

MINUTES
INLAND WATERWAYS USERS BOARD MEETING NO. 80
Tinley Park Convention Center
18451 Convention Center Drive
Tinley Park, Illinois 60477
October 5, 2016

[Note: The following minutes of the Inland Waterways Users Board meeting No. 80 were approved and adopted as final at Inland Waterways Users Board meeting No. 81 held on December 13, 2016 at the Conference Center at the Maritime Institute, Linthicum Heights, Maryland.]

The following proceedings are of the Inland Waterways Users Board meeting held on the 5th day of October 2016, commencing at 9:00 o'clock a.m. at the Tinley Park Convention Center, 18451 Convention Center Drive, Tinley Park, Illinois, Mr. Martin T. Hettel, Chairman of the Inland Waterways Users Board presiding. Inland Waterways Users Board (Board) members present:

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

MR. CHARLES A. HAUN, JR., Parker Towing Company, Inc.

MR. ROBERT J. INNIS, LafargeHolcim, Inc.

MR. JEFFERY A. KEIFER, American Electric Power (AEP), River Transportation Division

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

MR. ROBERT R. MCCOY, Amherst Madison, Inc.

MR. DANIEL P. MECKLENBORG, Ingram Barge Company

MR. BRUCE REED, Tidewater Barge Lines

MR. MICHAEL T. SOMALES, Murray American Transportation, Inc.

MR. WILLIAM M. WOODRUFF, Kirby Corporation

Board member MR. DAVID CHOATE, Bruce Oakley, Inc., did not attend the meeting.

Also present at the meeting were the following Federal observers, designated by their respective agencies as representatives:

MS. JO-ELLEN DARCY, Assistant Secretary of the Army for Civil Works (ASA (CW)), Washington, D.C.

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

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

MR. GARY MAGNUSON, Senior Policy Advisor, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, Silver Spring, MD.

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

MAJOR GENERAL DONALD "ED" JACKSON, Executive Director of the Inland Waterways Users Board and Deputy Commanding General for Civil and Emergency Operations (DCG-CEO), U.S. Army Corps of Engineers, Washington, D.C.

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

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.

Program speakers in scheduled order of appearance were as follows:

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

COLONEL CRAIG S. BAUMGARTNER, Commander, Rock Island District, U.S. Army Corps of Engineers, Rock Island, IL.

MAJOR GENERAL DONALD "ED" JACKSON, Executive Director of the Inland Waterways Users Board and Deputy Commanding General for Civil and Emergency Operations (DCG-CEO), U.S. Army Corps of Engineers, Washington, D.C.

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

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

MR. JOSEPH W. ALDRIDGE, Inland Waterways Trust Fund Account Manager, Programs Integration Division, Headquarters, U.S. Army Corps of Engineers, Washington, D.C.

MR. MARK R. HAMMOND, Senior Regional Economist, Great Lakes and Ohio River Division and Planning Center of Expertise for Inland Navigation and Risk Informed Economics

Decision-making (PCXIN-RED), U.S. Army Corps of Engineers, Cincinnati, OH and Huntington, WV.

MR. BOBBY DUPLANTIER, Senior Project Manager, New Orleans District, U.S. Army Corps of Engineers, New Orleans, LA.

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

Other individuals who provided additional information in response to questions raised by Board members during the meeting included the following:

MAJOR GENERAL MICHAEL C. WEHR, Commander and Division Engineer, Mississippi Valley Division, U.S. Army Corps of Engineers, Vicksburg, MS.

MR. PATRICK A. CHAMBERS, Deputy Chief of Operations, Mississippi Valley Division, U.S. Army Corps of Engineers, Vicksburg, MS.

MR. BOBBY DUPLANTIER, Senior Project Manager, New Orleans District, U.S. Army Corps of Engineers, New Orleans, LA.

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

MS. LYNN M. MUENCH, Senior Vice President – Regional Advocacy, American Waterways Operators, St. Louis, Missouri.

MR. JOHN S. DOYLE, JR., Jones Walker LLP.

PROCEEDINGS

MR. MARK R. POINTON: We will now call the 80th meeting of the Inland Waterways Users Board meeting to order. My name is Mark Pointon. I am the Designated Federal Officer of the Inland Waterways Users Board. I want to welcome you all here to Tinley Park, or Chicago, where – I am not sure exactly how we characterize where this meeting is being held, the Greater Chicago area. We have met in Chicago before. The last time we met in Chicago was for Users Board meeting number 59 in November in 2008 [Inland Waterways Users Board meeting number 59, held 18 November 2008 in Chicago, IL], so it has been a little less than eight years since the last time we were here in Chicago.

I thought the tour went very well yesterday [a site visit was conducted the prior day to the Chicago Sanitary and Ship Canal Dispersal Barrier in Romeoville, IL, the Brandon Road Lock and Dam on the Des Plaines river two miles southwest of Joliet, IL, near Rockdale, IL, and the Lockport Lock on the Chicago Sanitary and Ship Canal in Lockport, IL]. I am not going to spend too much time on that, other than to say I would like to thank the Rock Island District and the Chicago District staff. They did an outstanding job. I had nothing to do with the weather. I guess they can take credit for that.

I would like to thank our sponsors for last night's evening social event and for the coffee service this morning. Thank you to ACBL Chicago and to the Canal Barge Company for today's refreshments.

I am obliged to read for the record that the Inland Waterways Users Board was created pursuant to Section 302 of the Water Resources Development Act of 1986. It 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 it is open to the public.

The Corps of Engineers is the sponsor of the Board and provides for the Executive Director, the Designated Federal Officer, and for all the normal activities of this body. At this point in time, we have had no requests to make any public comments. We have had no written comments provided for the record either. If anybody wishes to make a public comment at the end of the meeting, come see me at the break and let me know that you have an interest in making a public comment. These proceedings are being recorded and the transcript will be available after the meeting, hopefully shortly after the meeting.

And at this point, I would like to call on the Commander of the Rock Island District, Colonel Craig Baumgartner, who will provide some welcoming remarks and opening statement since we are in his area of responsibility.

Thank you, sir.

COLONEL CRAIG S. BAUMGARTNER: Good morning. I am Colonel Craig Baumgartner, Commander and District Engineer of the Rock Island District and on behalf of Major General Michael C. Wehr, Commander and Division Engineer of the Mississippi Valley Division, and the Rock Island District, I would like to extend a welcome to Ms. Darcy [Ms. Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works], Major General Jackson, Major General Wehr, Brigadier General Toy [BG Mark Toy, Commander and Division Engineer of the Great Lakes and Ohio River Division], Mr. Martin Hettel, Chairman of the Inland Waterways Users Board, and all of the Board members of the Inland Waterways Users Board, welcome. Also, welcome to the many others that join us today and that were able to take advantage of our site visit yesterday.

To the members of the Inland Waterways Users Board, I would like to extend a welcome back, of course, because it was only ten months ago we had the distinct privilege of hosting the Users Board at LaGrange Lock and Dam [a site visit was conducted to LaGrange Lock and Dam, located at Illinois River mile 80.2 from its junction with the Mississippi River on 1 December 2015, the day prior to Users Board meeting number 77 which was held in St. Charles, MO], which we very much enjoyed.

Navigation, as you know, is a primary business line for the Rock Island District with our twenty (20) locks and dams and it is our responsibility to operate and maintain a nine-foot navigation channel for just under about 600 miles, both on the Mississippi River and the Illinois Waterway. It is a distinct privilege to have you here and join us today.

The Mississippi Valley Division, the Great Lakes and Ohio River Division, the Rock Island District, and the Chicago District very much enjoyed the opportunity to host the Inland Waterways Users Board and many others in attendance yesterday. We had an opportunity to showcase some of our recent successes and also some current and future challenges and opportunities, and we very much enjoyed that and hope it was time well spent for you as much as it was for us.

As always, we welcome the opportunity to advance our understanding of the state of our inland waterways infrastructure and advance the dialogue on the many critical issues confronting the inland waterways industry and the nation's inland waterways infrastructure. I think we had a great dialogue yesterday concerning some of those important issues.

One administrative note. I would like to mention that Mr. Tom Heinold [Mr. Thomas D. Heinold, Assistant Chief of the Operations Division, USACE, Rock Island District] – I would just like to have Mr. Tom Heinold and Lieutenant Rob Horey [1st Lieutenant Robert S. Horey, Military Engineer assigned to the Operations Division, USACE, Rock Island District] just raise your hands real quick. Both these gentlemen have been responsible for all the logistics, both for yesterday and today. I had them raise their hand here today because if there are any issues or concerns regarding logistics during the Board meeting, I would ask you to bring that up to them so that we can follow through and address whatever concerns you may have.

With that, I will conclude my remarks and turn the microphone back over to Mark, and once again, thank you very much for coming and participating in today's meeting and yesterday's site visit.

MR. POINTON: Thank you, Colonel Baumgartner. I would be remiss to not thank Colonel Drew [Colonel Christopher T. Drew, Commander and District Engineer, Chicago District] as well for all of his participation in the activities yesterday and today. Also to Tom Heinold and Lieutenant Horey. They were very, very helpful getting all the arrangements and everything squared away and keeping this meeting running right. With that, I would like to turn the microphone over to Major General Jackson, the Executive Director of the Inland Waterways Users Board.

MAJOR GENERAL DONALD JACKSON: Mark, thank you very much. Chairman Hettel and members of the Board, again, I want to thank you for your participation in our Board proceedings. As I always like to say, it is never lost to me that you guys have a day job and you do this because of your passion, because of your interest and your desire to make the inland waterways system the very, very best marine transportation system in the world, and we are equally committed to that at the Army Corps of Engineers. So for that I thank you very much for your continued leadership and participation and support and patience with the Army Corps of Engineers as we try to endeavor to do that together.

Secretary Darcy, ma'am, it is an honor to have you here with us today. Thank you so much for being here. Thank you so much for allowing Lowry [Mr. Lowry A. Crook, Principal Deputy Assistant Secretary of the Army for Civil Works who attended the site visit to the Chicago Sanitary and Ship Canal Dispersal Barrier, the Brandon Road Lock and Dam, and the Lockport Lock on 4 October 2016], to do what is the hellacious trip from Washington, D.C. and

back in one day, as you are doing today. We thank you so much for joining us, and I look forward to your remarks in a few minutes.

To Gary Magnuson from NOAA, thank you, Gary. And Nick Marathon from the USDA – where is Nick? There he is over there. And Lauren Brand from MARAD. Welcome. Thank you guys so much, as members of our Federal Advisory Team, again, for being with us and participating with us and helping to guide us as well.

I know Mark has talked a little bit about thanking some of the folks. These meetings and site visits don't just happen by themselves, these Board meetings, and I also want to express my appreciation and extend my thanks, as always, to the support from our District and Division offices.

And we had two this time. First of all, we had the Mississippi Valley Division, and we are fortunate to have General Mike Wehr here with us. Mike, thanks so much for all you do and for your leadership and the Mississippi Valley Division [MVD] personnel and the whole Mississippi River watershed, as President of the Mississippi River Commission and also serving as our MVD Commander. You are a tremendous leader for our team.

Colonel Baumgartner, who has already briefed us this morning, from the Rock Island District. Craig, for you and your team, thanks so much for not only hosting us and doing the logistics and such, but taking us on some very informative tours yesterday to the Brandon Road Lock and Dam and Lockport Lock and Dam. And, also, a special thanks to the crew of the Motor Vessel *Ottawa* who pushed us up and down the river yesterday and enabled us to see a lot of things and some really incredible things that I would like to talk to you about later. I really appreciate all of your efforts, the professionalism you displayed, your dedication to service, and performing your duties to the highest standards of excellence. And we will recognize a few members of Rock Island District at the conclusion of this meeting.

The Great Lakes and Ohio River Division, again, co-sponsored us here today, and they have sponsored the past few -- or several of the Inland Waterways Users Board [IWUB] meetings that I have participated in since I became the Executive Director of the Board.

General Mark Toy, who is new to the Great Lakes and Ohio River Division, but not new to the Corps having recently come from the South Pacific Division, where he previously served as the Division Commander. Mark, thank you so much for joining us today.

David Dale. Where is David? Oh, he is over there. You guys make me twist all the way around. Thank you for that. And Chris Drew [Colonel Christopher T. Drew], to you and your team from the Chicago District, I really, really appreciate not only you guys being here and fully participating in this meeting but for taking us out to see the Chicago Sanitary and Ship Canal Dispersal Barrier, which is very, very unique. It was the first opportunity that I had to get out there.

As Ms. Darcy told me this morning, it is hard to know what you are seeing. When you see the canal, you are told not to touch anything electric. You do not really see anything in the water, but you see big generation buildings on the side. It is a very, very interesting effort that we are doing that is part of the interagency team here in support of the prevention of the aquatic

invasive species spreading into the Great Lakes, something we are very committed to in the Army Corps of Engineers.

And, as Mark has already pointed out, the American Commercial Barge Line and the Canal Barge Company, thank you so much for hosting our social last night, hosting our breakfast spread this morning, and the coffee and stuff. I really appreciate how industry comes together to support this navigation mission that we are entrusted with in the Army Corps, and we thank you for that very much.

I do also want to mention that last night at dinner, the Dancing Marlin, it was a really big treat, ma'am. It was a share fest, as I found out. It was not -- you have your own plate -- and you guard your plate with your knife and fork like Robert McCoy normally does if we go to a steak place. But in this case it was order a little bit and pass it around, so I think that at our table Robert probably had the best manners when it came to passing food around, we ate a lot of it last night, and it was a great time. Whoever picked that venue, that was fun, and I appreciate that.

Okay, down to business. I think we have an excellent agenda today. What you will find is some of the topics that we talk about will be very familiar because we talk about them pretty much every time we come together. But, hopefully it allows us to incrementally show progress and talk about some of the things that we are doing.

I don't know if Dr. Mark Sudol [Mark Sudol, Director of the Navigation and Civil Works Decision Support Center at the USACE, Institute for Water Resources, Alexandria, VA] is here today or not, but I do appreciate Dr. Sudol and Marty [Hettel] and several other folks getting together and doing an LPMS [Lock Performance Monitoring System] summit to talk a little bit about some of the data issues that we have been trying to come to grips with to make sure that the way we present that information is helpful to the mariner. And I think, Marty [Hettel], from the reports I got from Mark [Pointon] at our sidebar yesterday, we have work to do, but I think we started out moving in the right direction understanding how we need to communicate better with that information. Chairman Hettel, thank you for your leadership in helping us straighten that out.

There are some new updates and some other things to be discussed at today's meeting. There are a few things that, if you take a look at the minutes from the last meeting [Inland Waterways Users Board meeting number 79 held on 1 July 2016 in Paducah, Kentucky] -- and I know we're going to talk about that in just a second. But there are still a few things that we have as deliverables. I still want to be able to lay out for this Board, sort of, our navigation program writ large so that you have a very good understanding of not just select projects that are specific to the Inland Waterways Trust Fund [Trust Fund], which I think everybody is focused in on here, but also understanding the Corps' navigation program across the nation in terms of what we are doing with respect to investigations, what is under construction, and how we are doing our operation and maintenance activities across the country for inland and coastal navigation, which I think all is relevant to the discussion here. We are going to work to try and pull that together. I have seen some initial products. But I don't know, Mark [Pointon], if we are going to have a chance to show any of that today.

MR. POINTON: That will probably be one of the items on the program for the next Board meeting.

MAJOR GENERAL JACKSON: In December?

MR. POINTON: Yes, sir.

MAJOR GENERAL JACKSON: Okay, good. So we are making progress on that, ma'am. I think that will be helpful to give everybody full context of our navigation program.

I do want to talk just a minute about transition because there has been a lot of transition in the Corps' Civil Works team at Headquarters. For the members of this Board, just so you are aware, obviously, I think since we have met the last time, we have a new Chief of Engineers [Lieutenant General Todd T. Semonite assumed command of the Corps of Engineers on 19 May 2016]. I was just on the phone with Lt. General Semonite as we were tracking the arrival of Hurricane Matthew, but one of the things that we did with the Civil Works Directorate is we tried to focus him in on key and essential inland navigation projects that you are very familiar with, many of those we will talk about today.

Lt. General Semonite has been out to all of them already and has developed a huge passion to help us try and get these projects delivered. I just want to make sure that you knew that he prioritizes our navigation mission at the top of his list, and so he is very much engaged, and hopefully you will get a chance to meet him.

Inside of the Directorate of Civil Works we have had some personnel changes. We have had the retirement of Steve Stockton [Mr. Steven L. Stockton, former Director of Civil Works]. Many of you know Steve. He has been to many of these meetings, and he has moved on to retirement now. Mr. James Dalton, who had been our Chief of Engineering and Construction Division for the last several years has taken Steve's place and is now our Director of Civil Works.

Mr. Eddie Belk, who had been our Chief of our Operations and Regulatory Division is now the Director of our Programs Integration Division. Mr. Belk is not here today, but certainly he is with us in spirit and fighting hard for the resources to continue the programs here, as he will do in his new capacity working very closely with Ms. Darcy's staff.

We have Ms. Susan Whittington here who is Mr. Belk's replacement for the time being. Ms. Whittington is going to be our interim Chief of the Operations and Regulatory Division. Ms. Whittington comes to Headquarters out of the South Atlantic Division, where she was the Chief of Operations and Regulatory Division, and most recently was the Acting Director of Programs for the South Atlantic Division for the last six months or so. Susan, we welcome you to the Inland Waterways Users Board and thank you for your many, many years of leadership and service.

Tom Holden from Mississippi Valley Division is our Interim Chief of Engineering and Construction, taking the place of James Dalton. I think many of you do know Tom. He has been very active in the Mississippi Valley Division and engaged with the navigation community for years. Mr. Holden will be holding down the fort in the Engineering and Construction Division for at least until December until we can finalize some of the selections.

