh District.

MR. STEVEN R. FRITZ: Good morning Mr. Smith, Chairman Hettel, other Board members, Federal observers and distinguished guests. My name is Steve Fritz. I am from the Pittsburgh District. I want to thank you for allowing me the opportunity to present an update on the status of the Upper Ohio Navigation Study this morning.

The first slide is an overview of the scope of the project. As you are all aware, the Upper Ohio Navigation project is a condition-driven project and the plan there is to replace the existing river chambers with a new auxiliary chamber and each one of those will be 110 feet wide and 600 feet long. The existing land chambers will act as the auxiliary chamber in that particular instance after those locks are constructed.

Next slide, please. The Upper Ohio Navigation project was not included in the Fiscal Year 2017 or Fiscal Year 2018 President's Budget for PED [Pre-construction Engineering and Design] funding. In FY 2017, however, the project received about \$5.5 million through the work plan which we put towards a Level III Economic Update, geotechnical investigations at Montgomery Locks and the development of the project management plan.

In FY 2018 we are requesting almost \$8.8 million in the work plan and that will continue the Economic Update and we will start additional engineering efforts as shown on the slide here. I will just read those for the record: As-built surveys; Value Engineering studies;

Scope out the physical navigation model; Begin physical and numerical models; Geotechnical investigations for Dashields Locks; and preliminary design efforts.

While the Economic Update is ongoing, none of this other work will cease. We will continue to work this concurrently so that we are able to hit the ground running when the economics is done.

Point number two on the slide concerns the activities associated with the Level III Economic Update. We expect the economic update to take about two and a half years. It is currently scheduled to be completed in May of 2020. We are looking at ways to shorten this timeframe, but at this time, I don't have any information on how that will happen. The specific items of work that will be accomplished to complete the Economic Update are listed there on the slide. They include a reliability analysis; demand forecasts and equilibrium traffic level determination; calculation of transportation rate savings; and then load all of that information into an economic model, calibrate and validate the economic model, then run the model and generate the results of the model and then review and vet the model results, and then that information will be presented and hopefully approved when the economics is done.

Subject to your questions, that concludes my presentation on the Upper Ohio Navigation project. Thank you for your attention and interest in the project and will now try to answer any of your questions. Thank you.

MR. MECKLENBORG: This is Dan Mecklenborg. I was curious, from the Economic Update standpoint, when was the original economic analysis performed.

MR. FRITZ: At the time of the Civil Works Review Board, which was held on October 21, 2014, I believe, and I am pressing my recollection, I think it was about ten years old at that time, so maybe in the 2004, 2005 timeframe. I can get a direct answer for you if you need that, sir.

MR. MECKLENBORG: Okay. Thank you.

MR. CHARLES M. RICKETTS: This is Matt Ricketts. Can you remind us what the purpose of the Level III Economic Update is?

MR. FRITZ: As part of the Civil Works Review Board -- before we got to the Civil Works Review Board, we went through an independent, external peer review process that we were required to do for all studies. We went through that process and the peer review suggested that we look at the economics of the project, because the data was so old, because it was ten years old at that time.

The Civil Works Review Board, chaired by Major General Peabody [Major General (Ret.) John W. Peabody, U.S. Army Corps of Engineers], at the time, suggested that we can't wait to do another economic study. We need to start moving this project forward now. However, Major General Peabody told us during Pre-construction Engineering and Design or

committed to during the Preconstruction Engineering and Design process, that we would do another economic Level III update so that the economics were sound and current.

Did I answer your question, sir?

MR. RICKETTS: I think you did for the most part. Let me ask the question in a different way, because I think what I heard is that we are moving forward the project.

MR. FRITZ: Yes, sir.

MR. RICKETTS: Again, when you get the Level III economic update completed, what are you going to use it for?

MR. FRITZ: The results of the Level III economic update will be used for budgeting purposes to see if -- whether the project meets the standard to be included in the President's Budget, sir.

MR. RICKETTS: Thank you.

MR. MECKLENBORG: This is Dan Mecklenborg. Basically benefit/cost ratio calculations would stem from this economic update; is that correct?

MR. FRITZ: Yes, sir, that is correct.

MR. MECKLENBORG: I am curious, from the standpoint of this very important project and comparing it to NESP [the Navigation and Ecosystem Sustainability Program, also known as the "NESP" project, formerly referred to as the Upper Mississippi and Illinois Waterway Project, authorized by Title VIII of the Water Resources Development Act of 2007, P.L. 110-114, dated November 9, 2007], it is interesting that we are moving forward with PED relative to the Upper Ohio Navigation study and yet we are not doing that on NESP.

I know you are probably not the right person to respond to that, but I just wanted to note that and it is concerning to us, that is for sure.

MR. FRITZ: I am not the correct person to address that.

CHAIRMAN HETTEL: Steve, Marty Hettel here. Just so I understand, the \$5.2 million that you received in the Fiscal Year 2017 work plan and the almost \$8.8 million that you are looking to receive in the Fiscal Year 2018 work plan, those funds are coming out of the General Investigations account, not the Inland Waterways Trust Fund, is that correct?

MR. FRITZ: That is correct sir. The Preconstruction Engineering and Design work is currently being funded through the General Investigations account, but PED, Preconstruction Engineering and Design, dollars, once we enter into construction, they will be cost shared with the Inland Waterways Trust Fund at that point. Those dollars would be brought into -- those would be brought into balance. I believe that is the case.

CHAIRMAN HETTEL: I think you are right. But there will be no draw from the Trust Fund until you actually start construction and then you will recoup your PED funds.

MR. FRITZ: That is my understanding, sir. I believe that is the way it works.

CHAIRMAN HETTEL: Okay. Thank you, sir.

MR ROBERT J. INNIS: This is Rob Innis. I have one quick question. If the benefit to cost ratio is not up to snuff will you then stop construction on this project, once the economic study is done.

MR. FRITZ: I cannot answer that question. The benefit/cost ratio will generate discussions within the Corps and with OMB [the Office of Management and Budget], and then the decision will be made whether or not to fund the project.

MR. INNIS: When you are doing the economic update, are you looking at the costs as if it hadn't started or are you considering some costs in that and only costs going forward for the benefit to cost ratio?

MR. FRITZ: We look at the overall costs. Right now we are not looking to the remaining benefits to the remaining costs ratio of the project. Was that your question sir?

MR. INNIS: Yes sir. My next question then is, your analysis is using what year dollars then, because if you are going to use costs that have been incurred prior to 2020 when you finish, if you are saying everything is at 2020 dollars when stuff has already been spent in prior years, it is going skew the number to be higher, is it not?

MR. FRITZ: Some costs are not inflated. Once some costs are included in the analysis, they are not inflated. We only inflate the remaining dollars to complete the work.

MR. INNIS: Thank you.

MR. FRITZ: You are welcome. Are there any other questions?

MR. MONAHAN: Steve, Mike Monahan. As a point of clarification on the study, when you say the benefit to cost ratio, is that the threshold, the OMB level which is an arbitrary number or the study number that was originally used for the benefit to cost ratio?

MR. FRITZ: The benefit to cost ratio that OMB is currently looking at is 2.5 to 1 at a 7 percent discount rate, so I am not certain, Mike, I can answer the remainder of your question.

MR. MONAHAN: The only point I want to make is that, once again, we are spending money to update a study to meet an arbitrary number that is set by OMB to either be included in the President's Budgets or not and, frankly, I think that is a waste of money in the process, and we have said it multiple times and as new User Board member, frankly, I don't get it why do we

set this arbitrary number that causes all of this consternation, additional studies and that is a significant amount of money from where I come from. Thank you.

MR. FRITZ: You are welcome. I don't know that the number is arbitrary. OMB can defend that themselves, but other construction projects, as we go through the process of making sure that the projects themselves are still viable and still have economic benefit, we do economic updates on these projects, I believe, it is every two or three years regardless of where we are in the queue. Whether a project is in the Pre-construction Engineering and Design phase or the construction phase, we look at those projects to determine whether or not those projects are still viable through those economic analyses. From that standpoint, the Upper Ohio River Navigation project is no different than any other project at this point.

MR. RICKETTS: This is Matt Ricketts. Do you know how many dollars you have spent on this project so far?

MR. FRITZ: In the Pre-construction Engineering and Design phase we haven't spent much. Through the feasibility study, we spent about \$17 million to get the project authorized.

Are there any other questions? Thank you.

MR. LICHTMAN: Thank you, Mr. Fritz. Very good presentation and discussion. Thank you. Next on the program we will turn to Mr. Jeff McKee from USACE Headquarters, Division of Operations and Regulatory, and who serves as the Navigation Business Line Manager, who will give a briefing on the Fiscal Year 2018 Continuing Resolution Act and funding for the Inland Waterways System, followed by an update on the status of the Inland Waterways Trust Fund and construction projects cost shared with the Trust Fund.

Mr. McKee.

MR. JEFFREY A. MCKEE: Good morning. Thank you, Ken. Ladies and gentlemen, Mr. Smith, Mr. Hettel, Inland Waterways Users Board members, federal observers. Good morning. My name is Jeffrey McKee, I am the Chief of the Navigation Branch at Headquarters.

Before I get into my presentation on the Continuing Resolution, concerning the question on the economic updates. It is a requirement for the Corps to update the economics of projects. If you are going into the construction phase, you must have an economic update within three years of going into construction. If you are already in the construction phase, it is required to be updated every five years, so that is an Administration requirement and that is used every year in terms of determining which projects, both for investigations as well as construction, make it into the President's Budget. Just to provide a bit of context and understanding as to when and why we are required to perform an economic update on a project.

Moving on to the current fiscal year's Continuing Resolution Authority. In terms of the Fiscal Year 2018 Continuing Resolution, which was passed in September [Public Law 115-56, signed on September 8, 2017]. That resolution funds the Corps of Engineers as well as the rest of the Federal Government through the 8th of December. That is a 69 day period in terms of

allocations. When we get our allocations from the Office of Management and Budget, we usually get a percentage that directly equates to more or less to the percentage of days in a fiscal year. In this case, 69/365ths of the funding amounts to just under 19 percent. That is the amount of funds that has been given to the Corps of Engineers, roughly, to get us through the 8th of December.

At that point in time, we would need Congress to enact another Continuing Resolution for a short period of time or potentially a year-long Continuing Resolution to get us through the rest of the fiscal year or to enact a year-long appropriations that would fund us through the balance of Fiscal Year 2018.

The general policy in looking at a Continuing Resolution from the Administration's perspective is to finance continuing operations at a level of obligations and expenditures that would not be detrimental to Congressional prerogatives. Basically, we don't want to go out and use more money that will then tie the hands of Congress before they actually get around to making an appropriation that would get us through the rest of the fiscal year. That is what drives our funding and some of our funding constraints during a Continuing Resolution.

One item which we addressed last year about this time was the "Least of Rule." This is an Administration rule that says when we look at funding projects under a Continuing Resolution, we are bound by the least of: 1) the President's Budget; 2) the amount in the House bill; and, 3) the amount in the Senate bill. We take the "least of" amount in each one of those bills and that determines how much funding we can put on a project during the Continuing Resolution.

So in terms of the Inland Waterways Trust Fund projects, Olmsted Locks and Dam is in the President's Budget, the House and the Senate versions of the Energy and Water Development Appropriations bills for \$175 million, so there is no problem funding the Olmsted project. The Olmsted project was funded for about \$28 million under the Continuing Resolution to get us through the 8<sup>th</sup> of December.

However, with respect to the Lower Monongahela River Locks and Dams 2, 3 and 4 project, the Kentucky Lock project and the Chickamauga Lock project, those projects were not included in the President's Budget and because we are operating in a "no earmark" environment, Congress cannot arbitrarily go in and add specifically a line item for the Lower Monongahela River Locks and Dams 2, 3 and 4 project, the Kentucky Lock project or the Chickamauga Lock project. Therefore, those three projects are not in the President's FY 2018 Budget request, the House version or the Senate version of the Energy and Water Development Appropriations bill.

The way the Congress has gotten around the "no earmark" ban is when they typically give us a year-long appropriations bill, they give us what we term "funding pots", which are allocations that are general funding amounts and then they put that responsibility back on the Administration to determine, within guidelines that the Congress provides in those appropriations bills, instructions on how we are to utilize those funds.

But they cannot specifically put in an amount for any one specific line item, whether it is in the General Investigations, the Construction, General account, or the Operation and Maintenance account.

Operating under the “Least Of” rule, at this point in time, we have not given any funds under the Continuing Resolution to the Lower Monongahela River Locks and Dams 2, 3 and 4 project, the Kentucky Lock project and the Chickamauga Lock project.

They are all operating under funds that were provided in the previous fiscal year and they do have sufficient funds to continue their operations for those contracts and options that have already been awarded as well as funds to cover the cost of the Engineering and Design during Construction, Supervision and Administration and project management.

Until we get a year-long appropriation, we will not know whether or not we will be able to award some of those contracts that are scheduled -- or options that are scheduled for award at the end of the fiscal year.

Mr. Getty and Mr. Fritz will be addressing some of those contract activities in their detailed presentations for their specific projects a little later in this meeting [Mr. Fritz is the project manager for the Lower Monongahela River Locks and Dams 2, 3, and 4 project and Mr. Don Getty is the project manager for the Kentucky Lock and Chickamauga Lock projects.]

Other things going on in terms of potential ways -- it doesn't happen in the construction account as much, but if there were a potential need for funds, there would be an ability to reprogram funds from carryover funds on a different project. If, for instance, the Kentucky Lock project required some funds and there were carryover funds from either the Lower Monongahela River project or the Chickamauga Lock project from a previous fiscal year, not Fiscal Year 2018 funds, some of those funds could be reprogrammed within the reprogramming limits. However we cannot give any one of the projects money from Fiscal Year 2018 funds.

As Mr. Smith discussed earlier, with the hurricanes that have come up and done extensive amounts of damage in Texas, the rest of the Gulf Coast, Florida, the Virgin Islands and Puerto Rico, there is a lot of funding that is being put towards those projects at this point in time. A lot of that funding was funding that was budgeted for some of these projects in advance for Fiscal Year 2018, and there is going to be a need to, in essence, replace some of those funds even through a supplemental, which we have not gotten from Congress yet, but, certainly, we have seen indications that Congress is working on a supplemental appropriations to help fund some of those things. The reason that I bring that up is, in the event that there is not a supplemental appropriations bill, some of the Operation and Maintenance funds that have previously been budgeted may be required to be used for some of that disaster response as opposed to some of the routine operation and maintenance on our inland as well as coastal navigation projects. More to follow in terms of the supplemental appropriations as we hear more from the Congress on that subject.

In terms of Operation and Maintenance projects, there is a one percent (1%) holdback on funding, and so there is a one percent (1%) holdback on Continuing Resolution funds, so

some of that one percent can go to funds to help pay for disaster response as well. So it is not all coming out of some of the previously planned work.

With that, I will stop and take any questions on the Continuing Resolution. Chairman Hettel.

CHAIRMAN HETTEL: Thank you, Jeff. Just for clarification, the 69/365ths, or 19 percent, that is 19 percent of Fiscal Year 2017 funding levels?

MR. MCKEE: I would have to double check to make sure but I believe it is at the overall funding levels for Fiscal Year 2017. And that is an overall level. It is not on a project by project level.

CHAIRMAN HETTEL: Thank you. I understand. The Construction account and Inland Waterways Trust Fund supported projects in Fiscal Year 2017 received \$409 million in funding. Nineteen (19) percent of \$409 million is approximately \$77.7 million. Is that what is available for Trust Fund projects?

MR. MCKEE: No sir, not at this point in time, because it is not by projects. It is by the overall account level, for example, the Construction, General account, the General Investigations, and the Operation and Maintenance account. While those Construction funds may be available, they may not necessarily be available specifically for Inland Waterways Trust Fund projects. As I indicated a few minutes ago, at this point in time, under the terms of the Continuing Resolution Authority, no funds would be available for the Lower Monongahela River Locks and Dams 2, 3, and 4 project, the Kentucky Lock project or the Chickamauga Lock project.

CHAIRMAN HETTEL: Yes, I understand that. I am just trying to understand the restriction on the spending of the 19 percent of the Fiscal Year 2017 funding levels if -- and I am sorry to repeat myself. If we funded Inland Waterways Trust Fund supported projects at a level of \$409 million last fiscal year, 19 percent of \$409 million is approximately \$78 million.

A few minutes ago you said only \$28 million was available to be spent on the Olmsted Locks and Dam project. That should leave approximately \$50 million available to be spent on the other Inland Waterways Trust Fund supported projects.

I know they were not included the President's Budget request and I know you are operating under the "Least of" rule, but that would lead me to believe that you have some \$50 million out there somewhere that could be utilized to fund the work on these other projects. I understand the "Least of" rule. I am just trying to figure out if that 19 percent is the same for the Inland Waterways Trust Fund supported projects of Fiscal Year 2017.