I did want you to be aware of some of the personnel changes at Headquarters. Mr. Tab Brown remains the Chief of the Planning and Policy Division. Ms. Karen Durham-Aguilera remains in the position of the Director of Contingency Operations and Office of Homeland Security. We have had a little bit of transition in the Civil Works Team at Headquarters, and I wanted to make you aware of that.

We are now honored to hear from our Federal observers, and I would like to first pass the microphone over to the Honorable Ms. Jo-Ellen Darcy, our Assistant Secretary of the Army for Civil Works.

Ma'am, again, it is an honor to have you join us at today's meeting, and thank you for making the long trip today.

MS. JO-ELLEN DARCY: Thank you, General Jackson. Welcome and good morning, everybody. As a Federal observer, I get to say something. I can more than just watch, right? I can put my two cents in?

MAJOR GENERAL JACKSON: Absolutely. Yes, ma'am.

MS. DARCY: What I would like to say is I have been involved with the Board since I took this position more than seven years ago, and I found the purpose of the Board to be one that I think Congress often – I am not quite sure what they do with some of the wisdom that they inject into WRDA [a Water Resources Development Act], but I think this was one of the better additions to navigation as well as to the Corps partnership with the navigation industry was creating this Users Board back in 1986 [the Inland Waterways Users Board was established by Section 302 of WRDA 1986, PL 99-662, signed into law on 17 November 1986].

I did not work on the WRDA '86, but in the WRDA's since then [in particular the Water Resources Development Act of 2007, PL 110-114, signed into law on 8 November 2007 and the Water Resources Reform and Development Act of 2014, PL 113-121, signed into law on 10 June 2014], the work of this Board has been recognized, I think, of what it has provided not only to the Corps but to the navigation industry as a whole, so keep it up.

I think one thing Chairman Hettel and I talked about, you probably are aware, yesterday I sent the nominations for the next round of appointments through the chain. We have to go through the Secretary of the Army's Administrative Office and then to the Department of Defense. That nomination package went out of my office yesterday, so hopefully we will be ahead of the curve this time and get those done in a timely manner. Sometimes that doesn't always happen within the Pentagon, but we are trying to make that happen this year before we leave.

General Jackson talked about transition. There will be a transition in my office come the 20th of January 2017. That day will be the end of my tenure in this position, which has been an honor for me. It has been the epitome of what I could have wanted at the end of my Federal service, which will end on the 20th of January.

I think many of you met Lowry Crook yesterday. He is my Principal Deputy. You could not have a better person in that position with his experience, both within the Administration and out. He came from the Department of Transportation and the Council on

Environmental Quality and has, again, a passion for the issues that the Corps of Engineers struggles with every day.

With that I want to say thank you for your support of the Corps of Engineers, for our office, and as the transitions go, we will make it a smooth one and continue supporting the good work of the Users Board. Thank you.

MAJOR GENERAL JACKSON: Thank you, Madam Secretary. Over to Mr. Gary Magnuson from NOAA.

MR. GARY MAGNUSON: General Jackson, thank you. Good morning, Chairman Hettel and members of the Board. Secretary Darcy, it is great to have you here with us. Fellow Federal observers, staff, and guests.

For the record, my name is Gary Magnuson. I am the Federal observer to the Board representing the National Oceanic and Atmospheric Administration, and specifically Admiral Shepard Smith, who sends his regards. Admiral Smith is our new Director of NOAA's Office of Coast Survey and also the National Hydrographer.

In my allowed time, General Jackson and Chairman Hettel, I will briefly cover two items, first, inland waterway surveying and charting, and second, provide an update on the continued progress on inland waterways water level forecasting.

Many of you may be aware that on September 17th the House Subcommittee on Coast Guard and Maritime Transportation and the House Subcommittee on Water Resources held a joint hearing on the subject "Federal Maritime Navigation Programs: Interagency Cooperation and Technology Change."

Picking up on your point General Jackson which you made earlier, and which we made at that hearing about the importance of Federal agencies working together, not only amongst ourselves, but also with the navigation industry such as this Board, I am pleased to report that -- and I think if Eddie Belk were here, he would agree with me that through the Committee on the Marine Transportation System and bilateral agreements, which NOAA has one with the Corps of Engineers, that the hearing was an opportunity for both agencies to provide examples -- Eddie Belk gave testimony for the Corps of Engineers and Admiral Smith gave it for NOAA -- that it was an opportunity for the cooperation and coordination to advance Federal maritime navigation services of both agencies was at hand. It is not often that our agencies are given the opportunity to describe before Congress our mutual progress. Often times we are up on the Hill, defending our budget requests, and Ms. Darcy knows that quite well.

To this end, NOAA is committed to seeking out new opportunities to more efficiently fulfill our mission of surveying and charting. New technologies are an essential component of this effort, and NOAA believes it is on the cusp of a new era of delivering the accurate navigation products and services required to meet the needs of the increasingly complex marine transportation system, including inland waterway users, such as yourselves.

In order to aggregate the highest quality data to build new charts, we will first assess currently available data, including traditional hydrographic surveys and topo-bathymetric

LIDAR [Light Detection and Ranging] data from our partners, such as the Army Corps of Engineers, the U.S. Geological Survey, state and local groups, and other non-traditional users.

Therefore, in line with our Memorandum of Agreement between NOAA's Ocean Service and the U.S. Army Corps of Engineers signed this past July, NOAA's Ocean Service and the Corps of Engineers continues to make progress towards seamlessly transferring quality survey data from the Corps of Engineers to our charts to provide the most accurate navigational information. This progress may be of particular value to the Board members when they must travel outside federally maintained channels, which does occur on occasion, particularly in the southern Mississippi River area. These outside the channel areas are the legal responsibility of NOAA to provide accurate charts and navigational guidance. It is my understanding there is a meeting on this matter next week, I believe, in Washington between NOAA and the Corps of Engineers.

Also, to follow up on a matter I brought to the attention of the Board last time on the progress made by NOAA's Weather Service efforts to provide water level forecasts, I am pleased that so many members indicated interest at that time. Chairman Hettel brought the matter to my attention at a conference in June and that, in particular, Board member Charles Haun was able to recently tour NOAA's Office of Water Prediction in Tuscaloosa.

Mr. Haun would you like to offer any comments concerning your visit to the Office of Water Prediction at this time?

MR. CHARLES A. HAUN, JR.: Yes. I would just like to say that sometimes at these meetings you gain knowledge that you didn't expect. That was the case at our last meeting when Gary mentioned the National Water Center. After the meeting he arranged for me to tour it, and it is an amazing facility. The facility is set up very well for carrying out their mission of predicting water levels. It is the only one like it in the world. I would encourage anyone that is going to be in that region of the country to go by and -- get with Gary and go by and get a tour of the building and see what they are doing. They are modeling droughts, high water, you name it. If it has to do with water, water allocation, anything like that, they have got an amazing program going. Thank you, Gary.

MR. MAGNUSON: My pleasure, Charlie. And I mentioned to Chairman Hettel before, any other Board members who are in that area if you would like to tour the Office of Water Prediction facility, I would be glad to arrange it.

Also, I should note that included in the minutes from the Paducah meeting [Inland Waterways Users Board meeting number 79] is a fact sheet I sent to Ken [Lichtman] and Mark [Pointon] that gives you a page and a half update of what I shared with you at the last meeting on NOAA's Office of Water Prediction and its work on the National Water Model, which Charlie [Haun] mentioned, pulling together all the various models to provide the most reliable and accurate forecasting of water levels on the inland waterways.

That particular model, National Water Model, Version 1.0, was officially implemented on August 16th. It is now operational on NOAA's website. I will provide the staff with the web link <http://www.noaa.gov/media-release/noaa-launches-america-s-first-national-water-forecast-model> that will be included in the minutes that you could find the website with the most up-to-date information on the National Water Model.

As part of the roll-out of the National Water Model this summer, several guidance output variables from the National Water Model Version 1.0 have been made available to the public through prototype web and data services. I will also provide links for that. The image viewer [<http://water.noaa.gov/tools/nwm-image-viewer>] provides access to pre-generated imagery depicting prototype guidance from the National Water Model, including streamflow, streamflow anomaly, and soil saturation. An experimental web mapping service allows access to forecast guidance hydrographs for 2.7 million river reaches for short-, medium-, and long-range forecasts [<http://water.noaa.gov/map>].

As this output is from the first version of the National Water Model, it does not yet contain information on the anthropogenic effects on streamflow and the results of the model output should be viewed with caution. The model output is undergoing extensive testing, validation and verification. The next version of the National Water Model will be released in the spring 2017 timeframe.

That concludes my remarks General Jackson and Chairman Hettel. As I announced at the last Users Board meeting, Admiral Shepard Smith is now the new Director of NOAA's Office of Coast Survey and in this capacity is the formal designated NOAA representative to this Board. I was very pleased that Admiral Smith asked me to represent him at today's meeting and for me to be with you again. Admiral Smith and I appreciate the opportunity to participate in these meetings, to provide assistance, and provide a bridge to NOAA's programs and offer NOAA's assistance in any way as the Board sees fit. Both Admiral Smith and I very much support the Board's commendable mission. Thank you.

MAJOR GENERAL JACKSON: Thank you very much Mr. Magnuson. Ms. Brand.

MS. LAUREN K. BRAND: Thank you, General Jackson. It is an honor to be here today, and for those of you who I have not yet met, I serve as the Maritime Administration's Associate Administrator for Intermodal System Development, and I am changing the name to Ports and Waterways, as soon as we can get all the paperwork done because the other office designation is too much of a mouthful.

This is my second opportunity to participate as a Federal observer on this Board, and I just want to take a moment to say, Assistant Secretary Darcy, we so respect all the work that you have done and you will always have a friend at the Maritime Administration, so let us know if we can ever help you in your future endeavors.

I am privileged to lead a team of professionals whose mission is to improve the maritime transportation system, including ports, connectors, and marine highways through investment, integration, and innovation to meet the current and future needs of the nation. It is our team's personal vision to achieve a capable connected system -- water, rail, and road -- to benefit every American. We have a vested interest in the success of the portion of the industry that is doing business on our nation's inland rivers and waterways. Although we are not directly involved in funding or policy making decisions with regards to operating and maintaining the physical infrastructure of the nation's navigation system and the operation and maintenance of the inland rivers and waterways, we look forward to strengthening our relationship with the Army Corps of Engineers in working together more to making sure that the infrastructure projects that MARAD is funding and the projects that the Corps is working on

are in the same part of the country. We don't want to be working ten miles away from each other. A member of my team who is in attendance at today's meeting and I met with members of your team in the past and we look forward to strengthening those relationships and doing more work and coordination in the future.

One of the areas that I mentioned that we are involved in is port infrastructure development. Right now my team is managing over \$750 million of Federal grants that are leveraging an additional \$1.7 billion in port projects around the country. This year alone is a record year. We had both the eighth round of the "TIGER" [Transportation Investment Generating Economic Recovery] program grants and the first round of the "FASTLANE" [Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies] program grants. Between the two, we have awarded \$147 million for port projects. Included among these grants are some inland waterway projects, the most recent one announced was the one in Little Rock, Arkansas entitled the "Little Rock Port Authority Growth Initiative." We are excited about all that work and we are looking forward to doing more. We are getting better at it. The port industry has been behind the other modes in obtaining Federal dollars. They weren't used to the Federal grant process, especially discretion grants, which are very competitive. The "TIGER" program, which has been the only program for eight years for port infrastructure projects, for every dollar requested, we only have a nickel to award. It is extremely overleveraged.

We have now analyzed -- we had an amazing intern this summer, and he analyzed every one of the 800 port applications we received over the eight years of the program, and we can now slice and dice that information and would like to be able to share that with the Corps. I can't give you the names of the entities, but we can give you the geographic information on who is looking for berth improvements, who is considering expansion plans, who are doing retrofits, who needs rail connectors, which you may or may not be considering in your work. But I think we can work together with some of this data that we have never had access to before.

I also want to say that very shortly we will be awarding \$4.8 million in Marine Highway grants, and with the Continuing Resolution, if it is extended, we will have Marine Highway grant program again in Fiscal Year 2017. The marine highway project submissions have been rolling every six months. We had an open season, and we are getting more and more applications for those grants every year. We now have marine highway projects that are actually up and running on inland waterways around the country at different locations around the country.

Most importantly, included in the "FAST" Act [the Fixing America's Surface Transportation Act of 2015, Public Law 114-94, signed into law on December 4, 2015] Congress required the formation of a National Freight Network. As you may know, ports and waterways has never been part of the freight network of this country.

The first proposed National Freight Network included 76 ports. That's not bad. But we have over 300 ports in the country. I am very pleased to say that our team and the agency has worked very hard, and we now have 165 ports recognized in the port freight network, and it will be coming out on the map very soon.

Twenty-six of those are inland ports, 36 are on the Great Lakes. One of the biggest ways we did that -- and I have to credit our Maritime Administrator Paul "Chip" Jaenichen for

being the champion for this -- is that we got the bar moved from a two million ton threshold to a one million ton threshold and a five hundred thousand ton domestic cargo threshold.

By changing that threshold to something that was much more realistic, we were able to increase recognition for ports that needed infrastructure improvements in our country.

Finally, as a shameless plug, our own FACA committee, the Maritime Transportation System National Advisory Committee, has its next meeting on the October 18 and 19 in St. Louis, and I would like to officially invite someone from the Corps to be a Federal observer at our FACA committee going forward. Thank you.

MAJOR GENERAL JACKSON: Thank you very much Ms. Brand. Mr. Marathon.

MR. NICHOLAS MARATHON: Thank you, General Jackson, for the opportunity to be here today and the site visit yesterday. It was very educational.

For the record, I am representing Mr. Arthur Neal. He is the Deputy Administrator of the Transportation and Marketing Program of the Agricultural Marketing Service at the U.S. Department of Agriculture.

U.S. agriculture is projected to have a remarkable year this year, with record corn and soybean crop production. In addition, there could be record soybean exports and the highest corn exports in ten years. This could be a good year in terms of tonnage for the barge industry. Based on past trends, over half of corn and soybean exports can be shipped from inland areas to coastal ports by barge.

Year to date, the USDA has inspected 24,600 barges of grain that were unloaded in the Mississippi River Gulf region for export to foreign countries. This is about 32 percent higher than the five-year average and doesn't account for all of the big crops that are in the field right now.

Part of USDA's ongoing research is a comprehensive study of agricultural transportation that was mandated by the 2014 Farm Bill. This study was mandated by the provisions of the current farm bill, Public Law 113-79, which directs the USDA to conduct a general study of the transportation issues of agricultural products [Section 6206 entitled "Study of Rural Transportation Issues" of the Agricultural Act of 2014, Public Law 113-79, enacted February 7, 2014].

The current study underway updates the results of a previous study titled "*Study of Rural Transportation Issues*" which was prepared in 2010 and which was prepared in response to Section 6206 of the Food, Conservation, and Energy Act of 2008 (PL 110-246), the Farm Bill of 2008, which directed the Secretaries of Agriculture and Transportation to jointly conduct a study of rural transportation issues. That report reviewed transportation and its effect on rural communities, with an emphasis on agricultural transportation.

Presently, this project is in the clearance stage, and we hope to have it available later this year or early 2017.

In a related project, we have finished an analysis of the impact of lock closures on the movement of corn and soybeans. The report will show the impact of using more expensive rail transportation when a lock is closed for an extended period. That report is finished and is waiting for clearance, and I hope to have it available later this month.

That concludes my remarks General, and once again, thank you very much for today's meeting and yesterday's informative and educational site visits.

MAJOR GENERAL JACKSON: Thank you, sir, very much. Before I turn the microphone over to Chairman Hettel for his opening remarks, I failed to recognize Mr. James Bodron from the Mississippi Valley Division. Jim, where are you? Thanks. Jim is our Director of Programs from MVD. Jim, thanks so much for being here and all the support that you provide the inland transportation system in the Mississippi River valley region.

With that, Mr. Chairman, I pass the microphone over to you. Thank you.

CHAIRMAN MARTIN T. HETTEL: Thank you, General, and good morning and welcome all to our IWUB Board Meeting No. 80 here in Tinley Park, Illinois. The Board would certainly like to welcome the Honorable Secretary Darcy to our meeting today. We are honored you could join us today and thank you for your many years of service to our country and we wish you the best in your future endeavors going forward.

MS. DARCY: Thank you.

CHAIRMAN HETTEL: The Board would also like to thank American Commercial Barge Lines for our social event last night, along with Canal Barge Company for sponsoring not only the coffee service but breakfast items, which had I known were going to be here I would not have eaten breakfast in the restaurant, but a very nice spread from Canal Barge Lines also.

The Board also wants to extend its appreciation to the Corps' Rock Island and Chicago Districts offices for our site visits yesterday. The Board realizes the logistical coordination that goes into scheduling these types of events, especially when you have two districts involved, let alone the two districts being from two different divisions.

The site visits yesterday were extremely informative to the members of the Board, and while the possible installation of additional Aquatic Nuisance Species [ANS] controls at the Brandon Road Lock and Dam is not an Inland Waterways Users Board project, due to the fact that the cost of any installation of ANS controls would not be derived from the Inland Waterways Trust Fund, the Board will always have concerns about projects that could change the efficiency of delivering commodities on the inland waterway system.

With that being said, I think it is important to enter into the record some facts that I know about the presence of Asian carp on the Illinois River.