MR. MCKEE: Sir, again, the 19 percent is at the overall account level, so that refers to the overall Construction account level. That does not mean that it is done by business line, either Flood Risk Management or Ecosystem Restoration or Navigation or Inland Waterways

Trust Fund support projects or non-Inland Waterways Trust Fund supported projects. It is the total funding at the account level.

CHAIRMAN HETTEL: Which raises the question --

MR. MCKEE: I understand your concern sir.

CHAIRMAN HETTEL: Okay, thank you.

MR. MCKEE: Certainly, as we move through the fiscal year, the amount that was originally allocated to the Olmsted Locks and Dam project was \$28 million, and as we see the need for subsequent short-term Continuing Resolutions or as we get a full year Continuing Resolution or a full year appropriation, depending on what the Congress does. As I indicated at the Portland meeting [Users Board Meeting No. 84 held on July 19, 2017], the Congress did give us a significant increase in the amount of Inland Waterways Trust Fund funding. The House of Representatives added approximately \$78 million to the original President's Budget request and the Senate added approximately \$100 million in additional funds in their version of the Energy and Water Resources appropriations bill for Inland Waterways Trust Fund supported projects, and then the matching share of those funds would come out of the Construction, General account if they pass a year-long appropriations bill, similar to what was in the existing House and Senate bills.

CHAIRMAN HETTEL: Okay. Thanks for that. I have just a couple of comments. I have really got to hand it to you when you say you don't want to handcuff Congress by spending more than the 19 percent when -- and this is Marty Hettel's opinion, not the Board's -- it seems that Congress seems to handcuff the Corps when they come out with a Continuing Resolution; that is just my comment.

Last year, we came to a critical point in time with respect to the awarding of options on particular contracts that were critical to ensuring the continued progress on certain projects, and, again, hats off to you as we stated in the Portland meeting that the Corps was able to execute those contracts in a week or ten days-time. Hopefully, we get a "CRomnibus" [a "CRomnibus" is a spending bill that combines a short-term continuing resolution for some federal programs and a long-term omnibus to cover all remaining federal spending], an "Omnibus" [An "Omnibus" spending act packages many smaller regular appropriations bills into one larger single bill that could be passed with only one vote in each chamber of Congress] appropriations, whatever you want to call it from Congress, that doesn't go into another Continuing Resolution and put us up against a similar deadline like we experienced last May. And, hopefully, the Corps is prepared, as you were last May, that if that comes about, to be able to execute contracts in a timely fashion in order not to increase the cost of these projects.

Thank you.

MR. MCKEE: Thank you, Mr. Chairman. And the hats would go off to the districts that executed those contracts. I have full confidence in those folks that were responsible to be able to do that again this year as soon as we get an appropriation.

Are there any other questions on the current Continuing Resolution?

MR. WOODRUFF: Jeff, this is Matt Woodruff. One comment, and I recognize at the outset that the blame for what I am going to talk about does not lie with anyone in this room. But I feel it is something that as an advisory board to Congress and the Administration probably something that, if not obvious, should nevertheless be stated for the record.

We go through this charade, it seems like, on an annual basis with Continuing Resolutions with “Least of” rules. We have seen the consequences of it and, therefore, I think the people in the Administration and in Congress are smart enough to recognize the consequences of the actions that they take. We have an Administration that perpetually under budgets for projects that they know Congress is going to provide money for.

That creates under another arbitrary rule, the “Least of” rule, and an environment where the Corps cannot efficiently execute its activities. We are wasting the people's money and we know that we are following policies, for reasons that are completely unclear to me, that throw the people's money away, and that cause the people in this room, instead of spending their time building things, trying to re-sort pots of money and figure out how to make due and cover gaps. This is no way to be the fiduciaries of the funds of the public. If people haven't noticed, we are running a deficit. We don't have enough money as a country. We shouldn't be wasting what we have. And I think the people who are doing this know they are doing it and should be ashamed that they are.

MR. MCKEE: Thank you, sir. Understood. That may be something the Board decides they would like to include in their Annual Report. Any other questions on the Continuing Resolution?

If not, I will move on to the update on the Inland Waterways Trust Fund and the status of the Inland Waterways Trust Fund supported projects.

Next slide. The first slide, as you see here, we started Fiscal Year 2017, last year, with a beginning balance of just over \$57 million. Income from the tax revenue itself was almost \$114 million, and interest on that revenue was just under \$675,000. Total revenue was \$114.4 million in Fiscal Year 2017. Taken with the balance at the beginning of year, there was a total amount of revenue of \$171.8 million to work with in Fiscal Year 2017.

What is not shown on here, but what I briefed at the Portland board meeting this past July was we allocated \$117 million to Inland Waterways Trust Fund supported projects in Fiscal Year 2017. That was above and beyond what the Congress had appropriated in terms of pure Inland Waterways Trust Fund dollars, but we took additional dollars out of the Construction, General account to get up to that \$117 million figure.

You will see the number of \$108 million for transfers to the Corps. Less than that -- about eight and a half million less than that \$117 million -- and that is because we carried over funds from Fiscal Year 2017 into Fiscal Year 2018, and we did not get those funds that we did

not need to execute in Fiscal Year 2017 transferred to the Corps. The balance of that roughly \$8.6 million will be transferred to the Corps of Engineers in Fiscal Year 2018. That is a brief explanation on that.

In the right-hand column where you see the \$275,000 figure, that \$275,000 is the Inland Waterways Trust Fund's share of the \$550,000 that was released from the Lockport project last year. The other \$275,000 went to the Fargo-Moorhead project, which is a flood risk management project. I know this Board raised concerns that we were taking Trust Fund dollars and putting them on non-Trust Fund related projects. That was not the case. Only the Construction, General funds were moved to the Fargo-Moorhead project.

This \$275,000 amount came back to the Corps of Engineers to be held at Headquarters until it was needed and that would reduce future withdrawals from the Trust Fund to be used at a future time.

The bottom line, at the end of the year in Fiscal Year 2017, the balance in the Trust Fund was \$63,395,863.

CHAIRMAN HETTEL: Thanks, Jeff. What was the projected Inland Waterways Trust Fund revenues for Fiscal Year 2017; wasn't it \$105 million or so -- what was it?

MR. MCKEE: I believe it was \$107 million, so yes, it was well under the -- well, and it was under the \$114 million that we got.

CHAIRMAN HETTEL: Agreed. I understand that. And, since we have increased our fuel tax by 45 percent, we have always projected \$110 million. Well, we have exceeded that by almost \$4 million in Fiscal Year 2017. And with reference to Vice Chairman Woodruff's comments, I think it is the Board's position that we ought to be -- either the IRS or the OMB, whoever sets that number, ought to be looking at the \$110 million figure on an annual basis, because it just keeps decreasing as years go forward. I believe it goes down all the way to \$104 million in three or four years.

I needed to get that on the record that we exceeded that balance. We think it should be \$110 million a year for planning purposes. In order to save the fiscal responsibility on the general public's tax dollars and our Trust Fund dollars, every bit of funding that we can get to move these projects forward and not delay them reduces the cost.

Thank you.

MR. MCKEE: I understand that, sir. That projection comes from the Department of the Treasury. They have models that they use that look at long-term forecasts for trade and a variety of other things that get factored into that projection. And, yes sir, you are correct that if you look at the ten year trend, it does decrease over time. But, certainly, when the Congress looks at appropriating funds, when we look at what may be available in terms of budgeting, we look at not only what we anticipate from the Treasury numbers, but also what is in there in the balance, so looking at it -- I wouldn't look at \$63 million balance for planning purposes,

because you need to take that \$8.6 million figure off of there. But you would look at the balances that are in the Trust Fund to determine what can be expended in a particular year.

CHAIRMAN HETTEL: Understood. Just for a reference point -- and I will get off this topic after this last comment, in Fiscal Year 2016, we exceeded -- we had \$111 million in Trust Fund revenues. We projected \$110 million. In Fiscal Year 2017, we project \$110 million, the IRS said \$108 million, whatever your number is, and we exceeded that again. Past history tells me we should, at minimum, look at \$110 million annual deposits. Thank you.

MR. MCKEE: Noted, sir. Thank you. Any other questions on the second slide?

Next slide. This slide is an overview by month from Fiscal Year 2012 through Fiscal Year 2017 of revenues that have come into the Inland Waterways Trust Fund. You will see through 2014, those revenues are all based on 20 cents per gallon fuel tax. With passage of the ABLE Act in December of 2014 [Section 205 of Title II of Division B of Public Law 113-295, the "Achieving A Better Life Experience Act of 2014" also referred to as the "ABLE Act of 2014", dated December 19, 2014], the fuel tax was increased to 29 cents per gallon effective 1 April 2015. The mustard yellow colored bar there that you see taking off starting in April of 2015 is based on that 29 cent per gallon.

And then, of course, the much higher red bars and blue bars -- light blue bars that you see are for a 29 cent per gallon fuel tax throughout the entire Fiscal Year 2016. You can see the comparison there, and then, finally, at the far right, you see the \$111 million figure in Fiscal Year 2016 that Mr. Hettel mentioned earlier as well as the \$114 million that was shown on the previous slide.

In terms of trying to clean this slide some, would the Board object to taking off maybe Fiscal Years 2012 and 2013 and make it a little bit clearer, because we will be adding Fiscal Year 2018 to this slide starting with the next Users Board meeting? We don't have any results from the Department of Treasury yet for October, which just closed this past Tuesday. I would recommend we delete 2012 and 2013 and it would still leave you Fiscal Year 2014, which was a full year at the 20 cent per gallon fuel tax and then, of course, Fiscal Year 2015, half a year at 20 cents per gallon and half a year at 29 cents per gallon, and then Fiscal Years 2016, 2017 and 2018.

CHAIRMAN HETTEL: I don't have a problem with that recommendation Jeff. Do any other Board members have a problem with that? None, great. Thank you Jeff.

MR. MCKEE: We will do that to clean things up a little bit.

Next slide. The next slide is just an enlargement of the last three months of the Fiscal Years 2012 to 2017.

Next slide. This slide shows our Fiscal Year 2013 through 2018, the President's Budget and allocations for the various Inland Waterways Trust Fund supported projects. You will see in Fiscal Year 2017, the amount of funds that were initially allocated to the projects, \$250

million for the Olmsted Locks and Dam project; \$82 million for the Lower Monongahela River project; \$1 million for the Emsworth project, to complete that major rehabilitation project; \$39 million for the Kentucky Lock project; \$37 million for the Chickamauga Lock project and the \$550,000 reduction in the Lockport major rehabilitation project.

You will see a little later in my presentation that there was a \$3 million transfer between the Kentucky Lock project and the Chickamauga Lock project.

For Fiscal Year 2018, only the Olmsted Locks and Dam project was included in the President's Budget in the amount of \$175 million and the allocations to date are \$28 million, but we expect those to be running around \$175 million by the end of the fiscal year.

Next slide. Projects that I will discuss for the Mississippi Valley Division are the Lockport Pool Major Rehabilitation project on the Illinois Waterway and the Inner Harbor Navigation Canal Lock on the Gulf Intracoastal Waterway (GIWW) in New Orleans.

Next slide. First, concerning the Lockport Pool Major Rehabilitation project, at the last Board meeting, Mr. Hettel, you requested we include allocations to date on the project slides, so what we have done is we have added a line for allocations through Fiscal Year 2013 that shows cumulative allocations through Fiscal Year 2013, and then individual years following that through Fiscal Year 2018 and then you see a line showing allocations to date.

You can see for Lockport, a total project cost of \$150 million, almost \$76 million of which came from the Construction, General account, \$15 million from Inland Waterways Trust Fund and a little over \$59 million from the ARRA [the American Recovery and Reinvestment Act of 2009, Public Law 111-5, signed into law on February 17, 2009] funding that we received for which there was no matching of funds.

This is a major rehabilitation project, and when this major rehabilitation project started, it was funded out at 100 percent Construction, General and then ultimately the cost sharing kicked in. There was a requirement not to reimburse and get back to a 50/50 cost sharing split, so that is why you see the smaller amount of Trust Fund dollars.

This project should be fiscally closed out by the end of the calendar year, 31 December 2017. That is also shown on the next slide. Are there any questions on the Lockport project? Moving on.

Next slide. Inner Harbor Navigation Canal Lock Replacement, Gulf Intracoastal Waterway. For the Inner Harbor project you will see the same type of information on the slide. A lot of the costs to date were spent on the original work that was done on the lock; things like lands, easements, rights-of-way, relocations, those types of expenses.

A proposed new lock has been discussed. It is 900 feet long, 110 feet wide and will have a sill depth of 22 feet to pass vessel traffic. The District is scheduled to complete the ongoing General Re-evaluation Report by September of 2019, and then we expect to have the reconciliation of funds with the Port of New Orleans, which is one of the project cost sharing

sponsors for some of the initial work done on the original lock, completed by the end of December as well.

CHAIRMAN HETTEL: Jeff. One question. At the Portland meeting, the General Re-evaluation Report was scheduled for completion in June of 2018. Your slide shows now that it is pushed back by some 15 months to September 2019. Can you tell us, what is the reason for the delay from June of 2018 to September of 2019? What is the cause of that delay?

MR. MCKEE: I will have to get back to you with an answer on that, sir, unless someone from Mississippi Valley Division has some better fidelity. I don't know all of the details associated with that.

MR. DENNIS O. NORRIS: What was the question again?

CHAIRMAN HETTEL: Why the General Re-evaluation Report for the Inner Harbor project – the completion date of the General Re-evaluation Report moved from June of 2018 to September of 2019. What is the reason for the delay from our last Users Board meeting?

MR. NORRIS: Dennis Norris, Mississippi Valley Division. I will have to get back with you. I am not sure exactly the specifics on it. I will have to get back with you on that. I don't know the specifics on the delay there on the schedule for the General Re-evaluation Report.

MR. MONAHAN: Mr. Chairman, this is Mike Monahan. I would like to add if that date is correct on not completing the General Re-evaluation Report until 2019, would we not miss the Water Resources Development Act [WRDA] 2018 bill? I think this is an important issue to understand why that completion date has changed.

MR. MCKEE: That is correct, sir. If it is September 2019, as a decision document, which would be used for reauthorization, it would miss a WRDA 2018 bill if one is passed.

MR. NORRIS: We will get that answer to you.

CHAIRMAN HETTEL: Yes please, if you would, Dennis, thank you. For the record, I request you get that to us because this would probably be included in our 2017 Annual Report.

Here is yet another example of delaying a project. Every time we delay a project, the cost goes up.

MR. NORRIS: Roger that. We will get that to you.

CHAIRMAN HETTEL: Thank you.

MR. MCKEE: The next projects to be updated are in the Great Lakes and Ohio River Division and I will go through them quickly since we will be getting detailed briefings from Mr. Mike Braden on the Olmsted project, Mr. Steve Fritz on the Lower Monongahela River project and Mr. Don Getty on the Kentucky Lock and the Chickamauga Lock projects.

Next slide. Olmsted Locks and Dam. We have included lines showing the allocations through Fiscal Year 2013 and the allocations to date. I will note that if you look at the line for the Fiscal Year 2018 budget, the entire President's Budget amount was put in there as opposed to the \$28 million allocation that has been made to date. The current allocation of \$28 million was split with \$23.8 million derived from the Construction, General account and \$4.2 million from the Inland Waterways Trust Fund account.

CHAIRMAN HETTEL: Jeff, first off, I certainly thank you for putting total allocations to date in these reports, this information is very useful. Unfortunately, they generate more questions from me.

The slide shows \$2.74 billion in total allocations on Olmsted, which includes the \$175 million in the President's Budget request for FY 2018. I may be getting ahead of myself, but in Mr. Braden's report, the Corps' estimated Total Estimated Price tag for the Olmsted project is \$2.77 billion. I can pretty much take the \$2.77 billion Total Estimated Price minus the \$2.74 billion in total allocations through the end of Fiscal Year 2018 and say that Fiscal Year 2019 funding should be only \$30 million and then we are done with Olmsted. Is that -- is my math off?

MR. MCKEE: Your math is correct. The assumptions are incorrect. I will let Mr. Braden Mr. Braden address that. Again, on this slide, you will see we are still reflecting a \$3.1 billion total project cost. As you will find out later, there are a number of contingencies in that project cost estimate and we are scheduled to come in well under that \$3.1 billion price tag. I will let Mr. Braden address where we are today with respect to the anticipated total price of the project.

CHAIRMAN HETTEL: I understand. And it goes back to making sure we utilize our Trust Fund dollars and the general Treasury dollars as efficiently as we can. I just hate to see us go out and fund Olmsted for whatever it is in Fiscal Year 2019 and we only need \$30 million going forward. That again is a waste of money going to a project that isn't going to be utilized and could be going to another project. Thank you.

MR. MCKEE: Mr. Hettel, no, we fully understand that, sir, and that is one of things that we are looking at in terms of your request for an efficient funding schedule. What do we need to look at in terms of funding for the Olmsted project, the Lower Monongahela River project, the Chickamauga project, as well as the Kentucky Lock project? We are looking at all four of these projects and the projected needs of each of these projects.