Former Chief of Engineers, Lieutenant General Thomas P. Bostick stated in a Congressional hearing [a hearing of the House Appropriations, Energy and Water Subcommittee, held on February 11, 2015] that in recent years the leading edge of the adult Asian carp population on the Illinois River has been reduced 68 percent. Add to that, the U.S. Fish and Wildlife Service stated that Asian carp were first identified in the Dresden Island Pool

[Dresden Island Lock and Dam, located at Illinois River mile 271.5 above the junction with the Mississippi River] just below Brandon Road [Lock and Dam] in 1999. The U.S. Fish and Wildlife Service also states that in the years since the Asian carp were first identified in the Dresden Island pool, from 1999 to 2015 there have been 236,171 barges pass through the Brandon Road Lock and Dam with no evidence of any Asian carp passing through Brandon Road with those 236,171 barges.

As we saw yesterday, we have three electronic fish barriers in operation in Romeoville with a fourth under construction. In addition, there exists the possibility of yet another electronic fish barrier being installed at Brandon Road Lock and Dam.

Many shippers and carriers believe the current efforts we have in place will prevent the migration of Asian carp and no further action is justified. As the U.S. Army Corps of Engineers Division offices work towards a conclusion, please know industry seeks common ground, as industry reviews all options the U.S. Army Corps of Engineers have identified to date.

We appreciate the cooperation, collaboration, and working relationship the industry has with the Corps as it works together to find a resolution.

We have plenty of really capable people working on the possibility of additional ANS controls being installed at Brandon Road Lock and Dam. If any additional ANS controls are to be installed, they must be installed without impeding the delivery of commodities through Brandon Road, as we do today.

General, this will conclude my brief opening statement. However, with your permission, I would like to venture off the agenda for a minute and seeing how most of the other Board members have not been exposed to the possible ANS controls that could be installed at Brandon Road, I would like to give the Board members an opportunity to comment or ask any questions they may have on this topic, starting with Vice Chairman Woodruff.

MR. WILLIAM M. WOODRUFF: I will take my opportunity with the microphone first of all. Dr. Sudol was mentioned in his LPMS work, and I was very impressed. I attended that meeting several weeks ago with him and his team and sometimes you see people who -- somebody told them to do something so they are going to do it, and then sometimes you see somebody who is leaning forward in the trenches and really trying to make a difference and solve problems and provide a service. That was the impression I got from him and his team. It was, "How can we do it better?", "How can we better serve the nation?" I want to offer an "attaboy" to Dr. Sudol and his team because they really do seem to be focused on getting absolutely the best data out in the best way to provide the greatest benefit to the nation.

With respect to yesterday's tour, one of the things that impressed me was the level of investment that the Trust Fund has made and the nation as a whole through "ARRA" [the American Recovery and Reinvestment Act of 2009, Public Law 111-5, signed February 27, 2009] and other sources in the Chicago Area Waterways system above Brandon Road. I absolutely agree with the Chairman that ANS controls are not within the purview of this Board, and the "Unlock Our Jobs" Coalition and other groups are speaking very ably for industry with respect to those issues, and I would certainly defer to them with respect to it, but we have got a great investment that we have made, we continue to make, and I would hate to see anything

happen that would impair the investment of Trust Fund dollars that we have made in the Chicago Area Waterways system.

The things that could impair that investment in my mind are things that would make the efficiency of inland waterways transportation decrease for serving the markets in the Chicago area. Anything that adds cost, complexity, and, most importantly, endanger the safety of our crews.

We have an absolute duty to the people who work for us to let them go home safely at the end of their hitches.

With the existing electric barriers, we were told that no one while transiting that barrier can leave the confines of the boat. Yet, when we approach locks, of necessity -- you saw it yesterday with your own boat -- the crew has to be out there providing information to the captain how far off they are. The lockmasters take a very dim view of it when we run into the lock walls when we're coming in and out of the locks. We have to have our guys there to provide that situational awareness to the captain.

I am just very concerned about how you would blend the idea of an electric barrier in a lock in the same vicinity. I think we have to not only think about the economic piece, but we have to absolutely consider the safety piece as we go forward.

The final thing I will say is it seems like there is a sense of urgency driving a solution forward, perhaps even before we even know what all the alternatives might be. Yet, I don't see anything that is a source or a justification for that level of urgency. It does not appear that the fish are moving. It appears that we do have the time to make sure that we make the right decision, the right investment for the nation.

I know that there have been times throughout this process where we have heard that the sky was falling, that we needed to immediately close the Chicago [Chicago River Lock (entrance to Lake Michigan) located at river mile 327.2 from the junction with the Mississippi River] and the O'Brien [Thomas J. O'Brien Lock, located on the Calumet Sag Channel and Calumet River, located at river mile 326.3 from the junction with the Mississippi River] Locks.

That turned out not to be the case as further investigation -- and investigation was done. I just urge us to make sure we are making the right decisions with the right data and that we don't rush unnecessarily to a decision that might not be the right one or might not be correct.

MAJOR GENERAL JACKSON: Sir, first of all, thanks for those comments. I think those were mirrored yesterday when we had our discussion on site. I think we agree with everything that you said. I think Colonel Craig Baumgartner talked about the importance and value we place on safety and safety is number one for us, and we want to do whatever we can do to minimize any hazards to any of the mariners, and we continue to look at options on how we can do that. So that is still in play.

In terms of -- we talked about the different types of technologies, some that are more ready to go now. As we continue to evaluate options and other things that might go into this particular design, I think we still remain very, very flexible to take into account new and emerging technologies that might not be ready today and may be ready for tomorrow that may

be at a less cost and may be a higher efficiency and certainly more effective at trying to achieve what the outcome would be.

I think we will continue to look at that as we work through our options. As we get to the Chief's report, I think, to the extent that we can be flexible on how we word what actually happens on the ground. When we submit a Chief's report, obviously it is not a hundred percent designed, and so there is some flexibility for us to work the designs and the technologies because there can be, in some cases, time between authorization and appropriations where we start our work, so we will continue to evaluate all of those alternatives.

As we discussed yesterday, we will still continue to be collaborative and do full reviews with the public and with industry and welcome any comments and ideas and suggestions anyone has as we work our way through these options so we can provide the best solution for Brandon Road that we can possibly provide, given the authorities that we are operating under today.

I don't know if there is anyone from the Rock Island District that wants to, from the audience, add anything to that?

MR. POINTON: Sir, can you please grab a microphone so we can get this on the record.

MAJOR GENERAL MICHAEL C. WEHR: I think I mentioned this yesterday, but I just want to highlight that I don't want anyone to be confused with the speed of our study with the inclusivity of the end product, so to speak, because we are known for studying things way too long and missing opportunities. What we are trying to do is discipline ourselves to deliver something that we know based on the current technology but to keep the door open, as you just said, and I want to make sure we are clear on the evolution of technology in making sure -- and even the Chief gets this, as we took him up there, and he is eager to move and also absorb those future technologies. Thank you.

MAJOR GENERAL JACKSON: Thank you, General Wehr.

MR. WOODRUFF: Thank you. I know that there are a lot of smart people working really hard on this, and we certainly appreciate it.

CHAIRMAN HETTEL: Are there any other Board members who would like to offer a comment at this time?

(No response.)

MR. POINTON: Thank you, Chairman Hettel. Next on the agenda is the approval of the minutes of the last Users Board meeting, Meeting No. 79 which was held this past July 1st in Paducah, Kentucky. I ask for a motion from one of the Board members.

MR. DANIEL P. MECKLENBORG: So moved.

MR. POINTON: Thank you, Mr. Mecklenborg. Do I have a second?

MR. ROBERT R. MCCOY: Second.

MR. POINTON: Thank you, Mr. McCoy. Can I see a show of hands or ayes for all in favor of approving the minutes?

ALL MEMBERS: Aye (unanimous).

MR. POINTON: Any nays? (No response.) Great. The motion is carried unanimously. Thank you.

Next on the agenda we have Mr. Jeff McKee, Chief of the Navigation Branch in our Headquarters Office of Operations and the Navigation Business Line Manager for the Corps, and Mr. McKee be talking about the FY 2017 funding for our inland navigation activities. Mr. McKee's presentation can be found in your blue binder in Tab 4. If you want a hard copy, you can follow along in your read ahead book, but Mr. McKee's presentation will be also be shown on the screen.

You are up Jeff.

MR. JEFFERY A. MCKEE: Good morning, ma'am, sir, Mr. Chairman, ladies and gentlemen, and happy new fiscal year [Fiscal Year 2017 began on October 1st, 2016].

Next slide. We are into our federal Fiscal Year of 2017, just barely into it. I threw the slide up on the screen here for you just to show -- you can see we finished out the yellow line, the vertical yellow line, shows the beginning of October where we are right now. We have finished the FY 2016 program. We are now starting the execution phase of the FY 2017 program. We are also in the defense phase of the FY 2018 budget.

What is not shown on the slide is we are also working on the FY 2017 work plan in anticipation of Congress giving us a full year appropriation, and we are actually getting ready for FY 2019. We are developing our budget guidance for FY 2019. As you can see, we are usually working on activities related to three fiscal years at any one time [execution, defense and development].

Next slide. In terms of the President's FY 2017 budget, you can see on the top line the navigation program, split by coastal activities and inland activities, showing \$1.017 billion for our coastal navigation program, and \$917 million for the inland program. Taken together that totals \$1.934 billion for the total navigation program as compared to \$4.620 billion for our entire Civil Works program for the Corps of Engineers. You see the navigation program budget is approximately 42% of the Corps' budget. For comparison, you can see over time from Fiscal Year 2009, we have been gaining some market share generally over the last couple years, as well as actual amount of funds going up in terms of the President's budget.

Next slide. Specifically for navigation by appropriations account, you can see \$22 million was requested by the President to carry out General Investigations activities, \$348 million was requested to carry out Construction General activities, \$1.527 billion was requested to carry out Operation and Maintenance activities, and \$37 million was requested to carry out Mississippi River and Tributaries related activities, taken together resulting in a total of \$1.934 billion for the entire navigation program.

Next slide. This slide shows the President's budget request for inland navigation related activities. For inland navigation, you can see the amount requested for the General Investigations account is \$8 million. Over half of that amount is in the "Remaining Items" or programmatic type of activities such as Research and Development. Of the \$8 million figure, there is approximately \$2 million directed towards specific studies, which you will see identified in a later slide. There is a figure of \$243 million requested to carry out construction related activities. Of the \$243 million figure, Olmsted Locks and Dam on the Ohio River is requested to receive \$225 million of the \$243 million total requested. Operation and Maintenance activities are requested to receive \$631 million of the \$1.527 billion total requested, the Mississippi River and Tributaries activities are to receive \$35 million of the \$37 million total requested.

Next slide. This slide shows some of the highlights of the President's FY 2017 budget request. For the General Investigations account, the Three Rivers study in Arkansas is requested to receive \$580,000; Inner Harbor Navigation Canal Lock Replacement General Re-evaluation Report in New Orleans, Louisiana is requested to receive \$550,000; and the Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks study located in Texas is requested to receive \$1.0 million.

In the Construction General account, the Olmsted Locks and Dam project on the Ohio River near Olmsted, Illinois is requested to receive \$225 million. The Olmsted Locks and Dam project is the only project that is requested to draw on funds from the Inland Waterways Trust Fund.

The Atlantic Intracoastal Waterway, Deep Creek Bridge in the state of Virginia is requested to receive \$12 million to complete that bridge over the Atlantic Intracoastal Waterway. That project does not draw on any funds from the Inland Waterways Trust Fund. The Atlantic Intracoastal Waterway Deep Creek Bridge project is cost-shared between the City of Chesapeake, Virginia and the Federal government.

Next slide. For the Operation and Maintenance account, the \$631 million requested will focus on reducing the risk of project failure on high commercial use waterways. That said, \$189 million is being requested to focus on projects on the Mississippi River; \$105 million is being requested to focus on projects on the Ohio River; \$61 million is being requested to focus on the Gulf Intracoastal Waterway; \$35 million is being requested to focus on projects on the Illinois Waterway; \$23 million is being requested to focus on projects on the Tennessee River; \$20 million is being requested to focus on projects on the Black Warrior and Tombigbee waterway; and then the remaining \$180 million is to be distributed to moderate commercial use and low commercial use waterways.

The Mississippi River and Tributaries account requested amount of \$35 million is split between \$3 million for Construction related activities and \$32 million for Operation and Maintenance activities. The difference between the Mississippi River and Tributaries request of \$35 million and the \$37 million that you saw a few slides earlier was \$2 million, and that request is for inland harbors. Even though these harbor projects are located on the inland waterways system, they are considered coastal in nature their Operation and Maintenance related activities are reimbursable from the Harbor Maintenance Trust Fund. We treat them as coastal to keep all of the Harbor Maintenance Trust Fund projects together.

Next slide. From the House of Representatives and Senate Appropriations committees' markups that we had, you can see it is fairly close between the bills, although there are some differences. You can see the General Investigations, the House of Representatives Appropriations committee added \$13.5 million to the Corps requested budget amount and the Senate Appropriations committee added an additional \$15 million above and beyond the President's budget request, and you can see the additional funds are distributed among the various categories. If you look at the first line item, the category identified as "Navigation", that category can fund any type of navigation project or program. It can fund inland. It can fund coastal. It can fund Remaining Items. Any type of navigation activity can be funded out of that general navigation category.

The next line item, identified as "Coastal and Deep Draft", that is exactly what that is. Unless it is a deep draft navigation project that is deeper than 14 feet, it cannot qualify to receive funds from the category of funds. It is strictly for coastal and deep draft projects.

The next line item, identified as "Inland" again, that is exactly what that is. Only inland waterways can qualify to receive funds from that category of funds.

The next line item, identified as "Small, Remote, Subsistence" funding category is to be used for both low commercial use coastal projects as well as low commercial use waterways. That funding category can be used to fund both inland as well as coastal projects.

And the last line item under Investigations is identified as "Remaining Items." We are unsure of the exact dollar amount because some of the plus-ups, whether or not it is for the navigation program or some of our other Civil Works business lines, such as Flood Risk Management, Hydropower or Aquatic Ecosystem Restoration.

The next category is "Construction." The first line item under "Construction" is "Navigation." That general category can fund anything. What were started with the FY 2016 funding pots, you see the Inland Waterways Trust Fund. Those are actual Trust Fund dollars. The matching share of the General Treasury dollars must come out of the general "Navigation" pot shown here. The Congressional language that accompanied the FY 2016 appropriations and that was included in FY 2016 appropriations and likely to be included in the FY 2017 appropriations is that we must allocate all of the additional \$75 million, in this case in FY 2017, if these numbers come through on the Inland Waterways Trust Fund projects as well as the corresponding General Treasury share out of the general Navigation pot before we can allocate anything out of the navigation pot to coastal construction that was started in FY 2016. Prior to that, in the funding pots we had strictly an inland funding pot that was given to us that included both the Inland Waterways Trust Fund as well as the General Treasury appropriations.

The next line item is "Section 107" and is concerned with navigation improvements at small boat harbors. Any projects that are under \$10 million can qualify for improvements under Section 107 authority.

The next line item is "Section 111" and is concerned with the prevention or mitigation of damage to coastal or Great Lakes shorelines caused by Federal navigation projects, particularly along coastal inlets, along our oceans, as well as the Great Lakes where we have

put in channels with jetties and breakwaters and trap sand on one side and starve the downstream side of sand. The Section 111 program is to mitigate for those damages.

Then at the bottom of the slide you can see the category, “Mississippi River and Tributaries, Operation and Maintenance Dredging”. This category applies not only for the main stem of the Mississippi River, but also would include shallow draft harbors along the Mississippi River.

Next slide. For the additional funds added by the House and Senate Appropriations committees for the Operation and Maintenance account, you see the House Appropriations committee added \$394.8 million and the Senate Appropriations committee added \$425.728 million. Then below the top line figure, you see the breakout by various line items, “Navigation”, “Deep Draft Harbors and Channels”, “Inland Waterways”, “Small, Remote and Subsistence”, “Donor and Energy Ports” and “Remaining Items.” Similar rules apply to the distribution of additional funds from the various funding categories for Operations and Maintenance as they did for Investigation and Construction on the previous slide.

I will direct your attention to the category identified as “Donor and Energy Ports”. This category applies to high commercial use coastal ports that either handle a lot of containership traffic or energy commodities, and that “Donor and Energy Ports” category provides funds back to the port to be used for traditionally non-Federal project purposes, such as environmental remediation or the maintenance dredging of a non-Federal access channel or a non-Federal berthing area.

You can see at the bottom of the slide, the total additional funding for the Corps’ navigation program in FY 2017 is \$745.55 million provided by the House of Representatives Appropriations committee and \$758.517 million provided by the Senate Appropriations committee, somewhere in the range of \$750 million if enacted by the Congress.

At this point in time we are not sure when we will get Congressional passage of an Energy and Water Development Appropriations bill and a bill signed into law, other than to say the current continuing funding resolution continues until December 9, 2016 [Public Law 114-223, signed into law on September 29, 2016].

Next slide. This slide shows additional provisions in the House version of the Energy and Water Development Appropriations bill. There is language says that there can be six new study starts and four new construction starts. The House bill says that \$1.263 billion is to be directed to Harbor Maintenance Trust Fund projects.

The House bill rejects the Administration’s proposal for a vessel use fee on inland waterways. And you can see the other items on the slide including language concerning the distribution of funds to donor port and energy transfer ports, the collection of information on underwater pipelines, and the placement of dredged material in open water.

Next slide. This slide shows additional provisions in the Senate version of the Energy and Water Development Appropriations bill. There is language that says there can be five new feasibility studies and eight new construction starts in the Senate bill. There is a provision to expedite the regulatory review of export terminals. You are certainly reliant on a lot of those

export terminals, as Mr. Marathon indicated before when he indicated that we are taking our crops down the inland waterways system to our coastal ports for shipment overseas.

And, the last two points on the slide address language concerning the placement of dredged material in open water and allocation of funds for donor and energy ports.

Before taking questions, I do want to reiterate that we are operating under a Continuing Resolution at this point in time. That will continue through the 9th of December. Some of the rules that we have in terms of policy constraints, the level of operation is at the appropriations account, so we continue operations at the FY 2016 levels for the Investigations account, for the Construction General account, for the Operation and Maintenance account, and the Mississippi River and Tributaries account. It is not by individual project.

As an example, if a project received \$10 million in FY 2016, it does not mean that project is going to receive \$10 million this year. It is at the top account level when you do that. We have a policy of “the lesser of”, and that means the lesser of the House version of the Appropriations bill, the lesser of the Senate version of the Appropriations bill, or lesser of the President's budget request. For a particular project, you look at what is in the President's budget request, what is in the House bill and what is in the Senate bill. The least amount shown in those three documents for that particular project is what we are allowed to work off of under the Continuing Resolution Authority [CRA]. Again, the continuing resolution goes through the 9th of December, which is 70 days.

The Office of Management and Budget [OMB] typically give us that proportion of the fiscal year's funds to operate under. But what that also means is, is if a project is not included in the President's budget request or the House or the Senate version, we are not allowed to do any work on that project.

Also, under a Continuing Resolution, we are only allowed to continue working on projects and studies or other activities and programs that were funded either through a reprogramming action or through an allocation in Fiscal Year 2016. That means if a project or study or program did not receive any funds in FY 2016, we cannot start work on that project or study in FY 2017.

Those are most of the guidelines that we are operating under a Continuing Resolution Authority. The reason we are using “the lesser of” the House or the Senate version is that preserves the Administration's and the Congress' prerogative to fund specific projects once we get either a year-long appropriation from the Congress or we get a year-long Continuing Resolution from the Congress. We do not want to move out on a project and start anything or go above a level for a project or a program that would not be the intent of the Administration or the Congress.

Subject to your questions, that concludes my presentation.

MR. POINTON: Thank you Jeff. Are there any questions for Jeff?

MR. MECKLENBORG: Jeff, I have a question. For the project on the Monongahela River [Lower Monongahela River, Locks and Dams 2, 3, and 4], was that project in the President's budget last year?

MR. MCKEE: Yes sir, the Lower Monongahela River project was in the President's budget for FY 2016 in the amount of \$52 million. We added additional funding in the FY 2016 work plan to raise that figure to about \$59 million. The Lower Mon project is not in the President's budget for FY 2017.

If you look at the President's FY 2017 budget request, the Lower Monongahela River Locks and Dams 2, 3, and 4; the Chickamauga Lock replacement project, the Kentucky Lock addition project, or the LaGrange Lock and Dam Major Rehabilitation project, none of those projects are in the President's budget, the House version or the Senate version of the appropriations bills. Therefore we cannot start work on those projects.

MR. MECKLENBORG: Does that mean you would have to discontinue work because you are working on some of those projects.

MR. MCKEE: No sir. We will continue construction with the funds that we have on the Lower Mon, Chickamauga Lock, and Kentucky Lock. The LaGrange Major Rehabilitation project would be considered a new start, so we do not have funds on that project at this point in time.

I will say there are very limited exceptions, if folks want to do work on projects that were not in either the House, the Senate, or the President's budget. But in order to do that, you have to use funds that have been carried over from a prior fiscal year and you must get Headquarters approval and possibly approval from Ms. Darcy's office [the Assistant Secretary of the Army for Civil Works]. But Corps policy is to receive approval at least from the Headquarters level. Also, typically we do not have the carryover funds that are available to fund a lot of these large construction projects. Does that answer address your question?

MR. MECKLENBORG: I think it does. It is obviously a concern and the carryover funds will be exhausted at a fairly near term point; wouldn't they?

MR. MCKEE: For the Lower Mon project specifically we have a construction contract that was not awarded in FY 2016, so we will be awarding that construction contract in FY 2017.

MR. MECKLENBORG: Okay.

MR. MCKEE: And there are additional carryover funds on the Lower Mon project.

MR. MECKLENBORG: Okay. Thank you Jeff.

CHAIRMAN HETTEL: Jeff, just to make sure I am clear on what you just told us on the CR [continuing resolution]. The lesser of the House version, the Senate version, or President's budget request. That is for FY 2017?

MR. MCKEE: FY 2017. Yes, sir.

CHAIRMAN HETTEL: Okay. I take it that is -- just so I understand, because we are in the FY 2017 budget year.

MR. MCKEE: Yes sir that is correct.

CHAIRMAN HETTEL: With the President's budget request only including funds for the Olmsted project, again, no -- you don't see any of these dollars through the CRA going to any of the other three priority projects?

MR. MCKEE: That is correct, sir.

CHAIRMAN HETTEL: I have some other questions and a request on your presentation, but I will go ahead and yield to Board Member Mr. Somales.

MR. MICHAEL T. SOMALES: Mr. McKee, my question concerns your earlier statement that you had not let a contract for 2017 yet? Are there funds available for that contract?

MR. MCKEE: Yes sir, there are. There was -- our FY 2016 funds provided for awarding one of the options on the Lower Mon project. At the last Board meeting, there was a discussion of the possibility of splitting one of those options and funding part of that under the ongoing contract. During the final contracting process, it was determined that we could not split that option. We did not have enough funding for the entire option, so those funds are being carried over into FY 2017. Those funds will be used for -- and we will need to provide additional funds in 2017 at some point in time to fully award that option.

MR. SOMALES: Just for clarification, do we have enough funds to continue the construction into 2017? If the answer is "yes", obviously, that is the end of the question. But if the answer is "no", at what reduced rate -- what are we talking about slowing down and by how much?

MR. MCKEE: There is ongoing work that will continue into FY 2017. The contracts that have already been awarded will continue over time. Mr. David Dale will go into greater detail a little bit later in the meeting on the Lower Mon project as well as the Chickamauga Lock and the Kentucky Lock projects concerning where the Great Lakes and Ohio River Division is with respect to ongoing construction and funding and what is funded and for how long.

MR. SOMALES: Okay. Fair enough. We will wait for Mr. Dale's report to ask more questions. Thank you.

MR. MCKEE: You are welcome Mr. Somales. Are there any other questions for me?

CHAIRMAN HETTEL: Jeff, would you do me a favor and go back to Slide 10 for a moment. I just want to talk about the additional funds added for Operation and Maintenance. I assume the additional funds directed towards the "Deep Draft Harbor and Channel", the "Small, Remote, Subsistence", and the "Donor and Energy Ports" line items will all be derived out of the Harbor Maintenance Trust Fund; is that correct?

MR. MCKEE: Not exactly. The "Deep Draft Harbor and Channel" line item is derived out of the Harbor Maintenance Trust Fund. As I indicated before, the "Small, Remote,

Subsistence” harbors can be for inland low commercial use waterways as well as low commercial use harbors, so it will be split. Whatever is funded for harbors out of the “Small, Remote, and Subsistence” line item is reimbursable from the Harbor Maintenance Trust Fund, but the inland waterways projects are not reimbursable from the Harbor Maintenance Trust Fund.

From an inland standpoint, all of the “Inland Waterways” is for inland waterways projects. We can use the general “Navigation” line item for inland as well as coastal projects and the “Small, Remote, and Subsistence” line item can be used for inland as well as coastal projects.

CHAIRMAN HETTEL: Does that then break down to the \$98 million in the House version and the \$93 million in the Senate version, then broken down between Division offices within the Corps on possible -- I guess what I am getting at is it looks like a big number, \$98 million and \$93 million. But when you break it down through all the Corps' different inland Division and District offices, it may be minuscule for the Division.

MR. MCKEE: Per the Division, that is correct. As I indicated before, we are in the process now of developing the FY 2017 work plan. All of the District and Division offices have submitted their work packages and ranked those work packages in priority order in terms of the things that they feel are most important to fund, and we will go down the list of given -- at least right now of what we are looking at for the tentative funding pot amounts and select projects that have the highest merit, in the event that we do get a year-long appropriation with these funding pots in that appropriation.

CHAIRMAN HETTEL: Thank you for that clarification. Jeff I have one additional request for you. As you know, we are going to start developing our Annual Report to Congress, and I believe we are going to look at scheduling our next meeting somewhere in the D.C. area on December 4th, 5th, 6th, somewhere around those dates. Can you -- a request for that meeting. Can you get us updated BCRs [benefit to cost ratios] and RBRCRs [remaining benefit to remaining cost ratios] at the current 3.125 percent discount rate for the Olmsted Locks and Dam project, the Kentucky Lock addition project, the Chickamauga Lock replacement project, and the Lower Monongahela River Locks and Dams 2, 3 and 4 project, excluding the relocation of the Port Perry Railroad Bridge and the landside lock chamber? Can you have those for us at the next Users Board meeting?

MR. MCKEE: We will work on that, sir. I will put together a table like I provided at the last meeting of BCRs. We will just have one in addition to the applicable rate and the 7 percent. We will add a column for the current discount rate.

CHAIRMAN HETTEL: Great. Thank you very much Jeff.

MR. MCKEE: Are there any other questions for me? (No response.) Thank you.

MR. POINTON: Thanks, Jeff. Next on the agenda is Mr. Joe Aldridge. He is going to give us the regular Inland Waterways Trust Fund status and project updates and comparison of the Inland Waterways Trust Fund revenues. Mr. Aldridge is the Inland Waterways Trust Fund account manager in the Programs Integration Division at USACE Headquarters. Joe, the microphone is yours.

MR. JOSEPH W. ALDRIDGE: Good morning. My name is Joseph Aldridge, and I am the Inland Waterways Trust Fund account manager. Good morning, Secretary Darcy, Chairman Hettel, Major General Jackson, Board members, and guests. This morning I will give an update on the financial report of the Inland Waterways Trust Fund and project updates.

Next slide. First up is the financial report for the FY 2016 Status of the Inland Waterway Trust Fund. This is as of 31 August 2016. At the top of the slide we have the beginning balance of the Inland Waterways Trust Fund at the beginning of FY 2016 which was October 1, 2015 of \$54,223,049. This was retained at the U.S. Treasury in the Inland Waterways Trust Fund account. We will not have the September 30, 2016 Treasury statement with full fiscal year Inland Waterways Trust Fund revenues and transfers data until approximately October 10th.

As of 31 August of this year, \$95.5 million of fuel tax revenue collected and the Trust Fund earned just over \$200,000 in interest, for a total year to date balance of \$95,744,096. Adding the beginning balance of \$54.223 million to the year-to-date revenue collected and interest earned, the FY 2016 current total funds available Trust Fund balance is \$149,967,145.

Next slide. This slide shows the Inland Waterways Trust Fund revenues compared to the previous five years. This covers the period from FY 2011 through FY 2016. When we start the FY 2017 reporting, we will stop showing FY 2011, if that is all right with the Board. Here you can see that we have the current FY 2016 represented by the green bars compared against the five previous years' revenue side by side to better display the revenue trends.

As stated, the FY 2016 year to date balance, as of 31 August, is \$95,744,096. You can see the \$.09 [9 cents] increase in the fuel tax by the projection of the green bars and the red bars starting in April of 2015.

The U.S. Treasury projected inland waterways fuel tax revenues to be \$107 million in FY 2016. This is represented by the dashed bar in the September column of the graph. This multi-year graph shows the fluctuations of revenue collected throughout the year as users of the waterway and specific parts of the waterways system are either closed or weather dependent.

CHAIRMAN HETTEL: Joe. I have a question on Slide 3 in your presentation. What does the dotted, dashed line in September represent?

MR. ALDRIDGE: Sir, that dashed bar represents the Department of Treasury's projection of \$107 million in Trust Fund revenues for the entire fiscal year, because we don't have that figure as of yet. We won't have the September report showing full year fuel tax revenue until around the 10th of October.

CHAIRMAN HETTEL: Okay. On Slide 2, you reference year to date fuel tax revenue of \$95.54 million, but on Slide 3 it is projected to be full year revenue of \$107 million, so it brings up some questions I discussed with you last night on -- I get totally confused about how the Treasury Department estimates our monthly deposits.

We, as an industry, make a deposit on a quarterly basis into the Trust Fund. When I look at FY 2014 receipts of \$81.75 million and the projected FY 2016 receipts on your previous

slide of \$95.5 million with the increase of 9 cents a gallon, it comes out to about a 27 percent increase in the Trust Fund dollars, which -- I know our industry is pretty fuel efficient. I don't know if we are that fuel efficient.

I know you can't answer this question, but, General, maybe at our December meeting we can have somebody explain to us how the Treasury Department projects -- someone from the Treasury Department explain how they project our monthly revenues because we have seen them bounce all over the place at the last two or three Board meetings. I understand that Joe is only getting the numbers that are reported to him. I don't know if that is an option of our next meeting to see if we can have someone from the Treasury Department help us understand how they make these projections.

MAJOR GENERAL JACKSON: We will be glad, Mr. Chairman, to make that request.

CHAIRMAN HETTEL: Thank you.

MR. ALDRIDGE: I am not sure what your question was. If you could ask it again about the difference between my Slides 3 and 4 -- or Slides 2 and 3?

CHAIRMAN HETTEL: You referenced the fuel tax revenue collected for FY 2016 so far this year through the end of August at \$95.543 million.

MR. ALDRIDGE: That is correct, sir.

CHAIRMAN HETTEL: Then on your next slide that dashed bar you show represents \$107 million. Why is there a \$12 million difference there?

MR. ALDRIDGE: Yes, sir. That would be what the yearend amount of revenue that is projected to be collected by the end of the fiscal year in September. There is a \$12 million difference between the amount of revenue collected at the end of August and the projected amount of revenue to be collected in September.

CHAIRMAN HETTEL: For just the month of September?

MR. ALDRIDGE: That is correct, sir. September is usually a large month for tax revenue collections.

CHAIRMAN HETTEL: Okay. So your \$95.543 million figure does not include September's tax revenue collections.

MR. ALDRIDGE: That is correct sir. That \$95.543 figure for fuel tax revenue collections is as of 31 August.

CHAIRMAN HETTEL: Okay. Thank you.

MR. MCKEE: Sir, this is Jeff McKee. The \$107 million figure that the Treasury projected, that was a projection from last December that the Treasury Department published in advance in support of the Fiscal Year 2017 budget. Excuse me, it was actually published in December of 2014 with a projection for the Fiscal Year 2016 budget.

CHAIRMAN HETTEL: You are working with a projection developed in 2014, and we are in - almost completed 2016.

Mr. MCKEE: I am trying to recall. No, it was from last December, it was from December 2015 that the Department of the Treasury provided that projection for the remainder of the fiscal year. That figure was their annual projection for the remainder of the fiscal year. It is not something that the Department of the Treasury gives us every month.

CHAIRMAN HETTEL: Again, I think an explanation to the Board on how the Treasury Department estimates these Trust Fund revenue projections would be very valuable to us. Thank you, General, for that request.

MR. ALDRIDGE: Next slide. Slide 4. This slide compares the Inland Waterways Trust Fund revenues for the past three months, June, July and August for Fiscal Years 2011 to 2016. It is important to remember that for these months these figures are Department of Treasury estimates and could be adjusted at a later date.

Such was the case for the August figure where you see that there is only a \$5.5 million increase in the August figure over the July figure. The reason for that relatively small increase in tax revenue collections is that the Treasury Department adjusted the third quarter tax revenue collections down by a negative adjustment of \$3.874 million.

Next slide. Slide 5. The next slide presents the President's FY 2017 budget request and the total allocations for fiscal years 2012 to 2016 for eight specific projects.

The question was asked earlier concerning the Olmsted Locks and Dam project and the Lower Monongahela River project, both projects were in the President's FY 2016 budget request, but only the Olmsted project is in the FY 2017 budget. In FY 2016, Trust Fund dollars were applied to five projects -- Olmsted, Lower Mon, Kentucky Lock and Dam, Chickamauga Lock and Dam and the Lockport Lock and Dam Pool major rehabilitation project.

Next slide. I will now move into the project specific updates. For the Mississippi Valley Division, we have the Lockport Pool major rehabilitation project, the Inner Harbor Navigation Canal Lock replacement project, and the Mississippi River Lock and Dam 27 major rehabilitation project which was completed.

It should be noted that the Mississippi River Lock and Dam 27 major rehabilitation project was fiscally closed out on 29 June 2016. This notice will close out the reporting of this project. It will be removed from future Inland Waterways Users Board reporting per guidance from the Board Chairman received at the last Users Board meeting held this past July in Paducah, Kentucky.

MR. SOMALES: Excuse me a moment. Go back to the last slide, please. I would like to ask a question. For Fiscal Year 2017, in the President's budget, of the \$225 million requested for the Olmsted project. How much of that total is General Treasury dollars versus Inland Waterways Trust Fund dollars?

MR. MCKEE: Sir, this is Jeff McKee. For the amount of money coming out of the Inland Waterways Trust Fund, it's about \$34 million. Just under \$34 million.

MR. SOMALES: If we have no other projects funded in FY 2017, are we stranding dollars in the Trust Fund?

MR. MCKEE: If there are no other projects funded, you would have an increase in the Trust Fund balance, yes.

MR. SOMALES: We have increased our taxes by 9 cents a gallon per earlier plans to continue to fund all these projects, but essentially with no money spent on anywhere but at Olmsted, and we are just going to swell the Inland Waterways Trust Fund and not spend the money because of no Federal match.

MR. ALDRIDGE: Right now we have not developed a work plan for FY 2017, so I cannot give you numbers. There will, as Jeff mentioned earlier, we will eventually receive funding for the entire fiscal year 2017, but right now we are operating under Continuing Resolution Authority until December 9th. Jeff, do you want to expand on that?