CHAIRMAN HETTEL: Great, Jeff. Thank you.

MR. MCKEE: Are there any other questions on the Olmsted Locks and Dam project? Moving on.

Next slide. Locks and Dams 2, 3 and 4, Monongahela River. Again, you will see the allocations through Fiscal Year 2013 and the allocations to date on the slide. The remaining

balance of \$392 million reflects the current plan to move forward with the \$1.22 billion project. It does not include the relocation of the Port Perry Railroad Bridge or the land chamber costs in that amount.

When I talked about the Continuing Resolution earlier and the need for funds, you will see in the box titled “Next Steps”, the District is preparing the stilling basin contract package for award next September [2018], as well awarding Task Order Number 2 of the Dredging contract next August [2018]. That would be the timeframe, the September and the August timeframe, respectively, for those particular contracts and options that we would require additional funds to make those awards.

I will leave the rest of the discussion on the Lower Monongahela River project to Mr. Fritz to address if there are any specific questions on the project. The one thing I would note is in the box on the left side of the slide titled “Funding Overview”, the cost figures for “Engineering and Design” and “Supervision and Administration”, those are total figures, as is the Fully Funded Cost Estimate for the entire project including the land chamber and the relocation of the Port Perry Railroad Bridge, and those figures are footnoted at the bottom of the slide as to how much it would be for the existing plan of action.

CHAIRMAN HETTEL: Jeff, one last comment on the Lower Monongahela River project. We had a very interesting discussion on your “Engineering and Design during Construction” cost and the “Supervision and Administration” cost at the last Users Board meeting in Portland this past July. Can you tell us, what is your current estimate of the efficient funding for the Lower Monongahela River project for Fiscal Year 2018? I believe it was \$105 million.

MR. MCKEE: \$105 million is what we were using --

CHAIRMAN HETTEL: Correct.

MR. MCKEE: -- for Fiscal Year 2018.

CHAIRMAN HETTEL: Okay. Thank you.

MR. MONAHAN: Jeff, this is Mike Monahan. As a point of clarification or to help me better understand your slide. In the box titled “Current Status of the Project” in the lower right hand side of your slide, the last bullet point says “Savings from Dredging Award keep FY 18 capability at \$105 million to fund out year EDC/SA and Contingency on Active Contracts.”

If we have savings, I would like to understand, what is the amount of the savings and then, if you know, why wasn't that reducing the \$105 million? Where did the savings, the money get reallocated to?

MR. MCKEE: I think the intent is we would use that \$105 million and not require something greater had we not had savings on that award. It may not be worded as cleanly as it should have been. We can clean that up for the next go around.

MR. MONAHAN: Thank you.

MR. MCKEE: You are welcome, sir. Next slide please.

This schedule shows the schedule of the remaining work on the Lower Monongahela River project. A couple of things to point out. The award of the dredging contract took place at the end of September and Options 1 and 2 of the River Chamber Completion Contract took place in August.

CHAIRMAN HETTEL: Jeff, one last question on the Lower Monongahela River project. The \$105 million figure – at the last Board meeting in Portland in July you talked about a figure of \$135 million, with \$30 million needed up front for EDC [Engineering and Design during Construction] and S&A [Supervision and Administration]. Are you going back to the original figures for EDC and S&A or what is going to be in the Fiscal Year 2018 number?

MR. MCKEE: The Fiscal Year 2018 number, as I understand it, is to get us through Fiscal Year 2018 in terms of Engineering and Design, Supervision and Administration and Project Management costs.

CHAIRMAN HETTEL: So that is back to the same way you handled it in Fiscal Year 2017? Is that how we should consider that?

MR. MCKEE: Mr. Fritz, do you want to clarify that.

CHAIRMAN HETTEL: I don't want to get into his presentation now. Maybe we can answer that later.

MR. MCKEE: Okay. We will address it when Mr. Fritz gives his presentation on the Lower Monongahela River project later.

CHAIRMAN HETTEL: Okay. Thank you.

MR. MCKEE: Next slide. Emsworth Lock and Dam. Again, this is another major rehabilitation project and you will see that the funds through Fiscal Year 2013 as well as the total allocations to date show a lot more in the Construction, General account than in the Inland Waterways Trust Fund account and that was because we started funding the project as 100 percent Construction, General funding and not Inland Waterways Trust Fund shared in that project initially.

And the ARRA funds were not cost shared with the Inland Waterways Trust Fund.

You can see \$1 million were put towards the project in Fiscal Year 2017. In the box in the lower right hand side of the slide titled “Current Status of the Project” the Post Implementation Evaluation was completed and the report will be included in a Periodic

Assessment of the entire dam. Also, a contract to clean and paint two sets of Emergency Bulkheads was awarded at the end of September.

CHAIRMAN HETTEL: Jeff, the \$6 million remaining balance of which \$3 million is remaining Trust Fund dollars, is that what was, I want to make sure I understand, not spent on what was allocated, is that correct?

MR. MCKEE: That is the remaining amount to get through and up to the original total project cost of \$160 million. Those are surplus funds. That is a remaining balance to get to -- we should really reflect the change in the total project cost to match the \$153.933 million.

CHAIRMAN HETTEL: Well, Jeff, give credit where credit is due. This was what, a \$160 million project and you come in under \$154 million? So nice job.

I just want to keep tabs of where that extra \$3 million in Inland Waterways Trust Fund revenues are.

MR. MCKEE: That additional money that is shown there will not be needed. It has not been drawn down.

CHAIRMAN HETTEL: That could possibly be reallocated in Fiscal Year 2018 to the Lower Mon project which would reduce the \$105 million figure to \$102 million.

MR. MCKEE: Well, there is nothing to reallocate because we have not drawn any of those funds down. We would not need those funds and so we have not asked for those funds.

CHAIRMAN HETTEL: The \$3 million is not part of the total \$48 million from Trust Fund dollars.

MR. MCKEE: No.

CHAIRMAN HETTEL: Okay. All right.

MR. MCKEE: No.

CHAIRMAN HETTEL: All right. Thank you. The reason why I ask is that the asterisk underneath the table says "Any remaining Inland Waterways Trust Fund dollars will be reallocated and transferred to other Inland Waterways Trust Fund requirements and will result in a reduced draw on the Inland Waterways Trust Fund, which will be reflected as an adjustment in a future apportionment." That is what made me ask that question.

MR. MCKEE: That should not have been worded in that fashion. That is surplus -- that is excess to the project needs and we have not requested those funds, so we do not have those funds to reallocate.

CHAIRMAN HETTEL: I understand. I just wanted to let you know where that question came from.

MR. MCKEE: No, I understand. That will be changed on the next presentation.

Next slide. Kentucky Lock and Dam. Again, similar to the previous slides, you will see the allocations through Fiscal Year 2013 as well as to date. You will see that I mentioned on the fourth slide, I believe it was, earlier in my presentation, where I showed \$39 million had been given to Kentucky Lock through the Fiscal Year 2017 work plan. On this slide you will see the allocation in Fiscal year 2017 was \$36 million. That reflects that \$3 million was reprogrammed from Kentucky Lock to Chickamauga Lock. And you can see the allocations to date. Are there any questions on this particular slide?

You can see the Construction, General funds show the \$4 million in PED funds. As Mr. Fritz correctly indicated earlier, PED funds are ultimately cost shared with the Trust Fund even though they are funded under the General Investigations account up front. You will see those included there.

MR. MECKLENBORG: Jeff, this slide shows a revised, new project cost estimate of \$1.254 billion; is that in affect?

MR. MCKEE: That is correct, sir. That shows the revised cost estimate at the time.

MR. MECKLENBORG: Okay. Thank you.

MR. RICKETTS: Jeff, this is Matt Ricketts. The footnote with respect to the \$1.254 billion, fully funded project cost. I assume that is cost estimate is based on efficient funding. Does that assume efficient funding to get to that number and also does it include inflation?

MR. MCKEE: It does. A fully funded estimate includes inflation through the mid-point of construction. This particular estimate is not for efficient funding. This estimate includes -- when we go through the 80 percent confidence limit cost estimate analysis, in order to get that 80 percent, we look at what a realistic funding schedule would be. This indicates that there may be some delays in getting funding on this particular project, and so that is reflected in that additional costs and escalation amount in that cost figure. And that is how you get to the 80 percent. If you were to assume an efficient funding and you ran into those delays, you would blow that cost estimate.

MR. RICKETTS: Okay.

MR. MCKEE: And your fully funded cost estimate does include inflation. If there is efficient funding on this project, you will -- you should see that. Barring any kind of different site or any changes that would increase the cost, you should see the ultimate cost of that project come down under that amount, and there is an 80 percent confidence level that that would happen.

MR. RICKETTS: Thank you.

MR. MONAHAN: Jeff, for my own edification, this is a new Corps footnote I have not seen in my short time on the Board. Footnote Number 2 says, "Includes \$4 million in General Investigations" funds. Why are GI funds being allocated in this way?

MR. MCKEE: Sir, this goes back to the discussion you had earlier with Mr. Fritz on the Upper Ohio River Navigation study. The PED funds, the Preconstruction Engineering and Design funds, are allocated to the Corps in the General Investigations account. Those funds, however, those funds -- not the feasibility funds which are also allocated the General Investigations account --, but the Preconstruction Engineering and Design funds that are initially allocated in the General Investigations account are part of construction costs. That applies not only to Inland Waterways Trust Fund projects. It applies to any of our construction portfolio. Those costs are included in the total costs when you reflect the cost of construction, which is what we are reflecting here under that allocations through Fiscal Year 2013.

In terms of Inland Waterways Trust Fund, because the PED costs are not cost shared at the time of accomplishment, after we go to construction, assuming we go to construction, it would be at that point in time that the Inland Waterways Trust Fund's share of those PED costs are drawn down. If a project doesn't go to construction, there is no drawdown of the Inland Waterways Trust Fund, but when a project goes to construction, those costs are drawn down as part of the first year's drawdown of construction costs.

MR. MONAHAN: Thank you for the explanation.

CHAIRMAN HETTEL: Jeff, I want to make a comment for the record here.

As we have seen with efficient funding at Olmsted, that project looks to be coming in -- I believe Mr. Braden's report says about \$329 million under the Post Authorization Change Report cost figure. Unfortunately, those savings are going to roll over to Kentucky in expenditures because it was not efficiently funded.

This is a prime example on how -- and this message is to Congress -- on how we can efficiently fund a project and save general taxpayer's dollars and Inland Waterways Trust Fund dollars. We have got to find a way to efficiently fund these projects to avoid cost increases.

Thank you.

MR. MCKEE: Sure. Thank you, Mr. Hettel. So noted.

The other thing is one of the reasons some of these projects were inefficiently funded is we just didn't have the Inland Waterways Trust Fund match to fund those as well, so that slowed construction particularly on the Chickamauga Lock project and the Kentucky Lock project.

CHAIRMAN HETTEL: Which hopefully we rectified by increasing our fuel tax by 45 percent. Thank you.

MR. MCKEE: Are there any other questions on the Kentucky Lock project? Moving on. Next slide please.

Chickamauga Lock and Dam, Tennessee River. You will see the same general display of financial information. You can see under the Fiscal Year 2017 allocation, there is a figure of \$40 million instead of the \$37 million that we had given the project in the Fiscal Year 2017 work plan and that, again, is from the reprogramming of funds from the Kentucky Lock project to Chickamauga Lock to allow award of the lock chamber contract which was awarded on the 28th of September 2017 in the amount of \$240 million. Are there any question on Chick Lock?

CHAIRMAN HETTEL: Jeff, just one comment. I appreciate your indulgence in all of my questioning. As you well know and you heard Major General Kaiser state in his opening comments, we should be challenging each other with difficult questions, so I appreciate you listening to all of our questions. Thank you.

MR. MCKEE: Absolutely Mr. Hettel. I enjoy the dialogue and appreciate the comments. A lot of them are very insightful, things we need to look at and bring out things that are on the sheets that aren't as clear as they should be. Sometimes when you are so close to it and you are doing these things, you know what you want to say, but it doesn't always come out so we do appreciate all of the dialogue, not only from you, sir, but from the rest of the Inland Waterways Users Board.

If there aren't any more questions, that concludes my presentation this morning. Thank you.

MR. LICHTMAN: Thank you, Mr. McKee. I think this will be a good stopping point. We will take a break for 15 minutes. We will reconvene the meeting at 10:05. Thank you.

(Thereupon a brief recess was taken.)

MR. LICHTMAN: I would like to reconvene the meeting. Next on the program will be Mr. Michael Braden, Chief of the Olmsted Division within the Louisville District, who will provide the Board with an update on the status of the Olmsted Locks and Dam project, but before Mr. Braden's presentation I would like to invite up the podium Mr. David Dale, Director of Programs at the Great Lakes and Ohio River Division [LRD] for a few general remarks on the construction activities at the four projects within the Great Lakes and Ohio River Division.

MR. DAVID F. DALE: Thank you, Ken. I appreciate the opportunity to speak for a few minutes for the Board this morning. I want to briefly share, obviously, we are approaching the four mega-projects in LRD a little differently. We are doing that because I am going to be retiring and I wanted to have plenty of time to transition this out over the next two Users Board, so that is going to happen. That is why we have the senior Project Managers and the Division Chiefs and the individual Districts briefing. I will remain the SES [Senior Executive Service

official] responsible for these mega-projects until such time that I retire and we will in fact have another SES step in and take over that role, so we are not losing focus on our projects. These projects are critically important.

I wanted to, with that being said, maybe – Chairman Hettel made some comments early regarding wanting to bring Olmsted operational as soon as possible. And, absolutely, I can tell you, we share that.

Our mission in life is to provide reliable navigation, to do that safely, and to maximize value to the Nation. In order to do that, the sooner we can bring Olmsted online the better. We are going to have a meeting this afternoon to discuss that very issue. We are going to talk about kind of the strategy to bring Olmsted online and lay that all out. We are absolutely motivated to do that. We are also absolutely motivated to ensure that we do that safely and we do that in a way that is in the best interest of the industry and of the Nation. Having said that, in the end, we are not going to rush it and put ourselves in a bad spot or you guys in a bad spot. That is the balance we are striking and our focus at all times is how we optimize value to the Nation and we know in our hearts to do that is we bring Olmsted on as soon as possible in a safe manner.

That is what we are doing and I wanted to share that with you. I think that is really -- and maybe to just close on that comment that Chairman Hettel talked a lot of impact, 2.4 million tons I think was the number, and I think it is important for everybody to realize that is not just a number; that is not just tonnage. That is lost value to the Nation. That is economic competitiveness lost that we are not going to recover. That is why it is important to us to ensure a reliable navigation system as soon as possible.

With that said, that is really all I had. I just wanted to assure the Board that we are not losing focus. I am not backing out of this and forgetting about the projects and I am looking for a good transition as we go forward. Thank you very much.

CHAIRMAN HETTEL: David, we certainly appreciate all you have done in explaining the progress on these projects and how they are moving forward. With respect to what I stated in my opening statement, it is not just the delay costs, it is the reliability of the system that the shippers look at, possibly moving tonnage off the river to a more reliable means of transportation, whether that be rail or truck.

It is the effect on manufacturers that don't get their needed inputs on time and their products on time and they have to send people without a paycheck. All of that is not adding value to the Nation.

When you say you are looking at bringing Olmsted online as soon as possible, can you give the Board an estimate as to when Olmsted could possibly be able to hold pool and not worry about Locks and Dams 52 and 53?

MR. DALE: Well, when could Olmsted potentially hold pool? Right now the earliest we could do that would probably be the end of January. However, that is not without a lot of risk. As we transition over time, because we want to train staff and, you don't -- as Mike

Braden shared with me, you don't go out and fly the new Dreamliner full of passengers. You go out and you do some commissioning, you try it out, you make sure it can work the way it is supposed to and you work out all of the little kinks. We need to do that in an orderly fashion.

Now, if we have a significant closure on the Ohio River, certainly we are going to look at, how do we leverage what we have, which is Olmsted, in place to minimize that impact to the industry. It is really not about impacting industry from my perspective. It is really about value to the Nation. That is what we are trying to drive. They are intertwined because when we impact you guys, all of the impacts you just talked about end up in lost value to the Nation.

Yes, we are looking at, how to do that quickly, but in January is probably the earliest we would be able to, but, if we have a minor one or two day disruption in January, we probably wouldn't because of the time it would take to get Olmsted up and the risks associated with bringing it up for the first time without people that are trained and without going through the commissioning process, if you would.

Closer to the end of June, it is much more likely that we operate Olmsted. It is a sliding scale depending on the risk and circumstances. To answer your question, January would be the earliest, the end of January.