MR. MCKEE: Sir, Jeff McKee. If you go back to the slide that I had in my presentation where I showed the additional FY 2017 funds included in the House and Senate versions of the Energy and Water Development Appropriations bills, I showed a line item under the Construction account titled "Inland Waterways Trust Fund". Both the House and the Senate included approximately \$75 million in additional funds for Inland Waterways Trust Fund financed projects. That would be above and beyond the Inland Waterways Trust Fund dollars that are going to the Olmsted project. That could be -- if Congress enacts something similar to that, there would be \$75 million that would be drawn from the Inland Waterways Trust Fund in addition to that \$34 million for the Olmsted project.

MR. SOMALES: Thank you very much Jeff.

MR. ALDRIDGE: Next slide. First up is the Lockport Pool Major Rehabilitation project on the Illinois Waterway, one of the project sites we visited yesterday. The Lockport major rehabilitation project is, for the most part, complete. Physical construction has been completed. Fiscal closeout is scheduled to be completed in mid FY 2017. With fiscal closeout, this project will be removed from the Inland Waterways Users Board reporting. Also, with fiscal closeout, any remaining Inland Waterways Trust Fund money will be moved to the 310 Inland Waterways Trust Fund account within USACE Headquarters and this will reduce the future draw from the Treasury. Again, this slide shows a physical construction completion date of December of 2016, but basically the project has been completed as far as physical completion.

Next slide. The Inner Harbor Navigation Canal [IHNC] Lock Replacement project on the Gulf Intracoastal Waterway in New Orleans, Louisiana. Changes since the last Users Board meeting. The results of the economic modeling conducted by the USACE Planning Center of Expertise for Inland Navigation and Risk-Informed Economics Decision making were received.

The General Re-evaluation Report [GRR] is currently on target to achieve the Tentatively Selected Plan [TSP] milestone in October 2016.

CHAIRMAN HETTEL: Excuse me, Joe. I have a question on that slide that Jeff may be able to answer. Jeff, the slide says that the “GRR is currently on target to achieve Tentatively Selected Plan milestone of October 2016”. As we saw yesterday, there are seven Tentatively Selected Plans for ANS controls at Brandon Road. Has the navigation industry seen any of the Tentatively Selected Plans for the GRR of IHNC or can we?

MR. MCKEE: Sir, I don't know if the New Orleans District office has shared those plans with the industry. Pat [Mr. Patrick A. Chambers, Deputy Chief of Operations, USACE, Mississippi Valley Division, Vicksburg, Mississippi] or somebody else from MVD, do you know if that Tentatively Selected Plan has been shared with the industry?

MR. PATRICK A. CHAMBERS: As of now, I think it has. The District is down to two plans.

MR. BOBBY DUPLANTIER: Yes, sir. The Tentatively Selected Plan has actually not been determined yet. It is actually scheduled for next week, October the 11th. Once that is reached -- and I have a separate presentation coming up on IHNC, and I will talk a little bit about that. But the TSP has not been determined yet.

CHAIRMAN HETTEL: I understand it hasn't been determined. My question is can the industry see what the TSP alternatives are? You may have two, three, or four of them. I don't know how many you have. This is the first time I have heard that you were going to come up with a Tentatively Selected Plan. As we saw yesterday, there are seven Tentatively Selected Plans for Brandon Road that we have been privy to see.

I think it would be beneficial for the navigation industry to know what the plans are that you are trying to work through, whether it is a 22-foot draft or a 12-foot draft. That all pertains to how much money we would spend on this project, so if we can know what those Tentatively Selected Plans are, it will help us understand.

MR. DUPLANTIER: During my presentation, I am going to talk a little bit about the different sill depths and dimensions of the locks that we are considering, but we can get you more specific information on the plans.

CHAIRMAN HETTEL: Very good. Thank you very much.

MR. POINTON: Those responses would have been from Patrick Chambers from the Mississippi Valley Division and Bobby Duplantier from the New Orleans District.

MR. ALDRIDGE: Continuing on with the slide on the Inner Harbor Navigation Canal Lock Replacement project, in the box titled “Next Steps” in the lower right hand corner of the slide, the New Orleans District will send a formal funding request letter for the amount owed by the Port of New Orleans by December 2016 to close out the construction of this project. The project will remain in the reporting cycle until the construction portion is financially closed out, which is still pending. Once the project is financially closed out, the project will be removed from future reporting at Inland Waterways Users Board meetings and the excess Trust Funds will be transferred to the 310 Inland Waterways Trust Fund account resulting in reduced future draw of Trust Fund dollars.

CHAIRMAN HETTEL: Joe. This is the second time I have heard you say upon the closeout of a project any additional funds will be transferred back to the Inland Waterways Trust Fund account. When these projects do close out, I am assuming you will present to us what that dollar value of the funds returned to the Trust Fund are?

MR. ALDRIDGE: Yes, sir. If that is what you wish.

CHAIRMAN HETTEL: Yes, that will be great.

MR. ALDRIDGE: Okay, sir.

MAJOR GENERAL JACKSON: Gentlemen, this is General Jackson. Before we get off that topic, Mark, if you could write down sort of the tasks, and one of the things that I would like to present at the December Users Board meeting is one slide that talks about our planning process to make sure that we all are in agreement and everybody on this Board understands the different touch points where industry can be involved in our planning process so it is not a mystery to anyone and also so we are all in sync so that we don't have inconsistencies between Districts and Divisions on how they engage with folks, whether it be navigation or others. I just want to make sure that that is clear. I think that would be a helpful discussion for December. Thanks.

MR. POINTON: Thank you, sir.

MR. ALDRIDGE: Next slide. Lock and Dam 27 Major Rehabilitation on the Mississippi River. As stated earlier, the Lock and Dam 27 major rehabilitation project has been fiscally and financially closed out. For the record this project will be removed from future reporting at Users Board meetings.

Next slide. Project updates for projects in the Great Lakes and the Ohio River Division. Mr. David Dale will provide additional project specific details in his briefing later this morning for the Olmsted Locks and Dam project, the Chickamauga Lock and Dam replacement project, and the Lower Monongahela River Locks and Dams 2, 3, and 4 project. I have included those three projects in the slide deck for continuity of briefing purposes.

Next slide. The Olmsted Locks and Dam project on the Ohio River, Illinois and Kentucky. Changes to the project are shown in red in the box titled "Next Steps" on the right side of the slide and the box titled "Current Status of the Project" in the lower right hand corner of the slide. I will be glad to try to answer any questions, but Mr. Dale will cover the project in more specific detail during his briefing.

Next slide. With respect to the project schedule, we had two contracts awarded, one the Wicket Lifter contract was awarded on September 2nd and the River Dikes contract was awarded on August 12th and Mr. Dale will cover those items during his briefing.

Next slide. The Lower Monongahela River Locks and Dams 2, 3, and 4 project. Again, Mr. Dale will discuss the details of this project during his briefing.

Next slide. The Emsworth Locks and Dam project on the Ohio River near Pittsburgh. This project is scheduled to be fiscally completed in FY 2017. As I stated earlier, any funds remaining will be transferred to the 310 Inland Waterways Trust Fund account.

Next slide. The Kentucky Lock and Dam project on the Tennessee River in Kentucky. The downstream cofferdam base contract was awarded on September 27th in the amount of \$42.4 million. The remaining six options on the contract will be exercised upon the receipt of additional funds in FY 2017. In the box titled “Next Steps” in the lower right hand corner of the slide you can see one of the next steps in the project is to complete the upstream Lock Monoliths contract by December 2016 and move forward with the construction of the downstream cofferdam.

Next slide. With respect to the project schedule update, as I indicated earlier, we awarded the downstream cofferdam base contract on September 27th, and the remaining six options will be exercised upon the receipt of additional funds in FY 2017.

Next slide. Chickamauga Lock and Dam on the Tennessee River near Chattanooga, Tennessee. Mr. Dale will cover the project specific details concerning the Chickamauga Lock replacement project during his briefing later. Mr. Dale will also discuss the project schedule update as part of his briefing later this morning.

Subject to your questions, that concludes my presentation.

MR. POINTON: Are there any additional questions for Joe? (No response.) Seeing none, thank you, Joe.

MR. ALDRIDGE: Thank you.

MR. POINTON: Next on the agenda will be Mr. Mark Hammond who will be giving a presentation on inland navigation economics. Mr. Hammond is a senior economist in the Great Lakes and Ohio River Division, and he is going to be giving us a top level, if you will, a 30,000-foot perspective on basic inland navigation economics and the economic analysis that the Corps of Engineers conducts to evaluate the economic benefits associated with construction projects. Mr. Hammond is also affiliated with, if that's the right word, the Inland Navigation Planning Center of Expertise and Risk-Informed Economics Decisionmaking located at the Corps Huntington District office located in Huntington, West Virginia. Mr. Hammond the microphone is yours.

MR. MARK R. HAMMOND: Thank you. Good morning, everyone. My name is Mark Hammond. I am an economist with the Great Lakes and Ohio River Division's Planning Division, and I have been doing inland navigation economics for about 25 years.

Today's presentation is going to describe our economic framework in terms of supply and demand modeling and how we do cost-benefit analysis. This is – we are in this study phase of a project, like the Inner Harbor Navigation Canal Lock Replacement study right now in its General Re-evaluation Report, that's in the study phase. The Upper Ohio River navigation study, which we just completed and had it signed off as a Chief's Report. This is where we are at the beginning of a study or some sort of an economic update.

The purpose of this presentation is to provide you, hopefully, with a basic understanding of why and how the Corps does cost-benefit analysis. This is the why. Major federal guidance in economics is why we do cost-benefit analysis.

The Flood Control Act of 1936 established this criterion of economic benefits exceeding economic costs in the decision-making process for Federal investment. It wasn't until the 1950 Green Book, you can see the cover of that report on the right side of the slide that proposed actual practices for the economic analysis of river basin projects. It was a product of an inter-agency river basin committee that developed benefit estimation procedures and began how we do what we do and what the PCXIN, the Planning Center of Expertise for Inland Navigation, what it does.

In the 1970s the Office of the Chief of Engineers then required a systems analysis approach to looking at river systems of locks and dam analysis, requiring larger datasets and we got into this concept of systems modeling, systems analysis through the Inland Navigation Systems Analysis or "INSA" initiative.

In 1973, we came out with our Principles and Standards which affected laws and established standards on how we do the economics. The 1983 P&G, or Principles and Guidelines, established NED, National Economic Development, as our Federal interest in inland navigation projects. There was an update to this planning guidance in 2000 with some revisions and amended appendices, but we still go by the 1983 P&G.

CHAIRMAN HETTEL: Mark, would you flip back that last slide. I want to make sure I understand. Are you giving us the historical context of the how? You said the 1950 Green Book is how. Then you go to 1970, 1973, 1983. What is your current guidance? What are you working under now?

MR. HAMMOND: We are working under the 1983 Principles and Guidelines.

CHAIRMAN HETTEL: Okay.

MR. HAMMOND: The 1983 Principles and Guidelines defined National Economic Development or "NED" as an objective of our analysis, but I am just giving historical perspective as to why we do economic analysis for river projects.

CHAIRMAN HETTEL: I understand.

MR. HAMMOND: The Green Book was our first attempt of how to do it, how to measure.

CHAIRMAN HETTEL: So we are working under Principles and Guidelines that are 32 years old?

MR. HAMMOND: The P&G was developed during the Reagan Administration. Yes, sir.

CHAIRMAN HETTEL: Okay. Thank you.

MR. HAMMOND: Yes, ma'am.

MS. DARCY: Could I just offer that in the 2007 WRDA, we were directed to modernize and update our Principles and Guidelines [Section 2031 of the Water Resources Development Act of 2007, Public Law 110-114, signed into law November 8, 2007]. This Administration has done that. However, we, the Army Corps of Engineers, are under a provision, a rider in an Appropriations bill saying that we are not to implement those Principles and Guidelines that have been updated since 1983.

MR. HAMMOND: Next slide. Okay. This is -- I want to try and show you a simple economic model of -- this will represent, if it works -- oh, it doesn't work.

Economics, supply and demand. I taught chemistry in Africa 25 years ago, and next door to me was this economist. All I ever heard was, supply and demand, supply and demand. I had to ask the fellow one day, "What the heck is economics, nothing but supply and demand?" He said, largely, it is. It is setting prices, et cetera, in competitive markets. Ironically, 25 years later here I am preaching supply and demand.

But in this graphic, if it was to work, the blue line S_0 [S sub-zero] is our supply line. Quantity is the X axis. Price, the dollar cost, is on the vertical axis. The horizontal line is quantity tonnage. The supply curve with more tonnage, you get higher costs. Thus, it is upward sloping. That is our basic supply, whatever we are modeling. Be it a single project, be it the Ohio River, or be it the national system.

The demand curve is downward sloping, showing that at a lower price, more stuff is demanded in a normal market. The intersection of the two lines is where we are when we take a picture and say in 2016 and we had 260 million tons of traffic on the Ohio River system moving at P_0 [P sub-zero] cost. Then we come into the Ohio River system and overnight we improved reliability at the upper three Ohio River projects, Emsworth, Dashiels, and Montgomery Locks [Emsworth Lock and Dam is located at Ohio River mile point 6.2 from the point in Pittsburgh, Pennsylvania, Dashiels Lock and Dam is located at Ohio River mile point 13.1 from the point in Pittsburgh, Pennsylvania, and Montgomery Lock and Dam located at Ohio River mile point 31.7 from the point in Pittsburgh, Pennsylvania].

What that improved reliability and capacity did was shift the supply curve, the red arrow to the right, to create a new supply curve, labelled S_1 [S sub-one] because of the proposed improvement in the capacity at Emsworth, Dashiels and Montgomery locks, the Upper Ohio projects, for example. This is how we would model it.

What impact does that have on the navigation economics of the Ohio River System? This graphic shows you that tonnage, equilibrium tonnage, goes from Q_0 [Q sub-zero] to Q_1 [Q sub-one]. The more tonnage that can be accommodated, the price of all that tonnage actually goes down, the cost to move it, because of the improvement at Emsworth, Dashiels, and Montgomery Locks. This is the economics we are after.

If you look at the yellow rectangle, the existing traffic before the improvement Q_0 [Q sub-zero] is -- that rectangle is just existing stuff that already moved, moving at a lower cost. The triangle here, this is the additional traffic that the improvement at Emsworth, Dashiels and Montgomery brings onto the system due to the increase in reliability and/or capacity, and it

moves at the lower price. There is the additional benefit. This is the existing traffic moving because of the improvement. Bottom line up front, the yellow rectangle is the benefit to this investment. We compared that benefit to the cost of the investment over time, and I will go into some of that, but not in a lot of detail.

That is basically the modeling of the supply and demand that we work with in our inland navigation arena. The demand is where I am going to start in our supply/demand framework.

Next slide. Demand. We define the demand for our system, however we might define it, it comes from -- we use waterborne commerce statistics data. Actual origin and destination flows of commercial traffic. We go out and monetize the cost for those movements and we can rank all of the movements in our system from high cost to low cost, and we get a downward shaped demand curve. We are using real traffic data, we cost it out, and then we go out -- shipper response is down here. We ask shippers what they would do if certain events happen, and this information helps us to shape and measure the slope and shape our demand curve.

The example here shows a shift, an increase in demand, a shift in the demand to the new demand curve to the right. My point is, say, a new Royal Dutch Shell ethylene cranking plant opens up in the Montgomery Lock pool. That would shift demand to the right because of additional demand to get products in for the construction, or whatever the reason is. The consequence of that increase in demand is a higher transportation cost, which we show here. The increase in demand at that quantity shift leads to higher cost. More stuff, more demand, higher cost.

Next slide. We go now to the supply side of our modeling framework, and this is where we rely heavily on our Lock Performance Monitoring System, the LPMS data, especially the lockage timing data. When the tows arrive, how long does it take for them to transit, which we have two components to the transit of a lock. It is the delay, if any, and the processing times.

We use the LPMS data in a Corps certified Waterways Analysis Model, or "WAM" model, and it generates with more tonnage we get this tonnage transit curve upward sloping, showing that with more tonnage it costs more to ship stuff. The supply curve is economically well behaved in our analysis.

The engineers come in and help us set the supply curve. Is the system open? Shift to the right. Is it closed? Shift to the left. Reliability, performance of the projects, performance of the system is impacted -- has a heavy impact on where our supply curve is in our analysis.

This example here shows a backwards shifting supply curve from the initial equilibrium, and it would show that -- say, a closure of the lock shifts the supply curve to the left. What is the consequence? The consequence here is an increase in cost at the quantity "Q" shift.

That is basically our demand and supply framework that we do our economic analysis for inland navigation project investments.

Next slide. The benefits that we use are -- the benefits in inland navigation investment are defined in our 1983 Principles and Guidelines. Projects are required to contribute to the nation's wealth. The Principles and Guidelines established National Economic Development, or NED, as the Federal objective consistent with protecting the environment.

The operational definition of NED is increases in the net value of national output of goods and services, and we express that in monetary units. To arrive at a net value, which is the value net of costs to get it, to achieve it, the Corps of Engineers employs cost-benefit analyses. NED benefits are most simply described as transportation savings in our world. Transportation savings are, simply stated, the difference between the costs of moving a commodity on the waterway versus the cost of moving a commodity via the next least cost alternative. I emphasize least-cost alternative.

CHAIRMAN HETTEL: Mark, I think you know what my question is that I am going to ask you. Do you do any analysis on whether that next least cost mode of transportation has capacity?

MR. HAMMOND: We have in the past, and what we have always found before has been the assumption of sufficient overland capacity has always worked. We are now coming across areas in our system where this assumption doesn't always work.

I am really pleased to hear, or actually excited to hear, the representative from MARAD [Ms. Lauren K. Brand] speak this morning about tying in the inland waterways to a National Freight Network. We do not do multimodal modeling in my world. We model the river. We move it on the river. When costs get such that the savings are eroded, we divert it from the river. We do know that there are impacts there from overland -- a lot of stuff moving on the river, going overland has traffic congestion impacts, health impacts, and other impacts such as safety. We do not have the guidelines to evaluate that.

Our Principles and Guidelines allows for the assumption of sufficient overland capacity, unless we know otherwise. When we do find out from stakeholders that there is, in fact, in the short run insufficient rail capacity -- rail is 9 times out of 10 the least-cost alternative due to the volumes of these commercial flows -- we do go after and try to properly evaluate the NED benefits of the waterway given in the short run there is no alternative.

CHAIRMAN HETTEL: Thanks, Mark. So that would be when you gave us on Slide 5 the shipper responses on questionnaires you send out?

MR. HAMMOND: Yes sir.

CHAIRMAN HETTEL: Is there a question on the shipper response surveys that if this facility had a major closure, do you know if there is an alternative mode of transportation for these commodities? So you are leaving it up to the shippers to determine whether or not there is sufficient capacity?

MR. HAMMOND: Well, we have done a variety of things in the past in our analyses depending on where we are and the questions that are being asked. We have actually had rate specialists go out and estimate rail capacity in the St. Louis, Chicago, and Pittsburgh areas just to see if it is, in fact, rail capacity is available or not. When we find rail capacity is not available, it is not a track issue. It is usually an equipment issue.

Those surveys are more used for us to evaluate the shippers' response to a lock closure. Would they sit or would they divert? That helps us to shape our supply curves in the short run. We get the responses and we try to evaluate the shippers' behavior.

With respect to the issue of insufficient overland capacity, we have always handled that in the past through our transportation rate analysis, which, while not getting into the weeds here, briefly I want to mention a certain steam coal powered utility plant on the Cumberland River that receives roughly 6 million tons of utility coal a year by barge only [the Tennessee Valley Authority's Cumberland Fossil Plant, located in Cumberland City, Tennessee at Cumberland River mile point 103.4 from the Ohio River]. It is not rail-served.

One might ask, "What is the value of the waterway to that utility?" One might say it is infinite, which is a little bit high, but it is high because there is no substitute, no alternative. What we do when we rate that movement to get it into our database to evaluate the NED value of the waterway for that specific plant, we construct an alternative rate because it does not exist. We construct a rail spur two to three miles from the nearest railhead and the appropriate equipment. We amortize that out. We cost that out over a 25 year period for a return on investment.

Even though there is not a real transportation rate, we can measure it against the water rate. We construct one and use it then as a proxy for the NED value. That is something similar to what we are doing currently on at the Soo locks, at the Poe Lock on the Great Lakes. [The Soo Locks are a set of parallel locks which enable ships to travel between Lake Superior and the lower Great Lakes. They are located on the St. Marys River between Lake Superior and Lake Huron.]

CHAIRMAN HETTEL: That was going to be my example. You found at the Soo Locks that there wasn't an alternative mode of transportation.

MR. HAMMOND: Correct.

CHAIRMAN HETTEL: Or capacity even for an alternative mode.

MR. HAMMOND: Both.

CHAIRMAN HETTEL: It is good to hear that you are looking at alternatives rather than just assuming the capacity is there.

MR. HAMMOND: Correct.

CHAIRMAN HETTEL: I think it should go to much more detail because there are routes that don't have rail connections.

MR. HAMMOND: Yes.

CHAIRMAN HETTEL: That don't have a rail connection into a plant or out of a plant. I don't know how we could gather that information so it would be automatically incorporated into your models, but that is something we ought to work forward to.

MR. HAMMOND: We have proposed many times in the last ten years research and development initiatives to get with academia, industry, and Corps economists and try to – there are a lot of benefits we feel we are leaving on the table. We feel there is a phenomenal water-compelled benefit that the waterways offer with respect to rail shippers. Commodities that people that move by rail. They enjoy a water-compelled rail rate, a rail rate that is a little bit lower because of the potential alternative of moving commodities by water.

There are other areas of potential benefits -- our NED evaluation of benefits -- we recognize as being very conservative. Very conservative. In the past, that has never hurt us with evaluating a potential improvement because we had such robust tonnage demand and forecast demand that it has always been – we have been able to economically justify our investments.

That world is changing a little bit as we get into this cyber, cell phone stuff and -- but your point is well taken. We have tried to get a better understanding and more -- develop better ways to more accurately evaluate the value of the waterways. It is not just NED value of lower cost transportation.

CHAIRMAN HETTEL: Well, it is certainly encouraging that you are looking at trying to improve that process, and we appreciate that and we know you will continue to work extremely hard to improve it even more. Thanks, Mark.

MR. HAMMOND: Thank you sir.

MR. WOODRUFF: If I could, Mr. Chairman. I have a couple of questions. I am not an economist, so I am trying to sort through this and also in asking these questions I am not trying to beat you up. I am just trying to make sure the record is clear.

MR. HAMMOND: Fair enough.

MR. WOODRUFF: For example, if there are higher air pollution impacts of alternative modes as compared to water and that results in health effects in communities, is that something that is or is not currently part of your calculation of economic impact?

MR. HAMMOND: Sir that is not currently part of our NED calculation right now. We have done -- again, 10 to 15 years ago we did some work. Most of those pioneers, if you will, in this area have retired or expired or both, but we do have some capability to continue that work. It has never been bought off by our Headquarters to incorporate into our NED calculations. We have been able to get some overland congestion impacts considered as part of NED calculations because in the flood risk management business line arena, overland congestion due to floods are considered NED benefits.

We have measured this in certain areas like Chattanooga where it was really important. There is a highway I believe, going through -- Interstate 75 going through Chattanooga, ten years ago was heavily congested and Chattanooga was considered a high attainment air pollution area, and any diversions due to a failure at Chickamauga Lock would have exacerbated that situation. We did that in the original Chickamauga study. In our current economic update we didn't update those numbers because we were not able to use them in the benefit-cost ratio, if you will. We have somewhat of a capability. Again, it is an effort that we

want to develop more fully and go on to some water-compelled rate analysis where there is no least-cost alternative in the short run how do we really evaluate that. We are struggling with that because we are not -- funding is not there to help support that.

MR. WOODRUFF: Just a few more points. I am trying to figure out if they are considered or not considered today. The Maritime Administration and the National Waterways Foundation did a study some years ago that talked about the increased accident rate per ton mile for different modes of transportation and found that truck and rail transportation can be measured and how many more people die when cargoes are moved by those modes as compared to barges. Is that figured in in your economic analysis?

MR. HAMMOND: Currently that is not captured. On the Upper Ohio study we did originally. The study, again, eight or so years ago, we did some morbidity for air pollution and mortality for safety of diverted traffic, its impacts on an already congested area, the Pittsburgh area, but that -- again, well, the results are what they are, but we were not able to use any of that information in our NED economic analysis ultimately to justify authorization.

MR. WOODRUFF: There are a lot of things in today's society we view as important and we try to measure that are not currently a part of the NED calculations that we are seeing for these projects?

MR. HAMMOND: Correct.

MR. WOODRUFF: One final thing comment, just shifting our attention a little bit. You said in a prior slide that you rely heavily on the LPMS in terms of determining delays and, therefore, the justification for new projects. If the LPMS data is significantly wrong in terms of what the delays are, that could throw off the whole calculation, is that correct?

MR. HAMMOND: This is true, and we are working with lockmasters. We have not found this -- okay. In the Ohio River basin where I was born and raised, literally, the LPMS data at our more mature projects, the dual-chambered locks on the Ohio River, is robust. It is defensible. We have clear arrival points and the timing is good. We can see it in the data. Issues aren't there.

As we venture out, as the PCXIN ventures from our basin, our home, to the nation, it is out in the nation that we are finding the world is not as friendly as it is in our basin. Thanks to guys like Chairman Hettel, we are finding places, in the Gulf Coast, in particular, certain projects that don't have clear-cut arrival points, and we are not doing a good job of -- I mean, a tow can get into a six-tow queue and not start its delay counting until it literally reaches the arrival point, although it has been waiting for 18 hours in a queue to get to the arrival point, which starts -- these kinds of things are driving us nuts. We are working with the Navigation Data Center, the owner of this data, and the lock operations community and, thank goodness for shareholders that are acutely aware and we are trying to get better and do better.

What we have to do is we are doing the Brazos River Floodgates and the Colorado River Locks economic analysis now, the economics, and we are finding horrific passage timing data there. It is just a funny system. We have to go down and help them to figure out what will help them to understand what we need and then help them to get it. We are working to do the best we can, given what we have. We do have a lot of experience in this area, but we just don't

have all the resources and answers right now. We are aware, and we feel our analyses are credible given the information that we have and we feel it is good, but not perfect. This is true.

MR. WOODRUFF: Thank you, sir.

MS. BRAND: I just wanted to say that the FAST Act requires states to develop a state freight plan. Because of that requirement, more states than ever are now including waterways in their state freight plan.

For example, the State of Illinois is having their very first waterway working group developed and in the next two weeks I think is their first meeting. I am glad to hear about this new awareness about the importance of waterways. This is a great conversation, and I am going to give you my card. Let me know what MARAD can do to help because there are going to be more and more people asking about how to move freight on their waterways, and it is going to come from the state DOT [Department of Transportation] level.

I just got contacted last week by the Arkansas Waterway Commission, who wants to know how to designate another waterway in the state of Arkansas that hasn't been considered part of their navigable waterway system in the state, so we are seeing a new resurgence in the interest of moving cargo on the waterways, slow but sure.

MR. ROBERT J. INNIS: I have a couple of questions. Why does the Corps use 25 years on a return on investment? That is something a private or publicly traded company would not use to calculate a rate of return on an investment. That is way too long.

MR. HAMMOND: That was the time period used to measure the return on capital over a 25-year period that we just did years ago with our transportation rate specialists, and that is what we used. I have been asked that question before. Twenty-five years is -- I don't know why specifically, but that is what we have used.

MR. INNIS: Okay. How does the Corps consider the impact of the immediate transfer to rail is probably not feasible if there is immediate shutdown? Rail may not be readily available. Do they look at truck? You need to look at the impact if a shipper has to go transporting by truck for a while before they go to rail, or is it an immediate switch over to the second most economical option?

MR. HAMMOND: Given the commodity flows and the geography and everything, we do the best we can with what we have and we try to cost it accordingly. We realize that there are some equipment constraints not immediately available, and there are these spot market effects, these short-term higher costs than long-term type costs and we try to reflect that. Unavailability with a slightly higher cost as we make the transition. But nine times out of ten, these waterways compliment the rails and highways such that there is some throughput capability on those alternative modes. It's not like we are starting something where it doesn't exist. So nine times out of ten it's that one --

MR. INNIS: I agree with the statement that it can go to rail, most likely, but that immediate switch over, especially, the fact that railroads have limited the cars available now and most people have to own or lease their own cars. If you are going to do a switch over to an

alternative mode, especially rail, there is a delay in the time in which you can forecast that, is that right?

MR. HAMMOND: Yes.

MR. INNIS: There is a big impact in that first two weeks to a month where you have a big impact.

MR. HAMMOND: In our world, according to our guidance as planners, we work in the long run. In the long run, all inputs are variable. Therefore we have to cost. We are mandated to estimate costs with this long run marginal cost pricing to get that least cost. We are assuming competitive markets.

MR. INNIS: I get that. Especially, temporary shutdowns or unforeseen shutdowns. The chances of being able to switch over during that period of time and the impact --

MR. HAMMOND: Yes. If we can get that information, we will use it. That comes from some of our shipper surveys and our transportation rate studies. We go out to docks and try to get this information. If we can get it, we use it. Generally speaking, we just go to a long run overland cost. We get it from rail waybill data, sample data, the cost data, and estimate costs accordingly, not to overemphasize the NED value. We are always afraid of being accused of, we could -- if the waterway goes down, we could put coal in Uber taxis, and really have a benefit, but that would not be the least cost alternative.

MR. INNIS: Right. Thank you.

MR. HAMMOND: Okay. Where were we? Benefits. Transportation rate savings benefits. That is essentially what it is. Our costs are defined in a Civil Works Policy Memorandum dated 25 August 2011 from Mr. Stockton. The important thing to notice here is that the economic costs are a constant dollar cost. We don't inflate the costs. We don't fully fund. The economics are a different beast than the Programs world.

Next slide. Our project first cost includes the Planning, Engineering, and Design costs, or PED costs. Then the construction costs and the LERRD [Lands, Easements, Rights of Way, Relocations, Disposal Areas] costs and contingencies. In the past, these contingencies have been a fairly routine function with respect to materials because we don't know in five, ten, fifteen years the price of steel, the price of stone, the price of labor, whatever, and that has been our big contingency. The Corps of Engineers has gotten into funding contingencies that add on to the uncertainty of funding, and that unknown is causing increases in project costs that we are all aware of on certain projects that are funded one year and not funded the next.

The total investment cost is the project first cost plus this interest during construction. As economists, when we tie up capital there is an alternative use to it. We have to add that interest before the project begins generating any benefits. We add that interest during construction.

The Average Annual Cost that we use in our benefit-cost ratio calculation is the Total Investment Cost amortized over a 50-year period. We discount so that we get a common denominator for all values expended or benefits or expenses at different points in time. We

discount to a base year. We compound costs forward normally, and we discount benefits back to this base year. That is the amortization factor.

We get a future stream or annual O&M costs and any repair or replacement costs the engineers can give us in the project life of the 50-year life cycle. That goes into our average annual cost, which goes into our cost-benefit analysis.

Next slide. This is an example of a cost-benefit analysis. It is comparing a "with project condition" and a "without project condition." The "without project condition" is the beginning of any study. You have to determine the most likely future of a system or a project in the absence of any federal investment requiring authorization. The "with project condition" alternatives are the different alternatives you want to evaluate.

In this example, the red line here -- above the red line you see the average annual costs and average annual benefits for the "without project condition" and the two "with project conditions" identified in this example as Alternative "A" and Alternative "B".

Each alternative has an average annual cost and average annual benefits. Below the line you see the incremental or additional costs and benefits of the "with project condition" relative to the "without project condition". This is the delta or the difference between the "with" and "without" cost and benefits.

The difference between the incremental benefits and incremental costs are the incremental net benefits. In planning, this is the plan selection. The NED plan is the alternative plan that maximizes net benefits, in other words, the alternative with the greatest amount of incremental net benefits.

In this example, Alternative B has the higher incremental net benefits. It would be the NED recommended plan going forward. Interestingly, if you look at the table, the BCR, the benefit to cost ratio, for Plan B is not as high as the BCR for Plan A. That is how the math in this example turned out. When we are doing a Feasibility study and making a recommendation for the Chief's signature, we recommend the NED plan, which maximizes net incremental benefits, unless there is a locally preferred plan that complicates things. The NED plan is the one that we recommend for authorization usually.

Next slide. The "without project" condition. What is the "without project" condition? It is several possibilities, but in our world of locks and dams, it is normally different futures of maintenance. From the basic normal maintenance routine and fixing something after it fails to something a bit more involved and doing some advanced maintenance, going in before a failure and that sort of thing, and we analyze different maintenance scenarios to determine the most efficient method of maintenance going forward.

Next slide. The "with project" condition. The "with project" condition is something that requires Congressional authorization, such as a new lock or an enlarged lock or some major rehabilitation project that is over a certain dollar threshold which requires some authorization.

Next slide. An example I want to go through with you briefly is the Upper Ohio Navigation Study and take you through this cost-benefit analysis process.

To begin any study, be it the Brazos River Floodgates or the Colorado River Locks, the Inner Harbor Navigation Canal Lock Replacement project, or the Upper Ohio River Navigation study, we have to identify the study area, and we have to define the system under analysis and describe it in terms of economics, in terms of resources, transportation systems, population, opportunities, et cetera. Then from there we look at the system and identify what is the problem or problems we are trying to solve.

Next slide. The navigation system opportunities on the Upper Ohio River, given the age and size of the locks on the Upper Ohio River, Emsworth, Dashields and Montgomery, involve three major areas to improve the structural integrity and reliability of the locks, enhance the reliability, address the concrete deterioration the lock chambers, address the lock wall stability of the locks chambers, address issues associated with the foundation of the lock chambers, and increase the size of the lock chambers to increase the throughput capacity of the system.

These are some of the measures that we looked at early on in the study and formulated or developed some of the alternatives considered for improvements to address some of the issues at the locks on the Upper Ohio River. Some of these alternatives were eliminated right out of the gate as not being feasible or doable or efficient or for some other reason. Other alternatives were carried forward, and we actually did modeling and other analyses.

We are required to forecast future conditions for any study that we are looking at, and that involves in the inland navigation arena, we have to forecast demand for the project, the use of the project for supplying transportation, and we have to forecast traffic demand at the project. The engineers have to forecast performance at the project. We need to have a good read on the condition of the system today and how the system will perform into the future without an investment and with an investment. That is the comparison of the future “without project” and “with project” condition that I talked about earlier.

Next slide. Plan formulation. In my experience, in the plan formulation portion of navigation studies about 75 percent of time and funding is devoted to this "without project" condition and getting the data ready and the developing the models. Once you have the "without project" condition, the various alternatives you want to compare to this “without project” condition are relatively quick and less costly, the other 25 percent of the study time and costs.

In the case of the Upper Ohio River Navigation Study, there are three structurally deficient lock facilities, and we looked at different maintenance scenarios and we realized a high and increasing probability of structural failure without doing something other than normal maintenance and fixes after something does fail – when a component would fail.

Next slide. The "with project" condition. We eliminated some of the alternatives we looked at, but we carried forward into our final analysis an advanced maintenance alternative, some component replacements prior to failure, and some new lock construction at the existing locations. Those were the main "with project" conditions alternatives carried forward in the Upper Ohio River Navigation Study.

Next slide. The cost-benefit analysis here is from the 2010 feasibility study. It is at a FY 2009 price level, and the discount rate is different than today, but I show the slide to show you the final array of alternatives that were modeled in detail. Again, this graphic is displaying

average annual costs and average annual benefits for each alternative above the red line, and then we compare the "with project" costs and benefits here. The "with project" costs to the "without project" benefits through this incremental analysis. Incremental benefits to incremental costs, incremental net benefits.