CHAIRMAN HETTEL: Okay. Thanks, David. Well, I would like to make a motion to the Board and with what we have seen since September 6th, at no fault of the Corps, simply at the fault of 1928-era projects being band-aided and band-aided and stapled together in an area that passes anywhere from 70 million to 90 million tons of cargo annually, I would like to bring up a motion to the Board, that while we understand that you don't want to jump into operation of Olmsted at the risk of any problems with Olmsted, we would -- I would ask that you look at how soon we can no longer have to depend on Locks 52 and 53. My motion to the Board is that we support operation of Olmsted to the point where by the end of January, we don't even look at Locks 52 or 53 in operation again. Are there any comments from the Board?

MR. WOODRUFF: This is Matt Woodruff. We need Olmsted in operation as soon as practically possible, whatever that date might be.

MR. MECKLENBORG: This is Dan Mecklenborg. I would agree with Chairman Hettel's sentiments there and certainly know that David [Mr. Dale] and the Corps probably are in line with that. David, is there any issue with the pool level being able to be maintained by Olmsted while Lock 52 and its wickets still remain in place, or are we going to be in good shape as far as the adequate depth of the pool that gets created by Olmsted?

MR. DALE: I believe there is not a problem. Mike [Mr. Michael E. Braden], are there any issues there?

MR. BRADEN: Assuming the wickets at Lock and Dam 52 are laying down there should not be a problem.

MR. DALE: For those in the room who could not hearing Mr. Braden's response, the answer is "no", we should be just fine as long as the wickets at Lock and Dam 52 are laying down. Obviously, if we get stuck in a situation where the wickets are up, that would be problematic, but we do not anticipate that problem.

MR. MECKLENBORG: Thank you much. That is all I had.

MR. SMITH: I just wanted to add a few comments. This is Tom Smith from USACE Headquarters. We have been talking about this at great length at the Headquarters, and I did not want to get in front of both Colonel Gant and David [Dale] here. But as recent as last week, General Jackson, Mr. Dalton [Mr. James C. Dalton, Director of Civil Works, USACE, Headquarters] and I, we worked through all of this to address the very issue that you have been consistently advocating, which is, let's get Olmsted in operation and get past trying to just figure out the newest way to keep Lock and Dam 52 operational, so I would just ask that as the Board considers anything that they want to propose with specific language, that you give us room in there to working with you, which is what the District and Division has been doing, to open at the earliest practical moment that minimizes the risk to the long-term viability of Olmsted, because the worst thing we could have is to -- and I know you are aware of this -- is to open Olmsted and find ourselves in a problem that we could have mitigated by -- with just a few more deliberate steps.

This issue has got the highest attention in the Corps. Spending \$3 billion on a project is not without a lot of oversight including from people like David and Colonel Gant. I am saying that on behalf of General Jackson, because we talked about this quite a bit in the past couple of weeks for part of this discussion.

MR. DALE: Chairman Hettel, David here. I think I would agree we share your urgency. Our one concern is we are not ready to lock in on a specific date. It is going to be a risk-based decision based on the circumstances at the time. Certainly, a key factor is value to the Nation and the impact to the industry is part of our decision making process. Sitting here today, I am not willing to say 29 January, that's when it will happen. It will be a capability we will have to minimize risk as we work our way through the final phase here of operating Lock and Dam 52 as we bring Olmsted online.

CHAIRMAN HETTEL: Thanks, David. Just so everybody understands, every time we drop the wickets at Lock and Dam 52, there is a fear of the wickets not coming back up.

MR. DALE: Understood.

CHAIRMAN HETTEL: We lose wickets, we get damaged wickets. Let's face it, the project is falling apart. Let me rephrase the motion I would bring before the Board is that -- and I am not good at phrasing these motions -- that we bring Olmsted online as safely as practicable as possible so we don't have to worry about the Lock 52 or 53 reliability. Does that make sense? Matt [Mr. Woodruff], you are better at these motions than I am.

MR. WOODRUFF: Well, it does make sense, but it sounds like to me that that is the path that the Corps is on already. I am not sure a motion from the Board is going to get the job done any more quickly. I think we have got a commitment from the Corps to get it done as quickly as it can be done safely and in recognition of the substantial investment we have already made there and that we don't want to mess up and what we have got at Olmsted. While everybody recognizes that the next time that we operate the wickets at one of those other projects could be the last time.

MR. INNIS: I just wanted to make one other comment. Chairman Hettel is talking about the cost to the industry, but just to an individual shipper, the issues that we have had at Locks and Dams 52 and 53 so far this year or just in September and October have cost us individually \$7.9 million, just as one individual shipper with what we have had to do there. Chairman Hettel is talking about the larger cost to the industry, but I am sure there are a number of shippers that have done this and that have much larger costs than ours.

MR. DALE: Yes sir. We are very aware of that. Chairman Hettel does a great job of keeping us plugged in to the impacts to the industry, it is very helpful for us because it is important to understand the impacts of what is happening. As a result of that, literally we have people today, we are spending millions of dollars trying to assure the reliability of Lock and Dam 52 for this last little bit. Mr. Hettel is right on target. It is a system that is compromised. It will likely continue to be compromised and we will likely continue to spend money to try to minimize that impact until we do have it up. That is why we have that sense of urgency that we need to do this as soon as possible, because it is impacting you, it is impacting us.

We are literally putting people at risk out there doing things that we have not done before, in ways we have not done before to try to sustain a system that is compromised. It is compromised because of old age and it has just exceeded its design life.

CHAIRMAN HETTEL: Okay. I will wrap this up. David, is it a fair statement to say, if we have a failure at Lock 52, by the end of January Olmsted could overtake a total river closure?

MR. DALE: Potentially, yes.

CHAIRMAN HETTEL: Okay. Thank you.

MR. DALE: It would be a risk-based decision. All things considered.

MR. MIKE FEWELL: This is Mike Fewell with Dow Chemical. One comment on the Ohio River in general. We have two locations in Kentucky. Neither of them is rail capable, so it is not just that the railroads don't go there. That is not the entire issue. It is whether our load site can load a railcar, it is whether our discharge site can discharge a railcar. The other piece of that is when your consumption rate of feedstock is 1.2 million pounds a day on the low end, you can't sustain that with railcars. Forget about trucks, it is physically impossible. The sooner we get Olmsted online, I think the better for everybody.

MR. DALE: Roger that. Thank you very much.

MR. WOODRUFF: This is Matt Woodruff. I want to make sure that we have this perfectly clear is. Are the Louisville District or the Great Lakes and Ohio River Division lacking for any resources that you need to get that critical path as short as possible?

MR. DALE: No sir. We have all the support in the way of funding and we have all of the resources within the Great Lakes and Ohio River Division, of the fleet and other places, so, no, there is no shortage of resources. It is just a math problem that we have to work our way through. Subject to any other questions, thank you very much.

MR. LICHTMAN: Thank you, Mr. Dale. Now we will turn to Mr. Michael Braden, Chief of the Olmsted Division in the Louisville District who will provide the Board with an update on the Olmsted project.

MR. MICHAEL E. BRADEN: Mr. Smith, Chairman Hettel, Mr. Leach, members of the Board, good morning. My name is Mike Braden. I am the Chief of the Olmsted Division, and I will be presenting today's project brief.

Next slide. "Olmsted – Bottom Line Up Front." Our Bottom Line Up Front slide. We are ahead of schedule. Currently, our operational date is October of 2018; that is four years ahead of our performance metric. Currently, we are under budget. We are a forecasted \$330 million under our budgeted cost of \$3.1 billion. Our Total Project Cost Summary, which includes risk, is currently \$153 million under budget.

The keys to this success are the same two keys we have been briefing about for a while now. We have had efficient funding since our authorization increased in 2013, which has allowed the project delivery team to plan their construction activities to take advantage when river conditions are advantageous to construction.

Next slide. "Olmsted Project Overview –Status." I know it is difficult to read the slide on the screen, but if you can look in your briefing books, I will walk you very quickly through the status update, to give you an update of where we are on the project.

Highlighted in the yellow blocks, starting in the middle of the slide, you will see our "Tainter Gates" section of the project. The current critical path work going on in our Tainter Gates section of the project is the unwatering of Tainter Gate Number 5 Bay, includes unwatered the chamber, and we are doing all of the side seal and sill installation work. We are currently scheduled to complete that work on 22 November of this year.

All four Training Walls, 1A, 1B, 6A and 6B have now been set and they are currently undergoing their tremie concrete placements.

The final two pieces of the Tainter Gates section would be the setting of Service Bridges 5 and 6. Those dates have moved to the left and are currently scheduled to set on 30 November and 4 December respectively. The setting of the Service Bridges are not sensitive to river elevations even though we do plan to get them done in this low water season.

Moving to the top left, the “Navigable Pass” section, you can see that we are positioned to set our stretch goal for this year, which is our final shell on the project, Navigable Pass 12A. The predecessor for that activity is the completion of the Left Boat Abutment, which I will brief next. That shell, Navigable Pass shell 12A, is -- the precast is complete and it is currently being outfitted for transport to the river.

Moving on the left-hand side of the slide, about halfway down the slide, is the Left Boat Abutment. This is the feature of work that was constructed using a thin-wall cofferdam saving us one construction season. Currently, we have completed all of the lifts up through 17. There are two more scheduled lifts that are permanent work, lifts numbers 18 and 19. Those lifts have been consolidated and are scheduled to set next week. We had a slight delay with those lifts, it would have been the top-out lifts, and they required the installation of some stainless steel corner protection, which all had to be surveyed.

In the bottom left of the slide, in the box titled “River Dikes” you will see a couple of support contracts which includes the installation of a series of river dikes. We have a SATOC [Single Award Task Order Contract] contract awarded for that. We will award the next series of river dikes, which are the Kentucky bank downstream, Dikes No. 5 through 7, late first quarter of FY 2018 or early second quarter of FY 2018.

In the bottom center, you'll see the box titled “Wicket Lifter” with information regarding the status of the Wicket Lifter. The Wicket Lifter will arrive on site on 21 December. They require – we have got currently scheduled about three weeks of training and sea trials to marry up our Operations folks with that piece of equipment.

On the right-hand side of the slide, you see the final two facilities to support our Operations personnel; the lockmaster's office and a maintenance building. That contract was awarded in February of 2017. Construction is scheduled to be complete no later than 6 May of 2018.

Next slide. “Olmsted Status Photos.” A few construction status photos. The top photo, No. 1, you will see some miter gate repairs in the river chamber. Part of our commissioning process for the project in preparation for operational status is to make sure both the locks, which were constructed back in the 2000-2005 timeframe, are fully operational so we don't have any unexpected outages. That included the unwatering and some minor repairs to the bottom of the miter gates over the years. It also included flushing all of the culverts.

Photo 2 shows the Lockmaster Building as we erect the metal studs. That building has since been enclosed. We have got the windows and doors going in next and will add the structural steel up on the maintenance building to its right.

Photo 3 in the bottom left-hand corner, shows the setting of one of those Training Walls in a moon pool. Part of our operation for doing that is to establish stable conditions so as to have a complete fleeting area around it and it can set down in a moon pool there. Once again, the purpose of those training walls is to stabilize flow as it come Tainter Gate section.

Picture 4 shows that upper reinforcement for the Left Boat Abutment as we prepare to place those final two lifts on that structure.

And finally Picture 5 shows our Maintenance Box. We have a Maintenance Box that can hold two wicket gates. We did a test fit on our last Navigable Pass shell 12A just to make sure we had no interferences. Our current maintenance plan is we will replace ten percent of our wicket gates every year, so every ten years all wicket gates will be replaced. We have 20 extra wicket gates, by the way, that we outfit and redo during the off season in preparation for those activities.

Next slide. "2017 Plan to Complete." This is our isometric view of the scheduling of the shell settings. This view gives you a little better visualization of how the project is progressing. You see the Tainter Gate section on the left hand side of the slide, then you see the Navigable Pass portion of the dam in the middle of the slide and progresses to the right hand side of the slide. It is translucent, which means that it has been completed. The work is in place and ready to go.

You can see in the light blue all of the elements remaining to be scheduled for this season including the left boat abutment up in the right-hand corner of the slide. The two Service Bridges, numbers 5 and 6 and then Training Walls 6A and 6B. As I briefed previously, Training Walls 6A and 6B have since been placed since this briefing was put together.

The stretch goal for this year is setting Navigable Pass shell 12A which is in the dark blue. Like I said, the outfitting is under way. It will be transported to the river and as long as we have conducive river conditions, we will set that shell by the end of this calendar year.

CHAIRMAN HETTEL: Mike, one question: The end of the calendar year for Navigable Pass shell 12A, any chance that is sooner than that?

MR. BRADEN: Absolutely. Our intent is to have it in the water before Thanksgiving. The key piece for us is when we start removing the Left Boat Abutment cofferdam. There is some work that we have never done before with divers. We have to get some productivity rates on how fast that is going to proceed. If that goes quickly, it could be sooner rather than later.

CHAIRMAN HETTEL: Okay. Thank you. This is just an out-of-the-box question. Your maintenance box for your wickets, any chance that can be utilized at Lock and Dam 52?

MR. BRADEN: There is no chance.

CHAIRMAN HETTEL: I had to ask.

MR. BRADEN: The scale is much different and there is a lot of engineering that goes into that. The box is customized for the Olmsted wickets.

MR. MECKLENBORG: Where is the maintenance box -- where is it located when it is in its proper position?

MR. BRADEN: It sits -- it straddles the wicket gate, so it is --

MR. MECKLENBORG: It is in the river?

MR. BRADEN: Yes, sir. I mean, during our maintenance operation, it will go out there and straddle --

MR. MECKLENBORG: Oh, I see. I see.

MR. BRADEN: -- it rests up against, say, Wickets Nos. 1 and 4 and that allows us to -- close the shutter box and safely go in without any flow and remove Wicket Gates 2 and 3.

MR. MECKLENBORG: Oh, okay. Got it.

MR. BRADEN: You get a stagnant pool. It is like a little mini cofferdam.

MR. MECKLENBORG: Thank you.

MR. WOODRUFF: One other question. On your isometric slide, the dark blue, Navigable Pass 12A, if I understood you correctly, you can't place that last piece until the cofferdam is taken out for the left boat abutment?

MR. BRADEN: Part of the cofferdam. The part of the cofferdam that is on the river side, there is an interface where those shells have to match up exactly, so we have to cut the sheet pile cutoff wall below a certain elevation and then we can set that final piece.

There are actually two wickets gates inside the Left Boat Abutment that marries up that surface. That is the critical path.

Next slide. "Olmsted Project -- Time and Cost Scorecard." This is our time and cost scorecard. There are no real significant changes than what was on the first slide, the Bottom Line Up Front slide. I would like to talk about, a little bit, the budget on the bottom left-hand box of the slide.

You will see in the August timeframe that we had \$25 million cost increase on the project. And then in September, that \$25 million cost increase went away. We will talk about that here. I have got a future slide to discuss that.

In the bottom right-hand corner, you can see the major activity schedule. The critical path is running through the Tainter Gate 5 bay, the Left Boat Abutment and then setting up that stretch goal shell, Navigable Pass Shell Number 12-A.

Next slide. “12 Month and Five Year Cost Trends.” Here is our 12-month and five-year cost trend analysis. The top graph shows our certified project cost estimate pace. Keep in mind, those cost figures include a contingency reserve that comes along with it. They are also the numbers that we program to. The bottom graph, is what we call the “Total Estimated Price.” It is a number that is kept by the project delivery team and updated on a monthly basis. You can see the trend line there that supports our \$2.770 billion current estimate to complete or estimate at completion.

In August of 2017, we were -- we've got to talk -- we'll talk about it shortly, but right now all of -- the Olmsted Dam contract is a cost reimbursement contract. We have a significant equipment inventory. The initial cost of that equipment inventory is approximately \$150 million. We have worked out, with our technical folks that we believe that we could get a return on investment of that equipment of \$25 million, but we have had to work through some regulations to get there. We have not successfully done that yet. We had a credit in our estimate for that equipment of \$25 million. In August we took that credit out and you can see the cost spiked up that \$25 million value.

Concurrent with that, our dam contractor was looking at his Fiscal Year 2018 and Fiscal Year 2019 estimates to complete and placement values and he experienced about a similar \$25 million or \$26 million estimated cost for those activities. At the end of the day, it turned out to be about a neutral effect.

There is still the potential out there as we work through some regulations between GSA [the General Services Administration] and the Corps of Engineers that we can successfully get through that and have a direct sale authority on the project to return some of that value to the project.

Next slide. “Olmsted – Finishing Strong.” A few bullets here as far as finishing strong on the project. Once again, there are some details there about the equipment disposition that we are still working through.

To advance the project, as we looked at the qualitative risk assessment with Lock and Dam 52 from 2012, we are looking at advancing some of the out year marine work packages. We worked through the Justification and Approval [J&A] process to include some of that work with our dam contractor to accelerate it. Both of those J&A's have been approved. Like I said, the repair to the miter gates has been completed on the river chamber and we are currently flushing the culvert valves as part of that schedule.

We have also moved out and will work on the construction of four upstream mooring cells and then partial demolition of Lock and Dam 53.

Then the last bullet, as you discussed prior to this brief, we are war-gaming the contingency course of action in what we will call the expedited contingency course of action to hold pool by the 1<sup>st</sup> of January 2018.

Next slide. Finally, if there are any questions or other items for discussion. Here are two photos. One of the things we did this construction season with our construction contractor is we wanted to make sure we had “in place” wicket testing, so the contractor has been going out there and raising 10 to 12 wickets at a time. This is a diver intensive activity. We have to place divers in the water to -- without the wicket lifter -- to put the rigging on those gates and then we raise them with a conventional crane.

The photo on the left-hand side of the slide is of the wicket lifter. The final outfitting of the vessel is going on right now. And as I briefed earlier, the wicket lifter will be going to be on site by the 21<sup>st</sup> of December of this year.

With that being said, that concludes my brief and I look forward to your questions.

MR. MONAHAN: Mike, excellent briefing. Thank you. I am not sure if you are the author of this or not, but there is an Earned Value Analysis chart that was included in your briefing.

MR. BRADEN: Yes, sir.

MR. MONAHAN: Did you develop that?

MR. BRADEN: It is our Earned Value Analysis, yes, sir. We have been keeping it for five years.

MR. MONAHAN: When I reviewed the chart, I think that is an excellent tool and I would recommend – I would like to see that for the other construction projects, Chickamauga, Kentucky and the Lower Monongahela River projects. It gets to the point -- at the last meeting in Portland, I mentioned that I would like to see standardization of the project presentations and some sort of gap analysis, and I think that chart is getting us close to where we would need to be.

MR. BRADEN: I will let the other project managers speak for their own projects. But for a cost reimbursement contract, that is mandated, required reporting, so we have some history with it. The Division has adopted standards for project reporting and it is maturing right now within the Division. I think you will see more of those presentations from an Earned Value perspective.

MR. MONAHAN: Thanks Mike. One other thing. I am trying to learn the Corps language and the use of acronyms, you could help me with what “PLT”, “SEB”, and “ELT” are acronyms for.

MR. BRADEN: Sure. “PLT” stands for “Project Leadership Team.” “SEB” stands for “Senior Executive Board” and “ELT” stands for “Executive Leadership Team.”

They represent three levels of project management governance, and depending on the cost and schedule impact of a potential change, there is an authority at the District level with

Colonel Gant that she can make that decision. If it rises to another level, then it goes up to Mr. Dale at Division level to make that decision if has cost and schedule impact of a change. Then depending if it is, a critical -- a large scale schedule and impact, it goes up to the Headquarters level to make that approval and change. It is just a way of spreading out that cost and schedule authority across our vertical organization for approving changes.

MR. MONAHAN: Thank you.

MR. RICKETTS: Mike, this is Matt Ricketts. Can you give us at least a prospective date as to when Olmsted becomes operational or you -- it's very simple, but you flip the switch and you turn it on and it's working, when you are bringing on a new dam structure like that, do you anticipate that you are going to have issues that surprise you that could cause meaningful delays, meaning a few weeks, a month, maybe more, and I ask going back to the situation that we are in with Lock and Dam 52 and really having no idea how you view those types of startup things for a project of this size.

MR. BRADEN: What I will say on that topic, of course, is we hope that there aren't any startup issues, but what we build into the schedule is --and I will use the term "sea trials", so when the original operational date for Olmsted was -- with the increased authorization was October of 2022 as an operational date.

Now, we had the qualitative risk assessment from Lock and Dam 52, knowing that it was in bad shape and that was an unacceptable thing. We were going to have a gap in being able to provide commercial navigation on that stretch of the river, so we accelerated the construction schedule. Part of that acceleration included the potential to have all of the damming services in by the end of this year and then a period of sea trials to make sure that it functioned hydraulically the way our models indicated it would. There are all of these anticipated things out there that will happen.

The thing that we want to be careful about is a catastrophic -- we put a lot of time and energy and money into Olmsted. We want to make sure that once we go into operation that subsequent to that date, that we have a worry-free period and that we are not going back and having to do significant things to Olmsted. We think that engineering, planning and construction oversight will pay dividends, but there is still a measure -- a timeframe to be prudent to make sure everything is behaving the way it was modeled. Did that answer your question?

MR. RICKETTS: I think so. If you had 100 percent confidence there would be no issues, when would you turn it on?

MR. BRADEN: I don't -- I can't speculate to that -- an answer to that. I just -- that is an enterprise response.

MR. DALE: 100 percent confidence --

MR. RICKETTS: My question was, if you had -- right now we are seeing operational in the June, October -- or January, June timeframe. I am saying if you -- when the project was capable of being turned on, if you had 100 percent confidence there were going to be no issues, what date would that be?

MR. BRADEN: My only caveat to that is 100 percent. The schedule date that we lined up, that we were trending toward, was 1 October 2018. If there were no issues at Lock and Dam 52, that is the date we would transition Olmsted on, because it gives us a nice low water season before, a nice timeframe of low water season after. That is the date that we would turn the keys. With the condition of Lock and Dam 52, we are obviously trying to get as many critical features in place to avoid -- in case of a catastrophic event at Lock and Dam 52, what we could do.

MR. DALE: To answer your question, if we had 100 percent confidence, it would be the 29th of January is when we think. We don't, so don't leave here thinking we do, we don't. But to answer your question straight up, if we had 100 percent confidence that we didn't need sea trials, everything would work perfectly the first time every time, it would be 29 January. But we are not there.

MR. LICHTMAN: If there are no more questions concerning the Olmsted Locks and Dam project for either Mr. Braden or Mr. Dale, we will move to the next item on the agenda, an update by Mr. Steve Fritz on to the Lower Monongahela River Locks and Dams 2, 3, and 4 project.

MR. FRITZ: Thank you again. There were some questions that came up previously before I get to my first slide the "Bottom Line Up Front" slide that I would like to address.

At the last Users Board meeting this past July in Portland, and I apologize I that could not attend that meeting -- there was some discussion that we had talked about requesting an additional \$30 million on top of the \$105 million for the project. The reason we requested that is because at that time -- when we budgeted for the project, it is a requirement, if you are not in the President's Budget, you need to include enough money that if you award a contract, you can see it through fruition, and that includes potential contingencies, that includes Engineering and Design during Construction and it includes Supervision and Administration of those particular contracts that are already awarded.

We had done an analysis and we determined it looked like we needed about \$30 million, and that was done pretty quickly. Today, I can stand here and say that we don't need any additional money if we get the \$105 million in Fiscal Year 2018. That \$105 million would go towards awarding a new contract for the stilling basin, it would go towards awarding Option No. 3 for the River Chamber Completion contract and it would go towards awarding the next phase of the dredging. With that \$105 million, that would carry us, I believe, through 2021 to satisfy all of those obligations.

It should be noted that assumes a contingency on those contracts. There is always a potential that something happens that we didn't anticipate and we may be shy. But the \$105

million, as I stand here today, we believe that is adequate to get us through all of the work that we plan to award in Fiscal Year 2018 as well as work that has been awarded prior to Fiscal Year 2018. I believe that addresses that issue from the last Board meeting.

MR. MONAHAN: Yes, thanks.

MR. FRITZ: You are welcome. Okay. I will go to my "Bottom Line Up Front" slide. The early project operational date associated with achieving over 90 percent of the project benefits has slipped from November of 2022, as reported at the last Users Board, to January of 2023. The primary reason for this slip is associated with when the work plan funds were received last fiscal year.

We received the work plan funds in June of 2017. We had anticipated prior to that that we would award Options 1 and 2 in May and June 2017, respectively. Receiving the funds in June didn't allow us to award those pieces of the work until August of 2017. The delay in receiving the funds accounts for that slip.

CHAIRMAN HETTEL: Steve, that slip in the timeframe, I understand when you received the work plan funds versus when you originally scheduled when you thought you would award the contract options -- we went through with the Continuing Resolution and when you could award contracts. The delay in awarding the contract options, it didn't result in any increase in costs, did it?

MR. FRITZ: No sir, because those particular options were already set in stone when we opened up bids in 2015 for those particular options, so there was no additional costs associated with that. You could argue, sir that we have two or three more months -- well, there are lost benefits from that. You could argue that there are three more months that we have to stay out there and do Engineering and Design during Construction and Supervision and Administration costs, but we do have contingency in that \$1.2 billion total project cost estimate to account for those things. We are not anticipating at all that we are going to be above the total project estimated cost of \$1.2 billion.

Does that answer your question, sir?

CHAIRMAN HETTEL: Yes Steve, thanks. As you stated, the only downfall is the lost benefits, we don't achieve the benefits of this project finishing sooner, and that is certainly a cost to be recognized. Thank you.

MR. FRITZ: You are welcome, sir. The Total Estimated Cost for the project currently is \$1.1 billion. As I said previously, we are at \$1.2 billion for total project cost, which includes contingencies. That means that right now, if we are anticipating things, we will come in about \$110 million lower than the \$1.2 billion total project cost. We have other contracts to award still and we just awarded a dredging contract at the end of last fiscal year and those numbers haven't been cranked into any of this yet. There is the potential that that \$110 million is a reality, but we need to crunch the numbers on that, so I am not saying we are going to be there yet.

CHAIRMAN HETTEL: Steve, that \$1.1 billion as your Total Estimated Price, does that assume the risks associated with inefficient funding?

MR. FRITZ: The \$1.2 billion total estimated project cost includes the risk of inefficient funding. The \$1.1 billion total estimated project cost assumes efficient funding, or said another way, it does not assume inefficient funding.

CHAIRMAN HETTEL: How much of a savings in total project costs is it for having efficient funding versus not having efficient funding?

MR. FRITZ: \$110 million.

CHAIRMAN HETTEL: \$110 million savings associated with efficient funding.

MR. FRITZ: Yes, sir.

CHAIRMAN HETTEL: Thank you.

MR. MONAHAN: Mr. Chairman, to that point, I think when we get into the Chickamauga Lock and Kentucky Lock project reviews, there are also contingencies built into those particular projects.

It may be helpful for the Board to clearly see, for all of the projects, the total dollars that we are talking about because of the legislative delay processes that we incurred from the President's Budget to the House to the Senate. If we could total those for the four projects, my sense is that would be a fairly significant number, and then if there is a way to peg when we talk about the foregone project costs on -- what it is really costing the Nation for not getting these projects completed on time for each of the three projects other than Olmsted.

And then the inefficient funding process obviously has an impact on the BCR [benefit to cost ratio] and our whole issue with the remaining benefits to remaining costs.

I am not looking for an answer today, but it may be beneficial for us to try to peg a number for the three remaining projects that could help highlight some of the frustration that we have with not getting proper funding on the front end. Thank you.

MR. FRITZ: Thanks Mr. Monahan. I would like to point out a couple of key things on this slide from our accomplishments from Fiscal Year 2017. We were able to award Option 1 and Option 2 of the River Chamber Completion contract and that puts us in good position to continue work on the project and reduce that risk as much as possible. We also awarded the Pool 3 dredging contract, and right now that is a three year contract and we did issue the first task order against that at the end of Fiscal Year 2017 as well.

If there are no questions, we can move on to the next slide.

MR. WOODRUFF: I just wanted to point out that bullet point No. 4 on that slide is exactly what I was talking about earlier. The decision to put zero in the President's Budget even though the drafters of that budget know full well that Congress is going to appropriate money and that that creates using their "Least of" rule, the inability to the Corps to use the money that we all know is coming in a timely manner costs the Nation money. It slows these projects down and deprives the Nation of benefits from those projects.

MR. FRITZ: Noted, sir. Thank you.

Next slide please. "Lower Mon – Project Overview." This slide shows the overall scope of the project. We have shown this slide before. It shows what we are doing at each one of the particular facilities. I don't know if there is any reason to dwell on this slide. We can move on to the next slide if you would like.

Next slide please. "Lower Mon – Project Schedule." There have been no changes to the project schedule since the last Users Board meeting in July. If there are no questions, we can move on.

Next slide please. "Lower Mon – Charleroi Ongoing/Pending Construction Plan." I would like to point out some of the key items on this slide. In the table, changes from the last Users Board meeting are highlighted with a white box and red text. There are five of those items on the slide.

As you can see we awarded the River Chamber Completion contract options 1 and 2, and I have talked about that before, so those are shown as actionable items in the column to the left, in August of 2017.

The percent complete for the ongoing work on the monoliths M-22 to M-27 contract is now 58 percent complete and that was shown as 54 percent at the last Users Board meeting. The River Chamber Completion contract now stands at 78 percent complete, and that was for the base portion of that contract. What I would like to note is that at the next Users Board meeting, you will see a decrease in that 78 percent completion figure because we have awarded Option 1 and Option 2, and what that does is that combines all of that funding into one River Chamber Completion contract that includes the base contract, Option 1 and Option 2, so we won't be tracking it anymore as just the River Chamber Completion base contract. We are basing it on how much money they have earned for all three of those pieces of work; the base contract plus Option 1 and Option 2. You will see a decrease in the percentage of the contract completed but that does not mean we are behind schedule.

Also you can see in this table under the column titled "Previously Planned Award", the River Chamber Completion contract Option 3 was scheduled to be awarded in November of this year, this month. However, that date was established before the project was not included in the President's Budget.

If funded in the Fiscal Year 2018 work plan, I would expect that the River Chamber Completion contract Option 3 would be awarded in late Fiscal Year 2018. This option expires at the end of Fiscal Year 2018, 30 September 2018.

I believe you are all aware of the consequences of not awarding that contract option, but to reiterate the impacts of not awarding the contract option that would require us to reissue the work. If we cannot negotiate an extension from the contractor to keep the cost and extend that date for us, that will cost additional money and it will take additional time.

Previous estimates -- and I haven't re-estimated this, but previous estimates were that it could cost over \$100 million and add another four years to the project completion date. Mr. Woodruff, your comments are very well known by the Corps and we do what we can to mitigate those impacts to the project, sir.

CHAIRMAN HETTEL: Steve. Could you be so kind as to include and note those cost increases and delay in the project completion in your next presentation at the next Users Board meeting.

MR. FRITZ: Note what, sir?

CHAIRMAN HETTEL: Note that if that if the River Completion Contract Option 3 is not exercised by September 30th and you can't negotiate the cost with the contractor, it could result in an additional \$100 million in costs and a delay of four years in the project completion.

MR. FRITZ: Yes, sir. Will do. I will find those numbers and we will include them in the next presentation for the next Board meeting.

CHAIRMAN HETTEL: Okay. Thank you.

MR. FRITZ: You are welcome, sir. Finally, I want to bring to your attention the dredging contract that we awarded in September 2017. It is shown in the bottom part of the slide, in red text, in the right hand column of the notes. If there are no other questions on this slide, we can move on to the next slide.

Yes, Mr. McKee.

MR. MCKEE: Steve, one question. Since you have all of the options laid out as well as the schedule for planned awarding of those options, why not just track each one of those individual options as a percentage completed in the far right-hand column instead of rolling everything up?

MR. FRITZ: It could probably be done. I would have to look at the way to do that, because in -- with our RMS, Resident Management System, and the way we are tracking those, it may be a little bit more difficult, but I can look into that, sir.

MR. MCKEE: Okay. I understand. Thanks you.

MR. FRITZ: Next slide. “Charleroi Construction Images.” This slide shows some images of the ongoing construction at the project site for both the monolith M-22 to M-27 contract and the River Chamber Completion contract. The work on the M-22 to M-27 contract is shown in Photo 1 to the left side of the photo that is at the downstream end, and the River Chamber Completion base contract, just the base contract work which is significantly underway, 78 percent complete, is shown on the right-hand side of the photo.

Photo 1 really shows you how tight the space is for the contractors to work in, and if we don't get the money to award the contract option in this Fiscal Year -- River Chamber Completion contract Option 3 in Fiscal Year 2018, there is no place to put another construction contractor out there. That work would be between those two work areas. It would be impossible to add another contractor to that.

Photo 2 on the right hand side of the slide shows what we call a Tremie Partition. That is going to go between monoliths M-2 and M-3 and that is a way to separate the concrete when it is placed below the water. The contractor is getting ready to install it in that photo. If there are no questions, we can move on to the next slide.

Next slide please. “Lower Monongahela River Project – Time and Cost Scorecard.” There are some notable changes on this slide in the “Expenditures” quadrant in the upper left corner of the slide. At the past two or three Users Board meetings, the Lower Monongahela River project has been reporting Earned Value metrics without contingency consistent with guidance of upward reporting to our Division office.

After further discussions with Mr. Dale and after reading the minutes from the last Users Board meeting held in Portland this past July, and to be consistent with the way the Olmsted Locks and Dam project is reporting these earned value metrics, the Lower Monongahela River project will now start reporting those metrics with contingency, because that really embraces the total project cost when it includes all of the contingencies.