This single 600' lock chamber is the alternative on the Upper Ohio that maximized net benefits at \$119 million a year, and it had a BCR of 2.83.

Next slide. The recommended plan, or the NED plan, for the Upper Ohio is to construct three new lock chambers, 110' by 600' in the footprint of the existing auxiliary smaller lock chamber and retain the existing 110' by 600' main chamber. The cost is \$2.32 billion. It is the NED plan. It sustains navigation consistent with environmental operating principles, and it meets all of our planning objectives.

MR. MECKLENBORG: I have a question on your 50-year amortization period in line with what Mr. Innis had asked before. Does that line up with the 25 years used in the other --

MR. HAMMOND: The 50 year period is our period of analysis when we do a life cycle. Once the project goes online, that is our base year. It is generating benefits. We look at the next 50 years. Now, in defense of that 50-year planning horizon, if you will, study period, it is hard to know what you are going to do tomorrow, let alone in 50 years.

MR. MECKLENBORG: Right.

MR. HAMMOND: But in defense of that, in economics we have a way to deal with that, and the further things are from the base year, the more discounted they are. Their current value is less. When we do our analysis, it is everything happening close in that matters. Our decisions are based on short-run impacts because the longer term impacts are heavily discounted and essentially their present value is greatly reduced.

MR. MECKLENBORG: Okay. Thank you.

MR. HAMMOND: Thank you.

MR. POINTON: If there are no other questions for Mr. Hammond, thank you Mark.

MR. HAMMOND: Thank you

MR. POINTON: Next in the agenda is Mr. Bobby Duplantier, Senior Project Manager from the New Orleans District, who will give us a brief update of the General Reevaluation Report for the Inner Harbor Navigation Canal Lock Replacement Project.

MR. DUPLANTIER: Good morning. As Mark stated, my name is Bobby Duplantier and I am a Senior Project Manager in the New Orleans District. I will be giving a brief status update on things and save some time to field questions on where we are with the study.

We have been working on this replacement project for quite some time. The lock was authorized to be replaced in the 1950s, and it is still not replaced. I will go through some of

those reasons and why it is so important that we make sure we dot our “I’s” and cross our “T’s” in this planning process that we are doing now.

With respect to your earlier question concerning the dimensions of the lock that we are looking at. We are looking at a length from between 900 feet and 1,200 feet. A width of between 75 feet and 110 feet and a sill depth of 16 feet and 22 feet. As I stated earlier, the Tentatively Selected Plan is scheduled to be finalized next week.

Once we decide on the TSP, I can share that with you. I can tell you that it is extremely close between two specific alternatives, the 110 foot wide by 900 foot long option and the 110 foot wide by 1,200 foot long option.

CHAIRMAN HETTEL: This is where I think industry might be able to help you determine a TSP. Has there been any coordination through industry as to whether a 900-foot lock or a 1,200-foot lock, in the industry's opinion, would be beneficial?

MR. DUPLANTIER: Yes sir. We have talked to industry during the planning process. As the previous presentation showed, it is the economics of the alternatives, the benefits and the costs. The economics of things that we can include as benefits and how that fares when compared to the costs.

CHAIRMAN HETTEL: Comparing the 900-foot long lock chamber versus the 1,200-foot long chamber.

MR. DUPLANTIER: Yes sir.

CHAIRMAN HETTEL: It has got to be more expensive to build a 1,200-foot long chamber.

MR. DUPLANTIER: Yes sir, it is more expensive to build the 1,200-foot chamber.

CHAIRMAN HETTEL: Did you check with the industry and see if they would utilize a 1,200-foot long chamber, would that be better for the industry, versus the 900-foot chamber?

MR. DUPLANTIER: The 1,200 foot lock chamber does show some benefit, but as of right now if we had to select a TSP, it would be the 900 foot chamber. But because they are so close, we want to make sure that we have everything right.

That leads me to the discussion of some of the challenges facing the project. I that I show on the slide is the high risk for future litigation. Again, the project was authorized for replacement since the 1950s. The reason it has not been replaced as of today is not because of funding. It is not because it does not need to be. It is because of legal action.

CHAIRMAN HETTEL: If I may go back to my last point. We are primarily a dry cargo carrier. I am very familiar with this. We run six to nine barges. There are probably unit tows that may run longer than 900 foot. Matt [Matt Woodruff], I don't know that. But that is where industry's input on a 900- versus a 1,200-foot chamber would be invaluable. I don't know if the additional 300 feet is necessary or economically viable.

Matt, I don't know. I can't speak for unit tows on the liquid side.

MR. WOODRUFF: I would have to talk to our operations folks to see where they would come down on that. I do know that my perception is that there are unit tows going that way, and I don't know if they are 50,000 barrel tank barges or, whether people are pushing six packs [six 10,000 barrel tank barges in a three long by two across configuration] or what is going that direction.

CHAIRMAN HETTEL: I know on the dry cargo side we will operate with six, even up to nine barges out there. Again, I think that coordination with the industry may help you determine what your best TSP option is.

MR. DUPLANTIER: Yes, sir.

CHAIRMAN HETTEL: I would recommend that you contact Jim Stark, President of the Gulf Intracoastal Canal Association, as probably the best person to discuss the current operating practices of the users in and around the Inner Harbor Navigation Canal region of the GIWW [Gulf Intracoastal Waterway], barring anyone else from the Board who think ought to be involved in that.

MR. DUPLANTIER: We do give Mr. Stark updates on this project.

Looking at the lower right hand corner of the slide. Path Forward. Where we are with respect to the study. Next week is when the TSP is supposed to be identified. We ran into a lot of problems with the economic models. The model would just not calibrate for us, and we had to pivot and develop a new model. The new model developed by the Planning Center of Expertise is running correctly, and right now it is showing us that these two alternatives are -- the NED plan is -- and I'm glad that Mr. Hammond went before me to explain how we arrive at an NED plan. Right now the 900-foot long lock alternative is showing as the preferred plan. We are going to make sure we have it right to make sure it can withstand scrutiny because it will be scrutinized in a court of law.

MAJOR GENERAL JACKSON: When you say that economic models would not calibrate, what exactly does that mean?

MR. DUPLANTIER: Sir, the results that the model was generating were not reasonable. We were getting these wild inflections with the data points. We ended up having to revert back to an older model. My understanding of the problem with the model that we originally used was that the model could not properly account for the breaking down of the tows that we actually see at this particular lock, so it would not calibrate correctly. We transferred to the WAM [Waterways Analysis Model] model, and that model provided better results.

MR. HAMMOND: Sir. Calibrate means to reproduce the actual performance behavior that we see in the study area, such as the average tow size, then number of empty barges, the direction in which the tows are travelling, etc., things that the NASS [Navigation System Simulation] model that they had been using did not capture. It was not able to account for differences in the way tows travel on the Mississippi River which are very heterogeneous tows.

Tows that use the GIWW and the Inner Harbor Navigation Canal Lock are not like those 15-barge tows, which are consistent and homogenous tows. It made it very, very challenging.

What the PCXIN did was we went back to an older model, a Corps certified model, the WAM model, that we are using in the Upper Ohio River Navigation study and elsewhere. The WAM model is better able to simulate the different tow sizes and configurations, alternative routings and travel patterns, and other those complexities, which is a whole another story down on the GIWW and the Inner Harbor Canal and better replicate the existing condition down there. Before you can even start looking to look at future conditions, you have to be able to reproduce what are the current conditions on the ground and get the current operating statistics correct.

MAJOR GENERAL JACKSON: Okay, thanks. My second question concerning the point you made on the risk of future litigation. What is the basis for your concern on the risk level for future litigation?

MR. DUPLANTIER: Sir, since I have been involved with this project, there has been at least four court ordered injunctions against the project. Every time we get out of one, there is another one that comes up.

This lock is located – it is not like most locks where it is sort of out in the middle of nowhere. This is in the middle of a number of neighborhoods. If you look at the slide in the upper left corner, if you look to the right, the right-hand side of the picture, that is the Lower Ninth Ward in New Orleans. That is the area that was hit very hard during Hurricane Katrina, and they have a lot of history with suing this project. For example, lawsuits over different environmental concerns.

In the latest injunction the court ruled that we did not produce enough viable shallow draft alternatives. There have been a myriad of lawsuits against the project. We know full well that we don't know what angle the lawsuit is going to be, but we do know that it will be challenged.

MAJOR GENERAL JACKSON: Thank you.

MR. DUPLANTIER: Thank you sir. Subject to any further questions or comments, that concludes my presentation. Thank you very much for your interest and attention.

MR. POINTON: Thank you, Mr. Duplantier. At this point in the program, we are at a break point. Can we take a 20-, 25-minute break and reconvene at approximately 11:35. Thank you.

(At which point a short break was taken.)

MR. POINTON: Welcome back everyone. Next on the agenda we will hear from Mr. David Dale, Director of Programs in the Great Lakes and Ohio River Division, who will give us an update on the status of inland waterways projects in the Great Lakes and Ohio River Division. David, the microphone is yours.

MR. DAVID F. DALE: All right. Again, my name is David Dale. I am the Director of Programs in the Great Lakes and Ohio River Division, and I am here to talk to you about some of the great projects we have going on your behalf in our region. Much of this has been briefed to you many, many times over the last several Board meetings, so I am going to move fairly quickly. If you see something that you want me to slow down on, please don't hesitate to slow me down. I will be glad to answer any of your questions.

With that being said, I am going to cover four projects, Olmsted, Lower Mon, Kentucky, and Chickamauga at a summary level, highlight what has changed, and the current status of the projects.

Next slide. The first project I will discuss will be Olmsted. I always like to start with the "Bottom Line Up Front". On the Olmsted project -- and this is a fairly consistent bottom line up front -- we are ahead of schedule and we are under budget.

We are still tracking an operational date for the project of 2018 and a project completion date in 2022, which is ahead of our PACR [Post Authorization Change Report] commitments that we made to the Board and to others.

Right now we are tracking a cost savings of at least \$41 million. We actually think it could be much closer to that \$300 million, depending on what risks present themselves during the last phase of the project after we go operational. We should be refining that number much closer once we go operational. Once we get into the remaining construction.

Being ahead of schedule and under budget has been enabled by two things. One is efficient funding for the project, and it has to do with a lot of hard work by a lot of people. We are very appreciative of that efficient funding. The other comment -- I would be remiss not to comment that the success of this project is being done by a lot of people that are out there working hard every day to deliver the project.

Next slide.

CHAIRMAN HETTEL: David, I'm sorry to interrupt. Could you please go back to your previous slide for a minute? The risk that you continue to reference should be getting smaller the closer we get to finishing of the laying of the last navigable pass shells; is that correct?

MR. DALE: Yes sir, that is correct.

CHAIRMAN HETTEL: And that, I believe -- I know this is in a future schedule in FY 2017, next year's low water construction season, other than the left boat abutment. To your remark regarding \$300 million possible less total estimated price. In your efficient funding through completion, you reference the out years of \$175 million in FY 2018, \$125 million in FY 2019, \$100 million in FY 2020, \$75 million in FY 2021, and \$25 in FY 2022 required to complete the project by FY 2022. If there are \$300 million in cost savings to be realized, does that mean in the out years of FY 19, FY 20, FY 21 and FY 22 you would reduce that request for funding?

MR. DALE: No. That does not include all the risk in there. These numbers don't -- the out year funding, efficient funding what we estimate does not include all the risks.

CHAIRMAN HETTEL: If that were so, where do we achieve the cost savings then? You finish the project and you come in -- you do all this out year funding and you come in at \$2.799 billion versus the \$3.099 billion. Does then a percentage of that get sent back to the Trust Fund and back to the Treasury or where are those dollars? What are those dollars doing?

MR. DALE: That is a good question. Thank you very much. In the end, we will not have requested those funds for the project. They will never have been given to the project because we would not have requested them. Those funds will be available in the Trust Fund but will not be on the project itself because we would have never requested them because they wouldn't be needed.

CHAIRMAN HETTEL: In the out years, as you get closer to project completion, your requested dollars would go down when you see that you have these savings incorporated; is that correct?

MR. DALE: Yes sir, that is correct. You see that in the efficient funding stream that we have provided, the funding does go down in the out years.

CHAIRMAN HETTEL: This efficient funding stream that you provided, does it incorporate the possible \$300 million savings or does not?

MR. DALE: It does.

CHAIRMAN HETTEL: Okay.

MR. DALE: If something went really bad and we had to use all the contingencies that we still have on the table, you would see those out year funding requests go up from where they are at currently in the efficient funding stream.

CHAIRMAN HETTEL: Okay. So they are included in your efficient funding stream, the \$300 million possible cost savings?

MR. DALE: Yes, sir.

CHAIRMAN HETTEL: Just to make sure, your efficient funding stream, is that based on the \$3.099 billion project cost which was in the PACR or the \$2.799 billion project cost estimate with the possible \$300 million savings?

MR. DALE: It is based on the \$2.799 billion cost figure.

CHAIRMAN HETTEL: The \$2.799 billion figure.

MR. DALE: Yes sir.

CHAIRMAN HETTEL: Thank you for clarifying that David. I appreciate it.

MR. DALE: Ye sir. No problem. This next slide is a picture of the project. Many of you have been to the project site and seen it. There are a couple of things I want to highlight. While we were out seeing some really neat projects yesterday, the folks at Olmsted were busy on-site and they set the Navigable Pass Shell number 9 in the river, so it is sitting on the river bottom, which is great news. They are tremeing the navigable pass shell in place today. Navigable Pass Shell number 9 was the last navigable pass shell that we had scheduled to put in place during the current low water construction season. We schedule construction at the project on the low water seasons [June 15 – November 30] because it is constrained due to river conditions. We had scheduled placing Navigable Pass Shell number 9 later in November but due to the great efforts of the team at the project site we were able to place the shell earlier than we had planned.

What we are working towards right now is setting Navigable Pass Shell Number 10, which we had scheduled to be placed in the river during next year's low water construction season, but all indications are we will get that set Navigable Pass Shell number 10 this low water season. Current river conditions are really good and the shell itself is actually cast in place and ready to go. The long pole of the tent is reconfiguring the catamaran barge because the way it is sitting right now -- the way it is going to have to sit in the river close to the Kentucky side of the river, the river is a little shallower over there.

We think we can set Navigable Pass Shell number 10 in the November time frame, and so far it is looking very good. Setting Navigable Pass Shell number 10 is really our stretch goal for the construction season. We are really happy with that, and that has been due to receiving efficient funding.

We also have awarded the contract for the Wicket Lifter barge [contract awarded July 29, 2016] and the Wicket Lifter Crane [contract awarded September 2, 2016]. And we awarded a SATOC, a Single Award Task Order Contract. It is a contract where we can award multiple task orders against the contract for work on the river dikes. That contract has been awarded [contract awarded August 12, 2016].

In summary, everything is going really well on the Olmsted project.

CHAIRMAN HETTEL: David. On the wicket lifter barge and crane, you state the contract was awarded in July and September of this year. Last year the budget for Olmsted was \$268 million, and you requested an additional \$30 million for the wicket lifter barge. It is my understanding that the construction contract for the wicket lifter barge was awarded at \$8.4 million and the crane or excavator, whatever you want to call it, should come in at around \$5 million, which is \$13.4 million of the \$30 million additional you requested. Where is that additional \$16.6 million accounted for? Is that included in the \$300 million project cost savings? Did you spend it? Or did you not spend it?

MR. DALE: Let me try to answer that. First of all, let me clarify. It was not additional funding that we were requesting. It is the efficient funding stream. They are funds that we are accelerating earlier in the requirements. We are not asking for additional funds at a project level. We are just asking for those funds sooner than we would have planned. That is driven by the fact that we keep the whole team looking at what can we do to pull the project to the left, buy down the risk, deliver the project sooner. They are constantly looking at ways to deliver

the project sooner, and accelerating the use of those funds is what we are talking about. It is not additional funds to the project.

CHAIRMAN HETTEL: The \$30 million in additional resources, accelerated funds, towards the wicket lifter barge, comes in less than that. You just then utilize those funds for other activities at the project.

MR. DALE: Yes sir, we do. For example, we bought some additional supplies that were required to allow us to pull some things to the left to buy down some risk. We also – there is about \$10 million of those resources that we carried over into this fiscal year with the concern about what happens if we don't get funding for the current fiscal year very quickly.

The good news is we did get funds very quickly. We just got an allotment of \$65 million to keep us going during the CRA, so -- but we did have \$10 million that we did not spend of that \$30 million that we were carrying over just in case we got stuck in a tough time with the CRA.

CHAIRMAN HETTEL: My last question on FY 2017 funding. We know the President's budget request was \$225 million. In your efficient funding level table you show your efficient funding level of \$250 million, an increase of \$25 million. What is that extra \$25 million for? Can you give us a little detail on what that additional money will be used for?

MR. DALE: Yes sir. I can give you exact details, but what we are doing is we looked for opportunities, we have identified an opportunity to, again, buy down some future risk. That additional \$25 million will not pull the operational date [October 2018] any sooner. It will not happen any sooner as a result of that \$25 million. But what it will do is result in the project completion.

Remember, we go operational in 2018. We still have contracts ongoing with river dikes and some mitigation and some other things after that. That additional \$25 million will take some of that work and pull it sooner in the project schedule, which will avoid some escalation and save money in the project cost overall. It is a wise investment. However, it doesn't bring the project online any sooner.

I will follow up, if you would like, and provide you with some more details on precisely what we would do with that money, that additional \$25 million.

CHAIRMAN HETTEL: Thank you. One last question on this subject. You provided us an efficient funding schedule, I think, a year ago?