As a means of transition in reporting between the last Users Board meeting and this Users Board meeting, I am showing two columns on the slide. The left-hand column, starting with the \$713.2 million figure is with no contingencies, and the right-hand column includes contingencies. When you look at the bottom of the two columns there is a “CPI” number. That is a “Cost Performance Index.” You can see, without contingencies, we are showing that we are below one, which means that we would be over budget. But when we plan our project, we put a baseline on our project. We include contingencies in that baseline, so it is appropriate to include them with this reporting. In the right hand column, the column with contingency included, the CPI is greater than one, which means we are under budget. We will continue to show them with the contingency to be consistent with other projects.

In the upper right hand of the slide is the schedule quadrant. Although the project itself is ahead of schedule, I highlighted the yellow traffic light because of the uncertainty of the Fiscal Year 2018 funding. We have moved approximately three months to the right already because of the Fiscal Year 2017 work plan funding receipt, and I have a concern that we may

move a little bit further to the right, depending on when the money comes in or the work plan funding is available for the River Chamber Completion contract Option No. 3.

Finally, on this slide, it was discussed in an earlier slide, we made several awards and those are reflected in the “Major Activities Schedule” shown in the lower right-hand quadrant of the slide.

As you can see, at the bottom of that schedule, the awarding of the River Chamber Completion contract Option 3 was scheduled to take place this month. Now it looks like it we could award that contract option in August if we get work plan funds.

If there are no questions, we can move on to the next slide.

Next slide please. “Discussion.” Subject to your questions, that concludes my presentation on the Lower Monongahela River project.

MR. MONAHAN: Steve, this is Mike Monahan. I just want to thank you for an excellent presentation. Well done and very informative.

MR. FRITZ: Thank you Mr. Monahan.

MR. SMITH: We will be making a change in the meeting agenda to allow for a brief discussion of the Administration’s infrastructure initiative. There has been quite a bit of talk recently about the infrastructure initiative coming out of the Administration and Ms. Robyn Colosimo from the Office of the Assistant Secretary of the Army for Civil Works has been the Corps’ point person leading that effort, and I wanted to give Ms. Colosimo a few minutes during today’s meeting to make a few remarks because I thought it would be worth the Board’s attention and understanding some of the latest dialogue and discussions surrounding this infrastructure initiative. Ms. Colosimo, if you could take a few minutes, to discuss some of the highlights of that effort that would be helpful for the Board members’ understanding.

MR. LICHTMAN: For the record, Ms. Colosimo please introduce yourself.

MS. ROBYN S. COLOSIMO: Robyn Colosimo with the Office of the Assistant Secretary of the Army for Civil Works. As I have mentioned to a few of you, but not all of you, my job in the office is officially, Assistant for Water Resources Policy. My portfolio moves all over the place. But thus far, in this Administration, it is largely focused on all things infrastructure. That is what Doug Lamont would say. What that means is I lead the engagement of our agency with the Corps on the infrastructure initiative as it evolves.

The two things that I want to leave you with today is (1) to challenge you to think about what is before you and not react to what you think might be out there, and (2) that we, the Corps, have been at the table since day one of this initiative. In fact, actually it is the USDA who brought us to the table and I met Lauren [Ms. Lauren K. Brand] through this effort as well.

The infrastructure initiative is continuing to evolve. A couple of messages that I want to convey is that there is no famous “fifty project” plan, there is no “one hundred project” plan that has been approved by the Administration.

What we have really been focusing on in response to the Administration’s requests is initially to remove barriers and obstacles, if you will, to getting infrastructure in the ground. There are three forms of investment in the eyes of the permitting world, (1) private sector investments and (2) state and local government investments, and then (3) our own federal government investments. For us as an agency and the USDA as well, in particular, the Department of the Interior, we are both the developer and regulator, so we benefit the entire conversation.

The truth is that we believe -- the work has migrated to the point that there is a set of legislative principles that will be released sometime before the end of the calendar year that reflect the broader Administration's obstacles they want to remove. It won't remove everything. It will be thoughtful. It won't be legislation.

The rule of thumb has been that once the tax reform clears the House, they will start to clear the way for this. I still think it will be the end of the calendar year. It will generate a lot of conversation for sure. It won't include projects. It will have many things on the list that will be interested in. It will have many things that you are interested in that aren't on the list. I encourage you to put those things on the list.

In terms of the ideas it is really following, if you haven't seen the Fiscal Year 2018 budget fact sheet, I think you will agree with largely what is in there. It is basically four key principles. It starts with the overarching one that says, the current system is not working. I think we have said that a bunch of times at this meeting. It also talks about making targeted federal investments; encouraging self-help; aligning infrastructure investment with entities best suited to provide sustained and efficient investment, and lastly, leveraging the private sector.

A couple of other things from your perspective, it is about a \$1 trillion bill the Administration is talking about. Only \$200 billion would come from the Federal Government and it would be targeted over ten years. \$100 billion would be spent largely around innovation, another \$100 billion around transformative projects. Loosely defined; don't have a lot of criteria there yet.

In terms of navigation, I can't tell you enough about how interested this Administration is in navigation. It is probably a rare political window frankly to strategically move a lot of these issues through. Focus on the things you can do as a Board. The Administration likes boards such as this and the things that you provide them in terms of intelligence, input and thought.

As you see these principles released, know that this is a rare point in time for your industry and for us as an agency supporting that industry and let's look to find ways to help each other get through that political window. I will say, I am not sure we will have another one like this in a while.

The President was purposeful in his speech in Cincinnati to look at navigation barges behind him, he sees the economy, he knows the importance of it, but he also thinks about it differently. He doesn't think about it as a plus up of a budget. Don't think about a plus up of a budget. There will be some of that, but it is much more about how to try and finance the system differently instead of funding it year to year and going through this, what we might get, what we might not get, and all the inefficiencies associated with that.

That is the big picture stuff. I am always happy to tell you things as we are moving along, and I appreciate the opportunity to put that before you.

MS. BRAND: Mr. Chairman, may I add one comment?

CHAIRMAN HETTEL: Yes, go ahead.

MS. BRAND: Thank you. I just wanted to support what Ms. Colosimo said and she is absolutely accurate and spot on in her messages. It is the same thing that we are hearing at the Department of Transportation. I do want to make sure that everyone is aware that the term "infrastructure" can include up to 17 different kinds of infrastructure, so it is not just the navigation infrastructure, it is not just railroads and roads. It also includes the electrical grid and it includes the internet. There are 17 different items will be vying for the same dollars.

MR. MONAHAN: Given the 17 different types of infrastructure categories, where can we go to find out more about those 17 different types of categories for definition purposes?

MS. BRAND: The best source of information I know of concerning the state of the Nation's infrastructure is the American Society of Civil Engineers. They publish a report, annual report card [<https://www.infrastructurereportcard.org/>]. If you Google "ASCE" with the words "annual report card" and "infrastructure" and you will see the 17 different categories of infrastructure listed. But there is no list that has come out of the Administration to date.

MS. COLOSIMO: There is one caveat that I forgot to mention. A couple of people asked me if the Administration was pretty much interested in privatizing everything. There is a lot of concern about that. I have to tell you, I haven't heard it once. In fact, it is the opposite. What the Administration really wants is to do is to focus the Federal responsibilities where they should be and look for innovative relationships in different forms as the interest emerges to meet the infrastructure needs.

They don't have a specific system in mind, "you must do it this way" kind of view. They really have a, "let's try this approach" and focus those Federal responsibilities where they should be. Don't worry about the privatization that you have been hearing a lot about.

MR. MECKLENBORG: This is Dan Mecklenborg. I want to make a few points on the infrastructure initiative; first of all, the fact that the President and the Administration is focused on inland navigation is exciting, it is very much appreciated. We, the inland navigation industry, through our inland waterways fuel tax, have a public/private partnership with the

Federal Government at present that probably puts us in a special position there because we are already putting private money into capital construction in our inland navigation system.

While privatization, I would -- I take your word for it that we are not talking about making locks and dams entirely private. There is, I am sure, an interest on the part of the Administration in private funds going into these types of structures, and our concern there is that we have not been, I think -- made aware of any approach that is viable for our industry beyond a very, very broad-based approach like what we currently have.

To put tolls or lockage fees on parts of the system, which is a way you look at private investment in the roads and the bridges type situation, is a complete non-starter for our industry. We are going to fight that tooth and nail and it is a situation that we hope that the Administration understands where we are with that, because it is just not going to be able to progress along those lines, so I wanted to make that point.

MR. INNIS: You stated that you were looking at funding projects through completion rather than on a year-to-year basis. Can you talk about where that is because that seems to be the real game changer for how this would work and what the projects would look like going forward? Is there any thought on that right now?

MS. COLOSIMO: There has been a lot of thought within our agency and within the Administration. What I will say is I am not sure you will see anything that is really overt about that in this legislative principles document because it is not really a legislative issue. There are some pieces that are legislative, so including the idea that budget scoring potentially will require legislation.

One of our big problems in public private partnership arrangements is CBO [the Congressional Budget Office] scoring can only be -- using that scoring they say you have to have all of your money up front. That causes problems with us being able to finance something and then have efficient funding to get it done in five or six years, whatever the construction schedule is.

The other part of efficient funding are the things we have talked about here and once this set of legislative principles are released, I think they will start to focus more internally. We, as agencies, are starting to lift some of those ideas up and it is certainly a goal of General Jackson's.

MR. SMITH: I would add, Mr. Innis that this idea of funding projects to completion, efficient funding, it is -- it is tough to say what the Number One issue is for our Chief of Engineers. But he is very passionate about not having spent several hundred million dollars on a project and then gapping it for a couple of years to wait for some funding in the future. There are some things going on right now and he is personally putting, to the greatest extent possible, his weight behind this idea to try to address it. It won't affect the Fiscal Year 2018 budget. The Fiscal Year 2018 budget is a little bit behind us. But the Fiscal Year 2019 budget, it is something that he is very, very focused on, and it is not dependent on legislative principles. It is on just some things he is trying to do, so we will see how that all plays out.

MR. LICHTMAN: Thank you very much Ms. Colosimo. Great discussion and we will certainly keep aware of the Administration infrastructure related activities.

We will move on in the program to an update on the Kentucky Lock and Chickamauga Lock projects and those presentations will be given by Mr. Don Getty, Project Manager at Nashville District.

MR. DON B. GETTY: Good morning, Mr. Smith, Chairman Hettel, Inland Waterways Users Board members and federal observers. My name is Don Getty and I work in the Nashville District. I am the Project Manager on the Kentucky Lock project and I will also be briefing the Chickamauga Lock project as well. Starting with the Kentucky Lock project.

Next slide please. "Bottom Line Up Front." We have ongoing construction on the downstream cofferdam. That construction is going well. We are about to execute a Value Engineering change proposal modification that will result in over \$1.5 million in cost savings coming back to the project. That is a good news story. I will explain that more in a minute. The Value Engineering change proposal modification reduces safety and schedule risks and specifically impacts the existing lock. We planned to close the lock for 30 days during the construction. As a result of this Value Engineering change, we expect the length of that lock closure to go down to the ten day range, so that is good news for you there as well.

We also have a Level III Economic Update underway and it is proceeding well. We are in the final throws of it, starting the final economic modelling. That will ultimately determine our new benefit to cost ratios. We ought to have some numbers crunched in the next month.

We plan to award two construction contracts this year; a very small one next month, our Site, Demolition and Utilities contract, and a much larger contract at the end of the fiscal year, our Downstream Lock Excavation contract.

Next slide please. "Kentucky Lock Project Overview." This slide shows the major features of the project. The slide has not changed since the last Users Board meeting in Portland, except I updated our obligations in the lower right hand corner of the slide to show \$499 million in obligations, which puts the project at about 40 percent complete from an obligations standpoint.

Next slide. "Downstream Cofferdam." This slide shows our downstream cofferdam. This is our ongoing construction. You can see the different colors representing different parts of the contract to the right of the slide. It was probably the most complicated contract we have built on this project. There is a lot of risk associated with it, both from a safety perspective and schedule risk. We awarded the contract in September 2016 to Johnson Brothers in the amount of \$67.1 million and we exercised the remaining options in May 2017. It was a tremendous team effort by all involved.

CHAIRMAN HETTEL: Don, I have a question regarding your Downstream Cofferdam contract award with a total price tag of \$67.1 million. The \$36 million you got in Fiscal Year 2017 funding covers the second half of that contract.

MR. GETTY: We exercised \$27 million in contract options and I want to say the rest of that funding was used for Supervision and Administration and Engineering and Design during Construction and for our labor for project management and other contingencies.

CHAIRMAN HETTEL: Can you tell me what the original cost estimate was for the downstream cofferdam portion of the project back in 1995?

MR. GETTY: I can tell you what it was the cost for both the upstream and downstream cofferdams. That is on one of my slides. I can't tell you what is broken out for the downstream cofferdam portion. I am sure it was much less than \$67 million, because the total cost for both of the cofferdams was \$52 million, both upstream cofferdam --

CHAIRMAN HETTEL: Okay. I was trying to compare the almost 100 percent increase in the last cost estimate versus -- if this was \$67 million, then I have to make the assumption that it was originally somewhere around \$32.5 million.

MR. GETTY: I would think it would be in that range, yes, sir.

CHAIRMAN HETTEL: If you can get us that number that would be great.

MR. GETTY: If I can. Our 1995 cost estimate was not broken -- is broken out by quantities which includes both upstream and downstream, so I can at least approximate it.

CHAIRMAN HETTEL: Okay. Thank you.

MR. GETTY: Next slide. This slide shows some photos of the progress at the project. This is work on our downstream cofferdam. This is what we call our drum cutter. It is part of the Value Engineering change modification. This is the device that is actually scarifying the weathered rock off the surface to expose the good competent rock. We have very good hard limestone. When it is there, it is a karstic limestone. Sometimes it is not there. We started this work. The upper two pictures are a trial run in the dry. The real work is under water and that is what you see in the bottom photo. We started on the 4<sup>th</sup> of October. We have already finished the first pass. It looks like that is going to be good enough for 80 to 90 percent of the footprint, so it is going better than expected.

Next slide. A few more photos. The left photo is where we use a diamond wire saw to cut a flat face on our downstream bullnose and the photo on the right shows the start of the sheet pile portion of the cofferdam. There are lot of pieces to this contract and a lot more to come.

Next slide. This is what is coming down the pike starting this winter. This is what I call “Olmsted light.” This is our lift-in approach where we are actually pre-casting shells on a barge and have a gantry barge similar to Olmsted's catamaran barge.

We are lifting up to 1.3 million pounds, and, Mike [Mr. Michael Braden], I believe you lift up to about 9 million pounds to 10 million pounds with your catamaran barge, just to put that in perspective.

It is also a blend of what we did at Chickamauga Lock. We built a cofferdam similar to this. We are blending those technologies. The image on the right-hand side of the slide shows one of these shells, which measure about 45 feet by 55 feet in plan dimensions, as it is being set down. We are setting down on rock, which is different than the Olmsted project. Olmsted is setting down on sand and piles, so it is a different set of challenges.

Next slide. “Kentucky Lock Project Schedule.” This is our schedule to project completion. There haven't been any changes made to the schedule since the last Users Board meeting, except for our downstream cofferdam which did slip one month, and the reason for that schedule slip was due to weather delays. Whenever weather -- Mother Nature is worse than we anticipate, we give the contractor additional days, and that is what happened there.

Next slide. “Kentucky Lock Project – Time and Scorecard.” There haven't been any changes to the time and scorecard since the last Users Board meeting. Still looking very good. I want to point out in the lower right-hand corner of the slide is our activity schedule. I have identified our PACR as one of our upcoming activities. The PACR is our Post-authorization Change Report. That is the only place I have it listed. That is what we have to do when we exceed our 902 limit and we are developing that PACR in concert with our Level III Economic Update. Those ought to be finished at the same time and we are planning to get that to Headquarters in the February 2018 timeframe.

CHAIRMAN HETTEL: Don, on your previous slide, you showed your Total Estimated Price, the TEP, of \$1.066.3 billion. Is that with efficient funding?

MR. GETTY: I don't know the answer to that. Mike [Mr. Michael Braden], do you know how the, the Total Estimated Price, the TEP, is computed?

MR. BRADEN: It depends on if it is the TPCS, which is the total certified cost estimate.

MR. GETTY: Yes.

MR. BRADEN: It depends on the way it was prepared, so --

MR. GETTY: So that did have --

MR. BRADEN: Earlier cost estimates had a risk value for funding and that --

CHAIRMAN HETTEL: Mike, please come up to the microphone.

COURT REPORTER: Thank you.

MR. BRADEN: Mike Braden. Really you have to go with the estimate. Whether it was carried as a risk, I don't know if these major projects had efficient funding as a risk item which significantly drilled the cost on that. Some of the more recent estimates have been done, we have assumed efficient funding in that estimate, so you have to go back to the source estimate on whether that was a risk item or not.

CHAIRMAN HETTEL: Don, again, in our Annual Report, our goal is to show how these projects can be completed sooner at less cost with efficient funding.

MR. GETTY: Right.

CHAIRMAN HETTEL: If you could verify for us that that Total Estimated Price of \$1.066 billion is efficient funding. To answer Board member Mr. Monahan's question on Jeff's [Mr. Jeffrey McKee] report, the total project cost is \$1.254 billion, so if the \$1.066 billion Total Estimated Price is efficient funding, that gives us the amount of savings, dollar savings, if it is efficiently funding.

MR. MONAHAN: Thank you Mr. Chairman. I understand that piece. A clearer definition and understanding of all of the contingencies and the benefit to cost ratio and the foregone benefits would be very helpful. I think we understate those items.

MR. INNIS: Rob Innis. I think this project was set at \$857 million and even with -- and that -- basically inefficient funding the project cost went up to the \$1.2 billion. I am confused at how with efficient funding the total project cost would be at the \$1.1 billion rather than back at \$857 million. That seems like a big gap to me.

MR. GETTY: Yes sir. There are a lot of apples and oranges being thrown around here. I think it is important for us to keep it apples to apples. And it is a very complex subject. I have got a few slides that I think is going to help address that, so if we can hold that off for just a minute hopefully we will cover that.

I will get that answer, Chairman Hettel, on that Total Estimated Price though. The TEP is something we update every month, is it not, Mr. Braden? It is not a static.

MR. BRADEN: The TEP is going to follow the funding stream.

MR. GETTY: Next slide. This is a new slide that was not in the original slide deck. You should have a revised slide deck in front of you. I wanted to talk a little bit about cost estimates, total project costs, and a basic primer on some of the lingo we use in the Corps of Engineers.

We have two basic types of total project costs. First costs are on the left side of the slide and Fully Funded costs are on the right side of the slide. The only difference in those two costs is that Fully Funded costs include inflation. The first cost does not include inflation. We inflate the First cost by using inflation rates set by OMB and a funding stream which is usually has a completion date in it.

There are some common characteristics of both of those costs. Both of them include risk based contingencies, both the first cost and the fully funded cost. They are both reported at a fiscal year price level and I think importantly the first cost -- and this is going to get into what I am going to talk about next -- and the fully funded cost both include a construction duration. For the Kentucky Lock project our first cost assumes a completion date of 2024.

First costs, we don't see very often. We use it in authorization language. Most of the time when we report cost numbers, it is a fully funded number which includes inflation. The first cost is very useful for comparing cost estimates. That is because the first cost stays static until we recertify it. We can develop many different fully funded costs off the same first cost. As our inflation rates change or our funding streams change, our fully funded cost can change. Most of what I am about to demonstrate or talk to you about involves first cost. It does not include inflation, because it is easier to compare that way.

A couple of weeks ago Chairmen Hettel asked my district engineer, Colonel Jones [Lieutenant Colonel Cullen A. Jones, Commander and District Engineer, USACE, Nashville District], to develop some inefficient funding cost impacts to both the Kentucky Lock and the Chickamauga Lock projects by contract, and Chairmen Hettel, this is a culmination of that work. I didn't do it by contract. I don't know how to do that. There is possibly a way. But this is by total for the project and this includes both sub-costs as well as expected future expenditures. I am sure there are a lot of different ways to skin this cat. This is one way to do it. There is a basis for it, and I think it fairly represents the order and magnitude we are talking about as far as cost impacts for inefficient funding.

Kentucky Lock's construction period originally envisioned to be nine years; we are now looking at 29 years. There is a huge cost associated with having a construction contractor on the job for another 20 years, and we will have continuous construction for that 29 years, it looks like. We are showing \$229 million for inefficient funding for Kentucky Lock. That is at a Fiscal Year 2017 price level. That is a first cost, so it is important to qualify those. The bottom line, I think, will cross all cost estimate types and that is 19.4 percent. That is what we are expecting inefficient funding to cost the Kentucky Lock project.

For the Chickamauga Lock project, the number is even higher. The increase in costs due to inefficient funding is 24.2 percent. Those are some huge numbers, I think, fairly eye-opening.

MR. RICKETTS: Don, this is Matt Ricketts. I want to make sure I am understanding this properly. Your total inefficient funding cost impact for Kentucky Lock of \$229.5 million, that number is included in the \$1.181 billion total first cost figure on the slide.

MR. GETTY: Yes sir, it is. The \$1.181 billion figure is the total first cost at the Fiscal Year 2017 price level, and those numbers are included in that.

MR. RICKETTS: When the analysis is done on the benefit-to-cost ratio calculations and remaining benefits-to-remaining cost ratio calculations that drive the go or no-go or continue decision making and ranking and racking and sacking versus other projects, do those costs go into those calculations?

MR. GETTY: Yes sir, the \$229.5 million cost figure for the total inefficient funding cost impact is included in those costs, in the benefit-to-cost ratio computation, and as a result the benefit-to-cost ratios are lower than they would be if they didn't have the increased cost of inefficient funding.

MR. RICKETTS: One follow up question. Is there any chance you could run a scenario for Kentucky Lock and Chickamauga Lock, if it is easy to do, to look at comparing the benefit-to-cost ratios for with and without the increased costs associated with inefficient funding?

MR. GETTY: With and without the increased cost of inefficient funding.

MR. RICKETTS: With and without the increased cost of inefficient funding.

MR. GETTY: Yes.

MR. RICKETTS: Those increased costs.

MR. GETTY: I think it would be very easy to do that for Kentucky Lock. We are in the -- in fact, I was just saying we are entering that model phase now, it is basically a spreadsheet exercise, and we do those types of sensitivity analysis in our economic updates anyway, so we certainly could include that in our economic update, I would think.

MR. RICKETTS: Okay. A second request, for whoever it is appropriate for at the Corps and particularly for the new members of the Board. If it would be possible to send us some abbreviated sort of Board level materials before the next meeting that lay out the various terminologies for cost estimates that the Corps uses and how those are defined.

What I am really focused on are those estimates that are involved in decision-making around benefit-to-cost ratios and the metrics that get looked at to decide what projects go forward, what projects continue, what projects don't in terms of how they rank up against the other projects that are out there. It would be helpful for me as new Board member, because there is a lot of different terminology and they are involved in a lot of different things.

Back to your comment earlier, Mr. McKee, about the economic updates and how they factor into the President's Budget, along the same lines, how any of those cost estimates that go into benefit-to-cost ratio calculations or other metrics that drive what gets put in the President's Budget as well.

If it is possible to put together, again at Board level, kind of a summary explanation for here is what all of this stuff is, it would be helpful to me and maybe to some of the other Board members.

MR. GETTY: I am glad to see Jeff McKee writing heavily over there.

MR. WOODRUFF: I am going back to the project cost estimate, the first cost versus the fully funded cost, and I just want to try, with an example, to make sure I understand what you are saying. If you had two projects, the first cost of which was the same, let's say a billion dollars each, and if you assume with the inflation rate, the funding stream completion date that the cost of those projects is going to increase by 10 percent simple rate per year and you are going to do one project now and you are going to start the other project ten years from now, even though the first cost of the two projects is the same, the fully funded costs of one of those projects would be \$1 billion, the fully funded cost of the other project would be \$2 billion.

MR. GETTY: Yes, sir, that is true, but they may not have the first cost. If they have the exact same construction duration, they would have the first cost, but, yes, they would have.

MR. WOODRUFF: Then if you decided we want to flip those projects and do one first and the other one second, the other project would have a \$1 billion cost instead of a \$2 billion cost, and the cost of that second project would go from \$1 billion to \$2 billion.

MR. GETTY: That is correct sir.

MR. WOODRUFF: It is all about the timing.

MR. GETTY: That is true from budgetary economics, but I think there is an important distinction, when we do economics and benefit-to-cost ratio calculations, that does not come into play because we use first cost when we develop benefit-to-cost ratios. We do look at funding streams and when they occur and that does come in play on the benefits side of the equation. It is not that easy when we do economics on it. Economics are so difficult. There are many pieces and parts to it when we do benefit-to-cost ratios.

MR. WOODRUFF: I think that the answer is we have to be very careful when we are looking at fully funded costs, because that really doesn't give us apples to apples means of comparing projects.

MR. GETTY: That is why I think it is better to use first costs, yes, sir.

MR. MONAHAN: This comment is directed to Ms. Colosimo. Concerning the benefit cost ratio, we are talking about using the current constraints, how we study and we can't look at future economic value, which I believe understates the benefit-to-cost ratio, and I would hope that this issue is addressed in this process as well.

MS. COLOSIMO: This is kind of an inside baseball thing more than it is a legislative thing, but the Administration is generally aware of this issue. It was something we identified as a barrier from a financial standpoint and how we budget projects. We have not had detailed conversations about that yet, but the Administration is aware of it. They are also aware that there are benefits being left on the table.

MR. GETTY: One last thing about this slide before I move on to the next slide and it leads into my next slide is that basically inefficient funding is usually negative. There are a few positive aspects to it and they are minor, but they are out there and that is what I wanted to demonstrate, one of the points I want to make on the next slide.

Next slide. This slide shows the history of our bid results of some of the large recent Inland Waterways Trust Fund construction contracts on Kentucky Lock, Chickamauga Lock and the Lower Monongahela River projects.

I want to point out the third contract listed in the table, the Kentucky Lock, Upstream Lock Monoliths contract from 2010. We had a lot of competition on that contract because it was a small contract. We didn't have the money to get a bigger contract and we got better competition and better bids. We actually had two bidders that had never bid on Corps contracts before, and our low bidder has now gotten another Corps contract and has bid on the Chickamauga Lock contract. We have entered more construction contractors into our pool. That is the positive aspect of this.

Kentucky Lock's current downstream cofferdam contractor, Johnson Brothers, is the same way. They traditionally have not bid on Corps contracts and are now bidding on Corps contracts, so that is helpful.

CHAIRMAN HETTEL: Don, let's talk about that downstream cofferdam contract. Explain to me -- you mentioned earlier that it was awarded at price of \$67.1 million, but you had a low bid of \$55.3 million.

MR. GETTY: No sir. I am sorry. I should have noted that the text in red are the Independent Government Estimates. I should have pointed out the note at the bottom of the slide that says the text in red font are Independent Government Estimates without profit. That figure of \$55.3 million is our independent government estimate.

CHAIRMAN HETTEL: That was at the 1995 level.

MR. GETTY: No sir. That would -- I need to explain independent government estimates. We have been talking about total project cost estimates. This is an estimate just for the contract. An independent government estimate is something that we put out right before we open bids and it is specifically for that contract, using the latest information available. It is not used for any type of budgetary purposes. It is typically used for our acquisition process. Kentucky Lock's cost estimate had \$67.1 million in our total project cost estimate because we had that information when we developed our last cost estimate. So the \$67.1 million is in our total project cost estimate.

That brings up a point on Chickamauga Lock. If you look at the last contract on the slide, the Chickamauga Lock Chamber contract awarded in 2017, Chickamauga awarded their big lock chamber contract last month or two months ago for \$240 million and their Independent Government Estimate was much less than that at \$206 million, and that does not include profit. Theoretically, that should be lower than the low bid amount.

I think what is more important for this body to understand is what number did we have in our total project cost estimate for the lock chamber contract and the answer to that is \$265 million. We actually came in \$25 million less than what we had in our total project cost estimate. Therefore, our total project cost estimate is coming down by \$25 million as a result of that award. That is just one more distinction of our different cost estimates that we do that I think are important.

CHAIRMAN HETTEL: Is the low bid your independent government estimate?

MR. GETTY: No sir, I just put those in ranking order. I apologize for the confusing nature of that. I just wanted to show how they racked and stacked. A lot of times, our Independent Government Estimates come in lower than the low bid, but not always. You can see two of those, they do not.

I want to point out though that, especially on our large contracts, the Lower Monongahela River river chamber completion contract and Chickamauga's lock chamber contract, if our low bidder had not bid, we would be paying a lot more for those contracts. That is what I am trying to illustrate with this next slide. This shows you how much uncertainty there is in our cost estimates. I have shown the low bid and the next low bid. What would happen if our low bidder had not bid on the project? Our costs would have gone up significantly, especially on those large contracts where I think there is a lot of funding risk associated with it, and we were fortunate to get those low bidders. That just shows you how much uncertainty there is in our acquisition world when it comes to putting out these contracts for bid. A lot of risk is factored into those contractors' bids.

Next slide. "Cost Estimate Comparison of Categories with Large Differences." This is the third time you have seen this slide. I am talking about Kentucky Lock's cost estimate increase. You have seen a version of this slide. This is the third time you have seen it. Chairman Hettel, at the last Board meeting in Portland in July, I think you wanted to see a breakout of sunk costs versus remaining costs and that is why those two last columns are in red, so those are some changes from the last Board meeting.

I want to point out, if you look at the difference in the total between those figures, that \$446 million figure at the bottom of the third column, I believe it is, I used to think our old cost estimate was very low, but based on this inefficient funding analysis, we are saying now that \$229.5 million of that \$446 million figure was due to inefficient funding, and I think that tells you a little bit about where that falls in that cost increase. These cost figures are shown in Fiscal Year 2017 price level and a first cost, so that is an apples to apples comparison.

Chairman Hettel, was there anything else you wanted to see on this slide?

CHAIRMAN HETTEL: No. Thank you.

MR. GETTY: Next slide please. "Kentucky Lock Controlling Costs." I do want to take a minute or two to talk about what we are doing to try to control actual costs on the Kentucky Lock project.

I mentioned our Value Engineering Change Proposal. I am going to go over these three categories. I have some quick slides with pictures and I want explain a little bit our Value Engineering Change Proposals. Our contractors are allowed to, and we encourage them to submit ideas to build our projects better and we recognized there was potential for that on the downstream cofferdam and we explained that to the contractor.

He jumped at the chance and he developed these two concepts and made this possible where we did away with underwater blasting and just went with this drum cutter and scarified the weathered rock. As a result, we are having a resulting overall cost savings of greater than \$3.5 million. Based on our acquisition regulations, the contractor gets 55 percent of that cost savings and we get 45 percent, that is why over \$1.5 million has come back to the project.

On the bottom right side of the slide, you can see these integral spuds that he also came up with, those are the two construction methods that made this Value Engineering Change Proposal possible.

I wanted to show you this as something that we encourage as a means both for cost savings but also for adding value to the project and that is what happened with the Value Engineering Change proposal.

Next slide. Something else that we have done on the Downstream Cofferdam contract is we have included an incentive clause to the contract to try to reduce the amount of time that the existing lock is closed during construction. We did have an allowable 30 days period for closures. The Value Engineering Change proposal is going to bring down that number of days the lock is closed, but we also are paying \$50,000 a day for every day he does not close the lock, and the contractor is doing things like this to prevent that. This is a picture of an exploratory drill drilling a hole off the existing lock wall and the contractor built this yellow frame specifically to do that instead of putting the drill on a barge and closing the lock. This is an example of how putting an incentive clause into the contract really works and allows us to not have as great of an impact during construction as you would otherwise.

You can see how tight the quarters that is. That is an up bound tow coming right next to that drill rig. They would not have been able to do that if it had been on a barge.

Next slide. Another thing we have done with this contract is we did not require an on-site concrete batch plant. We thought the contractor might be able to develop other means of acquiring concrete from batch plants in the local area. He did even better than that; he teamed

with a local concrete supplier, Federal Materials. They built this batch plant one and a half miles away from the project site.

They designed the plant specifically for our very unusual concrete needs. Not only will the plant be used for this construction contract placing about 50,000 cubic yards, but it will be available for our other 900,000 cubic yards we plan to put in future contracts.

We ought to get better bids as a result of this batch plant that is going in close to the project site that is being developed by this area batch plant, ready mix company.

Next slide. We also got a new “used” Resident Engineer office building. We had planned to build a new one, but this one became available from the Wolf Creek project for free. We did pay about \$160,000 to move it down to the project site and set it up. But our other trailer was falling apart and was way too small, so this is a case of where we are trying to utilize other projects’ excess supplies to save money.

I don't have a slide on it, but in talking with Mike Braden there are a few pieces of equipment that we could use at the Kentucky Lock project site that he has that would save us from having to buy them, so that will save some money. It won't be big dollars savings, probably less than \$200,000, but it is another case and example of sharing resources between projects.

Next slide. “Value Engineering Studies.” I mentioned what our contractors do, but we, as the Corps, also do value engineering studies for any contracts greater than \$2 million. They have been very successful at Kentucky Lock in the past. We are going to continue to do that. We have high hopes for both our upstream and downstream approach walls which appear to have promise for cost saving measures. We think that we can improve on their design and lower their cost, so we plan to do that in the future.

Next slide. “Kentucky Lock – Summary and Challenges.” Lastly on Kentucky Lock, I want to let you know the things that are going on. The downstream cofferdam construction is going well. The Economic Update is going well and the Downstream Lock Excavation contract is being configured to be awarded by the end of this fiscal year depending upon the receipt of funds.

Subject to your questions, that completes my presentation on the Kentucky Lock project. Hearing none, I will move into the briefing on the Chickamauga Lock project.

In the interest of time, I will be very brief. Next slide. “Bottom Line Up Front.” The big news on the Chickamauga Lock project is that we awarded a big contract for the lock chamber that I already mentioned with a total value of \$240 million on the 28<sup>th</sup> of September. It is a base contract with 13 options. We just awarded the base. Contracts have been configured for between five and seven years to allow flexibility on funding. There is an efficient funding amount, but also a minimum funding amount to keep this contract viable. We are going to have to fund the contract at a fairly significant level just to keep it viable over the next seven years.

The District is also developing a PACR for Chickamauga Lock because of its 902 cost limit, and that is well on its way to completion.

Next slide. “Chickamauga Lock Replacement Project Overview.” Again, this slide shows the major features of the project. There are no big changes to the project. Construction is continuing on the lock excavation contract. It was awarded in September of 2016 and is scheduled to be completed in November of 2018.

Next slide. A couple of photos of the progress on the lock excavation contract. It is a \$37 million contract. The contractor is about a year into the contract with a total duration of about two years on the contract. Here are pictures of them placing these 44 high intensity strand anchors. A big part of this contract is rock excavation; they started that several weeks ago and are making good progress. They should be finished in the next year.

Next slide. “Chickamauga Lock Project - Time and Cost Score.” No changes to the project schedule.

Next slide. “Chickamauga Lock Summary and Challenges.” Funding these lock chamber options, they expire the end of the fiscal year, so we are not going to have the same issue we did last year with a May expiration date. As long as we get Fiscal Year 2018 funding before the end of the fiscal year on September 30th, we will be in good shape on this.

Subject to your questions, that concludes my presentation on the Chickamauga Lock project. Thank you very much for your time and attention.

MR. LICHTMAN: Thank you very much, Mr. Getty. Greatly appreciate your presentations. Very informative.

Moving on in the program, we will have a presentation by Mr. Brian Tetreault from the Engineering Research and Development Center. Mr. Tetreault will be presenting on the subject, “e-Navigation and River Information Services: The waterway of the future: leveraging the power of information.” Mr. Tetreault.

MR. BRIAN J. TETREULT: Good morning, Mr. Smith, Chairman Hettel, distinguished members of the Board, guests and members of the public. As introduced, I am Brian Tetreault. I am from the Engineer Research and Development Center. In the next five minutes, I am going to cover the 30 slides I prepared to tell you about River Information Services. So without further ado, I am going to jump ahead.

Real quick, the main points that I want to get across here is that there is a bigger vision that we are working towards here. I am going to talk about some specific efforts. I am going to talk about a framework that it all fits into. And it is all about information, about getting information, the right information in the right place, at the right time, to the right people who need it, in the format that they need it. Then I am going to talk a little bit, as I have time, about specific efforts that we are working to do this.

Real quick, we are not -- this isn't something that just came up out of nowhere, came up this year or whatever. We have been working on this since at least 2009, and there have been other efforts associated with this that have gone back decades. This isn't something that is just arising right now that we pulled out of thin air.

The vision that we have is that it is focused on real-time navigation operations. The vessel pilot is a critical piece of this, but there are other stakeholders as well. The vision of the waterway of the future is based on the idea that vessel pilots are delivered real-time information when they need it and how they need it. They move efficiently – vessels move efficiently and safely through well maintained infrastructure and that waterway conditions are predicted and communicated to those who need them. This is the overall vision and elements of the vision that we are working towards.

It is fitting in with an overall concept that can be referred to as e-Navigation. This is an international concept that has been developing for over 15 years, and I have highlighted that it particularly deals with information, good information delivered to those who need it.

A specific implementation of information services of e-Navigation on inland waterways is referred to as River Information Services. Again, this is something that has been in development for decades. On the right-hand side of the slide is an image from a guideline published by PIANC that is the “International Guidelines and Recommendations for River Information Services.” This is the framework that we are working under to provide these services to those who need them. They can be divided into what is known as operational services, which is the actual delivery of specific information to those who need it ashore or on vessels. They are facilitated by technical services. Technical services are what a lot of people think of when you think of services or really systems, is the word that people usually think. We are really talking about services, and I will try to emphasize that a couple of times. The technical services include a lot of the fun stuff that I am going to be talking about here with the specific efforts that we are working on. The key point to remember is that it is aimed at providing operational services, which is information to those who need it, when they need it for decision making purposes, whether it is navigating a vessel, determining a voyage plan, determining how to run your company, on the Government's side, how to operate, maintain our infrastructure.

I don't want to spend too much time on this, but this is a framework showing how the operational services, again, the information provision is supported -- which those are on the outside and the upper and lower portion in yellow of the diagram -- are supported by the technical services that are in the middle as well as critical information, reference information, authoritative sources of information. This is to show that the provision of services of information to those who need it, need to be supported by technical services, and more importantly, they needed to work together. The dotted lines on this chart, I think, are the most important, not the individual systems, data sources, efforts that are underway, but the connections between them to make sure that they are working properly, that they are not duplicating and that they are supporting the ultimate goal of safe, efficient navigation.

Some of the specific capabilities we have, I am going to go through now. We have a tool that we call the Lock Operations Management Application or “LOMA”, that is the acronym that we use. I am not going to spend much time on this. It is built on the Automatic Identification System -- which shows that there is electronic communications aboard ships using their AIS transceivers that communicate between vessels, from vessels to shore, and more importantly or what we are really leveraging is the ability to send information from shore to vessels.

We are working closely with the Coast Guard, providing coverage around the country. This is a screen shot of a LOMA system. I am going to skip over this, but a portion of -- well, I don't want to skip over it. A way of communicating information to vessels includes augmenting existing physical Aids to Navigation. The term used is a Virtual Aid to Navigation or Virtual “AtoN”. They are used in areas where a physical aid is not practical, timely enough, accurate, or to augment physical aids.

Two specific examples are shown here. One is in Alaska where ice and tides prevent the maintenance of physical buoys and the second is on the inland waterways where there was an accident where a vessel sank about a year and a half ago and was in the navigable channel on a rising river, the Coast Guard couldn't place a buoy to mark it, so they asked the Corps to transmit a virtual buoy, virtual AtoN, via AIS that would appear on vessel navigation systems. That is a screen capture from the vessel navigation system showing a submerged wreck at a particular location.

Other efforts we can do, you are very familiar with Olmsted Locks and Dam. What we are doing there is transmitting information about the operations that are happening. In the previous slide, the area in red there is an exclusion area where the gates are -- the fixed gates are -- that vessels aren't supposed to navigate. It is marked by buoys, but we are augmenting that with Virtual Aids to Navigation.

We are also transmitting weather information, water levels, lock order and other information that is again displayed on the vessel's navigation system as they need it.

One final thing that we are doing, a final example that I think is pretty exciting; the mat sinking unit that operates laying revetments to support the levees, protecting the navigation channel. It works in the river, obviously, and this slide, this is the Mississippi River south of Vicksburg. They are working in the lower right-hand corner here.

Several years ago there was an accident where a vessel didn't know the mat sinking unit was working there, came around a bend and struck the large plant that was locked there on the riverbank extending near the navigation channel. The National Transportation Safety Board [NTSB] investigated the accident and one of the specific things they recommended, and on the slide is an excerpt from the report, was that the Corps of Engineers should use AIS to notify and warn vessels of hazards to navigation.

What we have done is we have started doing that. This is, again, a screen capture from a vessel navigation system where we are transmitting these red boxes -- we have to zoom in on

the lower one on the right-hand side -- that show where a vessel is entering the construction. It is hard to read but it says to contact the vessel that is in charge to arrange passage, find out information about it. This is a way where, given the actual operation that is happening, vessels can be alerted to that, provided additional information on a dynamic basis.

Other capabilities we are working on are in development. I won't spend a lot of time on this but we are working on some efforts with more granularity, to monitor waterway performance in a real-time and forward-looking manner as well as look at ways to predict -- not so much predict vessel movements, but to anticipate where there may be congestion, start predicting when there may be many vessels at a lockage or when there won't be so maintenance can be conducted and things like that. That are some of the efforts that we are developing.

Finally, in summary, I would like to reiterate that we do have a vision how we can use information to make the waterway better, get these services to provide information to those who need it, when they need it. We have existing services in place that we are leveraging, so we are trying not to build anything new if we don't have to; trying to enhance things that are. There is a lot of coordination and cooperation that has to happen.

Something I kind of skipped over is the fact that these services aren't provided all by the Corps, all by the Coast Guard, all by NOAA. They are provided by multiple stakeholders and used by multiple stakeholders in industry, the public, other government agencies, et cetera. A key portion of this is coordination and cooperation.

That concludes my presentation. Thank you for your interest and attention and welcome your questions.

CHAIRMAN HETTEL: Brian, thank you for zipping through your presentation. A quick question. On one of your slides you have vessel traffic management. I take it that is for use on the landside.

MR. TETREAULT: That is the intention. It is not the intention to have vessel traffic services on inland waterways, although, if the Coast Guard deemed that was appropriate, this would support them. But the idea is that those managing vessels would have the information they need to make decisions, dispatchers, vessel pilots, et cetera.

CHAIRMAN HETTEL: I wasn't able to make the Smart Rivers Conference in Pittsburgh last September, but I looked through the preliminary sessions and a lot of people said river information services would help reduce lock waiting times. I want to make sure you understand that our efficiency is based on going from one lock through another lock, through the pool, whether or not we slow down to eliminate delays at a lock just shows that we don't need to improve that facility. Can you tell us that you are confident that this does not get into lock scheduling or --

MR. TETREAULT: I see. Yes, lock scheduling is not anticipated. The idea is that vessel operators would be given the information they need about waterway conditions, lock operations to efficiently move through the waterway at their decision making. The ultimate

decision would rest with the pilot and the industry. Lock scheduling is not anticipated, and I do -- I am sensitive to the linkage between, if you will, an artificial decrease in delays caused by infrastructure problems. We are sensitive to that and want to make sure we address that.

CHAIRMAN HETTEL: Okay. Thank you.

MR. DAVID KONZ: I might have missed it. You said this is in development. Do you have any idea when -- kind of a timeline when we could see it out in operation?

MR. TETREULT: Yes sir. The development -- a lot of parts and pieces are in development. There are existing capabilities that are out there now -- for example, the ability to transmit information via AIS is out there now and we are expanding that, we in cooperation with the Coast Guard and others. I don't anticipate there will be a time we declare victory, we have got river information services, have the ribbon cutting, et cetera. It is more that it will be incremental continued progress in coordination of existing capabilities, introduction of new capabilities to work together.

Along those lines, what we need to do is for these individual projects is have more definite deliverables. We should be setting a date when we will be transmitting water levels, for example, from all of the locations that we possibly can. We haven't done that yet, but that is the sort of thing we anticipate doing in the future.

Once again thank you very much for the opportunity to present this briefing before the Users Board.

MR. LICHTMAN: Thank you, Mr. Tetreault. Our last presenter of the day is Dr. Mark Sudol, Director of the Navigation and Civil Works Decision Support Center at the Institute for Water Resources. Dr. Sudol will be presenting on "LPMS and Waterborne Commerce Data: Improvements to Digital Data Delivery." Dr. Sudol, please proceed.

DR. MARK F. SUDOL: Mr. Smith, Chairman Hettel, other Board members, other Federal observers and guest. In the interest of saving time I will go right to the fourth slide.

The Lock Performance Monitoring System [LPMS] Navigation Viewer will go public either today or tomorrow. We will have the link out shortly. It will be up and running today or tomorrow or worst case Monday. It will not be active without a password anymore. We are going to be putting out a testing environment. Please give us more information and data and questions.

I think most of you know where it is right now, but if you don't have it, please e-mail me. My e-mail address is on the next slide, I think. And my phone number. We are also going to be adding Socrata links [<https://data.navigationdatacenter.us/>]. All of this stuff will be active today, tomorrow or Monday.

Subject to your questions, that concludes my briefing. I want to get it out quick and dirty. We are trying to take input from you to make it better for what you guys need from the LPMS data that we have been collecting forever.

Thank you.

MR. LICHTMAN: Thank you, Dr. Sudol.

We will now move into the public comment period of the meeting. No one has approached Chairman Hettel or myself regarding making a public comment at today's meeting. We have not received any written comments.

We will now move to the closing remarks portion of the meeting. First, we will have closing remarks by Mr. Smith.

MR. SMITH: Thank you. My sample size of one Users Board meeting, this being the first Users Board meeting that I have had the privilege of attending, the 85<sup>th</sup> Inland Waterways Users Board Meeting has – this has been a great experience. I appreciated the passion and the dialogue and the exchange of ideas and I can tell it is going to equip me to take on these issues harder and faster. I know that the reassuring part is almost all of the sentiments that you have reflected are what we have internally in debate and try to move forward on. I know it is about results, so it is not good – it is not just enough that we are in sync. It is about getting results I will pass on to General Jackson. I will say one last time, he appreciates this effort and I will pass on to him the great success of today's meeting. I look forward to continuing to get to know all of you in the time ahead. Thanks to all of our presenters, particularly those at the back end who shrunk an enormous amount of effort into five minutes, they are the heroes of this briefing because the clock is facing us all, so thank you.

CHAIRMAN HETTEL: Thank you, Tom. As I stated in my opening statement, our next task is to develop our Annual Report to Congress and the Secretary of the Army for 2017. While we need efficient funding numbers that I know we will certainly get, the theme so to speak, as you heard Ms. Colosimo say is how we can efficiently fund these projects to bring them online sooner at reduced cost. That is the idea behind asking for efficient funding numbers on what the reduction would be in cost and how soon we could bring these projects online. I am looking forward to getting that information back. Mr. McKee, I know we will get together on efficient funding numbers. I appreciate everybody's attendance at today's meeting.

Unless there are any other comments from the other Users Board members, I think we are getting close to standing adjourned.

MR. DALE: Chairman Hettel, if you don't mind –

CHAIRMAN HETTEL: Not at all, David. Go right ahead.

MR. DALE: Real quick, anyone interested in attending the meeting that we are going to have regarding Olmsted and Lock and Dam 52 and our strategy for going forward. We are

going to go through some details, do a webinar with a broader industry audience, the meeting is going to be in this room. If you are interested, you are certainly welcome to attend. If you would be here about five minutes to 1:00 and we will go through that pretty quickly. The idea is to share our strategy and answer any questions that we have. Thank you very much.

MR. MONAHAN: Chairman Hettel, this is Mike Monahan -- just two comments. One, I would like to thank the Corps for having the project managers for each of the key projects here today. I think that is very helpful to have that level of knowledge in a room. And, secondly, I want to thank all of the men and women that are serving in the Corps and everything they are doing for our Country in these, what I would say, unprecedented times, whether we are talking about the hurricane response or what is going on overseas, so thank very much.

MR. LICHTMAN: Before we move to adjournment, I do want to make a couple of closing comments. I would like to thank the personnel from the Mississippi Valley Division and the Vicksburg District who supported this meeting, including Mr. Pat Chambers, Mr. Ben Emery and Mr. Cody Eckhardt for their support and professionalism and dedication to ensuring the successful accomplishment of this meeting and yesterday's tour of ERDC.

Also, I would like to recognize the passing of two former chairmen of the Users Board, Mr. Jerry Brown and Mr. Larry Daily. Their service to the Board was greatly appreciated and we sorely miss them.

And one last note from Colonel Derosier from the Vicksburg District. Colonel Derosier would like to extend an invitation to the members of the Users Board to visit the Jesse Brent Lower Mississippi River Museum during this visit to Vicksburg or in subsequent visits to Vicksburg. The museum has exhibits that depict life on the Mississippi, both past and present. The museum also features the Motor Vessel Mississippi, which while in use, was the flagship of the Mississippi Valley Division. The museum is open 9:00 AM to 4:00 PM. If you contact the Mississippi Valley Division Public Affairs Office, they can set up a tour for the members of the Board. The location of the museum is 910 Washington Street, Vicksburg, Mississippi.

With that, I would now like to have a motion to close the meeting. Can I have a motion?

MR. MECKLENBORG: So moved.

MR. LICHTMAN: Thank you, Mr. Mecklenborg. Can I have a second?

MR. RICKETTS: Second.

MR. LICHTMAN: Thank you, Mr. Ricketts.

Can I have a vote to adjourn the meeting?

THE BOARD COLLECTIVELY: Aye.

MR. LICHTMAN: Thank you, gentlemen. The meeting is adjourned.

(The meeting concluded at 11:58 a.m.)

CERTIFICATE OF COURT REPORTER

I, Nikki L. Lloyd, Court Reporter and Notary Public, in and for the State of Mississippi, hereby certify that the foregoing contains a true and correct transcript of the proceedings as taken by me in the aforementioned matter at the time and place heretofore stated, as taken by stenotype and later reduced to typewritten form under my supervision by means of computer-aided transcription.

Witness my signature and seal this the 22<sup>nd</sup> day of November, 2017.

---

NIKKI L. LLOYD, CCR #1870

My Commission Expires:  
April 30, 2021