MR. DALE: Yes sir.

CHAIRMAN HETTEL: Because the efficient funding for Olmsted is the same as the efficient funding you gave us here for this meeting, I assume that this \$300 million possible contingency funding that you will not spend was included in that efficient funding schedule a year ago also because the numbers are exactly the same.

MR. DALE: Yes sir. We have been carrying that \$300 million figure for a good year or two. What that comes down to is as we go through our certified cost estimating process, we

have a lot of folks coming from outside of the project team and looking at the project risk and trying to put a number to it, and they are carrying that risk number out through the project.

One of the things we are going to do is spend some time over the next year or so with those folks and try to make sure they truly understand where we are at in the project and see what we can do to reduce that risk number and to start reflecting the actual number.

CHAIRMAN HETTEL: Okay. My last point, if you would for me, on your efficient funding table that you just sent us for this meeting, the increase of \$25 million for FY 2017 did not decrease the out years on your efficient funding. It may be something that just was overlooked. Maybe we can discuss that one on one or after the meeting. Maybe you can clarify that for us. Thank you for your time and all your efforts.

MR. DALE: Will do sir. As always I appreciate your questions and comments and your attention to this great projects.

Next slide. These are some pictures of the work ongoing at the project site. Real quickly, the first picture shows the arrival of Tainter Gate 4 at the project site. It is on-site. The second picture show the unwatering of Tainter Gate 2. After we get the tainter gates in place, we shut them down, we dewater the area around it, inspect it, and do some work with the concrete and some finishing work. The third picture shows Navigable Pass Shells 7 through 10 pre-cast work ongoing, we have work constantly ongoing in the pre-cast yard.

The next picture shows some unanticipated emergency support work we did at Lock and Dam 52. This year we had a little bit of unanticipated support we gave to Lock and Dam 52. We had some problems getting the wickets up at the dam at Lock and Dam 52. We actually had to -- I guess we lost the pool to a certain extent for a few days while we went out and fixed it, and we pulled some of the resources from Olmsted, without impacting the Olmsted project schedule, to shift those resources down to Lock and Dam 52 to help mitigate that emergency action. Colonel Beck [Colonel Christopher G. Beck, Commander and District Engineer, Louisville District, U.S. Army Corps of Engineers, Louisville, Kentucky] and the folks in the Louisville District did a fine job of minimizing the impacts to the river operations associated with that emergency situation.

CHAIRMAN HETTEL: If I may make on comment on the Lock and Dam 52 situation that we went through, and David you mentioned that Colonel Beck and his crew did a great job of responding to that emergency situation.

I cannot state enough of -- that could have been a pretty catastrophic event, and all of the options that the guys down at Lock and Dam 52 worked through and that Waylon [Mr. Waylon Humphrey, Operations Manager, Locks and Dam Project Office, Louisville District] worked through and through Colonel Beck's oversight, I cannot state enough on how appreciative we are as an industry of rectifying that situation that could have run into seven, ten, twelve days of loss of pool. Again, congratulations to the Louisville District on being able to get Lock and Dam 52 in a position where they could hold pool and hopefully we replaced the wickets and learned from it going forward.

MR. DALE: I will tell you the district is very appreciative of industry's input and support through that entire operation.

Back to the pictures on site. Picture number 5. Set down a paving block -- Paving Block 10 being set this past July. This picture is taken from underneath the floating gantry crane. And picture number 6, the cofferdam sheet piling for the Left Boat Abatement on the Kentucky shoreline. You can see the sheet pile wall going around it. It is progressing very well.

Next slide. This is a graphic that you have seen numerous times before. If you compare this slide to previous version of the slide, you will see that the white stuff has been completed. The colored stuff is work to be done. The bottom line is we are moving forward and making good progress. We just set Navigable Pass Shell number 9 and we have Navigable Pass Shell number 10 lined up ready to be set this low water season. It is looking very well. What you can tell you is the darker blue over here to the right of the diagram that is what we have planned for the low water construction season in 2018. There is not a lot of work in the 2018 low water construction season required to meet that October operational date.

CHAIRMAN HETTEL: David, once you set Navigable Pass Shells 10 and 11, is there anymore use for the catamaran barge or the gantry crane? Will they set any of these other pieces or --

MR. DALE: I don't believe so, no.

CHAIRMAN HETTEL: Okay.

MR. DALE: That is about when we start wrapping up the need for those.

CHAIRMAN HETTEL: That should eliminate -- I know in these low water conditions we are having, to pick up Navigable Pass Shell number 9, we had to close down for something like 24 hours. Once you get Navigable Pass Shell numbers 10 and 11 set that should be behind us -- or is the catamaran barge going to be used to set Navigable Pass Shell number 12A?

MR. DALE: I would need to confirm that. That is a pretty small piece. I don't know if we are going to use another piece of equipment or not, but that would be the only other one.

CHAIRMAN HETTEL: Maybe you can give us an update on it at our next meeting.

MR. DALE: I will be glad to.

CHAIRMAN HETTEL: Thank you.

MR. DALE: Next slide. You have seen this slide before. The thing I would like to point out are the changes. The red bars in the project cost graph in the lower left hand corner of the slide represent the commitment we made to bring the project in at a cost of \$3.1 billion or less. That has not changed. The green bars represent what we are calling our Total Estimated Price, or "TEP". What you see is that downward trend over the last several reporting periods, which is a good thing.

That concludes my presentation on Olmsted, subject to your questions. I will now move on to the Lower Monongahela River, Locks and Dams 2, 3, and 4 project update.

CHAIRMAN HETTEL: David, one more question on Olmsted. As you get closer to finishing this project, you are going to -- I take it some of these assets will be dispensed with or dispersed and/or transferred or -- there are a lot of assets down there, as we all know, that have been on-site. For example, what happens to the gantry crane and the catamaran barge if you no longer need it?

MR. DALE: We have several things ongoing to address that issue. We have not finalized any of them. One extreme is basically when we get done with the project and we go into an excess role of getting rid of all that equipment. Some of that equipment is very valuable. There are people who are interested in it. There are other Corps districts, there are other projects. There will be some of it that might be sold on the open market. And then, very honestly, there may be some equipment that nobody wants and we end up having to scrap it. That is one extreme.

The other extreme is we find someone that maybe would be interested in taking over the operation of the casting yard and re-utilizing that equipment. We have our Inland Navigation Design Center looking at some alternatives that -- is there a way to re-utilize the casting yard with future work that we have planned elsewhere?

There are a lot of alternatives, but one scenario, and probably the most likely one is that we will, in fact, go into that mode of shedding some of that equipment. When we shed that equipment, we will sell it. As long as the project is still active, we will sell it off and then the money from that sale of equipment will go back into the project and further reduce the project cost.

Those cost savings are not included in those numbers currently, so there will be some savings. We have sold one crane so far. That money is sitting at the district, and they are working their way through the accounting procedures on how to get that credited back to the project.

CHAIRMAN HETTEL: To finish up then, as an example, if you sold \$25 million of these assets in your efficient funding level, you have got a request in FY 2022 for \$25 million, that would go away, is what you are telling us? Because you would reinvest that money instead of asking for money from the General Treasury and the Trust Fund?

MR. DALE: I don't know that I want to say that it will all go away; but, yes, it would be reduced.

CHAIRMAN HETTEL: Reduced.

MR. DALE: Yes sir.

CHAIRMAN HETTEL: Okay, thanks.

MR. DALE: And there would be some timing issues there; but, yes.

MR. INNIS: David. As you go into these -- if the CRA is extended, can you tell us when each of these projects would end up without any funding, because we expect that it could go into March.

MR. DALE: Well, on Olmsted, we are pretty comfortable that with what we got in the CR we will continue operations. That should not be a problem at Olmsted because it got an allocation the prior year, so I don't really anticipate any problems with Olmsted. I will touch on the other projects as I get to them; is that okay?

MR. INNIS: Yes. Thank you.

MR. DALE: Very good. Back to the Lower Mon project. Bottom line up front, not much change from our last report.

The one thing and Joe [Joseph Aldridge] kind of touched on it. We did settle a contract, we call it a Request for Equitable Adjustment. Essentially, that is where the contractor said he thinks the Government owes him some money and we have a little bit of a contract issue, and we resolved that. That resulted in a modification to the contract, which required some of our funding that we had planned to use to award Option 1 this year. That was in the May time frame. We could not award Option 1 because that settlement led to a lack of funds.

The reality is the District thought they could convert that to an Option 1A, reduce the scope, make an award, and move on. Near the end of the fiscal year, the District finally figured out that that just was a bridge too far. They couldn't do it from a legal and contractual perspective, and we did not make that award. The good news is that work is not on the critical path so it did not result in an immediate project schedule slip.

Clearly, we would have liked to have made the award because it reduces some risk exposure. However, that didn't happen. Probably the one lesson learned is on a firm fixed price contract, we need to think about when we request efficient funding to make sure that we account for these types of Requests for Equitable Adjustment or claims or things that could happen and have some contingencies to cover modifications that could occur. When you are funding constrained the way we are here, if those funds aren't available to cover a modification -- and we have an obligation to the contractor. Once we figure out we have a liability, we need to pay them in a very timely manner. That is a lesson learned, and we are working through the system.

CHAIRMAN HETTEL: David. On your slide, your footnote reads "Funding and schedule information reported does not include the Charleroi landside lock chamber or the Port Perry Bridge relocation." I take it your total estimated price falls in that category.

MR. DALE: That is correct sir. We have essentially taken the stance on the project that we have, over the last series of Users Board meetings, we are no longer going to address those features as part of the project. If they still are - but to make it clear so we don't keep bouncing back and forth with different numbers, we are going to focus on the project without those two features.

CHAIRMAN HETTEL: Thank you.

MR. DALE: Next slide. Lower Mon Project Schedule. Essentially no change from the last report with the exception of some minor slippage in the river wall completion work. Just some minor punch list items. Nothing really of concern.

Next slide. This one is a little bit of a busy slide, but what it does is it gives you several scenarios relative to the project schedule. I briefed this last time. Not a whole lot has changed here. The one thing I do want to draw your attention to is we have a column titled "Current Completion with the Work Plan", we have a column titled "Current Completion without a Work Plan". Essentially that is if we were to get zero funds this year, what impact would it have on the project. What you see is that it stretches the schedule for project completion from 2023 out to 2027. That is the same information I briefed you last time. For the sake of clarity, that one-year slip in efficient funding results in a four-year slip because of the dynamics on how this project is structured and how it is contracted for. It is about a four-year slip and approximately a \$200 million cost increase of the project associated with that four year delay in completing the project.

CHAIRMAN HETTEL: David. That \$200 million cost increase does not include what are your benefits forgone if the project completion is extended by four more years.

MR. DALE: That is correct sir. These figures do not include any estimate of the benefits foregone by delaying the completion of the project beyond 2023.

CHAIRMAN HETTEL: And the estimate of the amount of the foregone benefits are what?

MR. DALE: I will have to get back with you an estimate of the foregone benefits.

CHAIRMAN HETTEL: So there is more to delaying the project beyond just the \$200 million project cost increase.

MR. DALE: That is correct sir. We call them forgone benefits. Benefits that won't be accrued.

CHAIRMAN HETTEL: I thought the benefits were in the \$600 million range, but -- when we were up at Charleroi a couple meetings ago [Inland Waterways Users Board meeting No. 78 held on April 1, 2016 in Pittsburgh, Pennsylvania], but maybe you can get that for us at the next meeting.

MR. DALE: Will do sir.

CHAIRMAN HETTEL: Thank you.

MR. DALE: And then to answer Mr. Innis's question, sir, about when would we run out of money. Let's assume we don't receive any additional money. Obviously, we have a contract that we awarded. We have work ongoing. That really is about the May time frame is when we believe we would begin to be impacted if we did not have additional funding on the project. For this project, the Lower Mon project, May 2017 is the mark on the wall. That is not absolute, but it is in that time frame. The May time frame.

Next slide, the “Lower Monongahela River Project Time and Cost Scorecard”. At the last Board meeting you asked that I modify this quadrant here. I actually had some computer problems this morning, so I didn't get it printed out. But we will begin reporting very similar information to what you see on Olmsted Project Scorecard, the total estimated project cost. What you might call the authorized project cost compared to where we are currently at. The project's authorized cost is \$1.22 billion without the Port Perry Bridge and without the landside Lock Chamber at Charleroi, and we have currently have a Total Estimated Project cost of \$1.213 billion. I will add that graphic into my next slide presentation.

Next slide. Here are some pictures of work on going at the project site at Charleroi. We are making good progress at the site. We have two contractors working on this site, two distinct contractors and coordinating the efforts of the two contracts can be a challenge sometimes but it is exciting. One of the things that I am really excited about and I think you should be excited about it as well, or at least interested in, is that the team on-site, they are taking up the challenge of coordinating the work and saying “Let's look at how we coordinate all this work. What can we do to alter the project schedule to see if we can pull this project to the left?” They are in the early phases, but they have had some good progress in getting the two contractors together, talking about how we coordinate two schedules and ultimately work on mitigating risk and trying to pull the project schedule to the left.

Subject to your questions or comments that concludes my presentation on the Lower Mon project.

CHAIRMAN HETTEL: David, I am looking at Joe's [Joseph Aldridge] financial report which he gave earlier in the meeting, and he says, the remaining balance for the Lower Mon project is approximately \$474 million. The fully estimated project cost is \$2.733 billion, where your project cost, bottom line up front, is \$1.22 billion.

I take it, Joe, your number includes the Charleroi Landside Lock Chamber and the relocation of the Port Perry Railroad Bridge?

MR. DALE: That is correct sir.

MR. ALDRIDGE: I believe the slide does say that at the bottom of the slide.

CHAIRMAN HETTEL: Your double asterisk next to the Remaining Balance figure of \$474 million says, “Excludes Charleroi Land Chamber and Port Perry Railroad Bridge Relocation.” But in the box in the lower left hand corner of your slide titled “Funding Overview” it says, “Fully fund estimate: \$2.733 billion”. It doesn't have the double asterisks. I just want to make sure we are reporting the same thing that David is reporting or what we should be reporting. We talked at the last Users Board meeting, and, Mr. Somales you had to leave for an emergency meeting, on whether or not the Board would vote to permanently take the second chamber at Charleroi and the relocation of Port Perry Railroad Bridge off the table for this facility.

MR. ALDRIDGE: The \$474 Remaining Balance on the Lower Mon project. That figure excludes the construction of the Charleroi Land Chamber and the Relocation of the Port Perry Railroad Bridge.

CHAIRMAN HETTEL: Correct.

MR. ALDRIDGE: By excluding that, and you will see at the top of the table where it says 'Current Project Estimate' where I have the double asterisks. The double asterisks were supposed to be for the \$1.22 billion which matches Mr. Dale's project cost estimate.

CHAIRMAN HETTEL: Yes, I see that.

MR. ALDRIDGE: That \$1.22 billion, and I have \$2.733 billion in parentheses.

CHAIRMAN HETTEL: My question was on the bottom left of the slide, where you say, "Fully funded estimate of \$2.733 billion".

MR. ALDRIDGE: Yes, that cost figure would include everything.

CHAIRMAN HETTEL: Okay. I just wanted to clarify that point for everyone so we weren't confused by it. Thank you.

MR. SOMALES: Mr. Chairman. To address your comment from a moment ago, to my knowledge, we had pushed the relocation of the Port Perry Railroad Bridge and the landside lock chamber at Charleroi out to 2050 for the long-term to get to a completion of the project. Essentially, the reason it was pushed out was we wouldn't have to reauthorize the project if we didn't try take it out of the plan altogether, but we would have to get the project reauthorized if we did try to take those project features out of the project; is that a correct statement?

CHAIRMAN HETTEL: Yes. We had a discussion at our last Users Board meeting on whether or not we should exclude the additional chamber at Charleroi and the Port Perry Railroad Bridge so we get an accurate BCR on the project without the additional costs of those project features. I made the statement that I do not want to take a Board vote on it with you not being here because you are the primary operator up there. Your statement seems to me you would rather leave them in and have those project features deferred?

MR. SOMALES: The way it was explained to me initially was you couldn't take them out of the project without having to reauthorize the project. We were just pushing them out to 2050. In an attempt to complete the project I am in favor of not doing relocation of the Port Perry Railroad Bridge and the landside Chamber at Charleroi, so however technically we get that done, if it's deferring those project features out to 2050 or project reauthorization. Can somebody help me with that?

MR. MCKEE: Currently it's been pushed out to 2050 for completion. It is still part of the project. When you do the benefit-cost calculation, it includes the Port Perry Railroad Bridge relocation as well as the landside lock chamber at Charleroi.

If we were to modify that project, yes, it would need an official modification with Congressional authorization to reduce that and change that. At that point in time if you went forward with that study, cut it off, you would be able to recalculate the benefit-to-cost ratio.

MR. SOMALES: To your question, Mr. Chairman, do you want to vote or what do you want to do?

CHAIRMAN HETTEL: Well, as you are the main operator and leaning on your expertise in that region, whether we should go forward and remove Port Perry Railroad Bridge relocation and the other chamber at Charleroi so we can get accurate BCRs, unless, Jeff, if you can give me a better BCR, a more accurate BCR without those two project features, or a portion of the project.

MR. MCKEE: I believe, as we discussed last time, the BCR doesn't change very much.

CHAIRMAN HETTEL: Which I struggle to understand.

MR. MCKEE: Unfortunately, Mr. Hammond had to leave, but in terms of when he was talking about bringing the costs back and discounts and whatnot, there is very little bit of difference. The Pittsburgh District did go through and recalculate the BCR, and we can get that for you. But, as Jeanne Hoey [Ms. Jeanine Hoey, Chief, Engineering and Construction Division, Pittsburgh District, U.S. Army Corps of Engineers, Pittsburgh, Pennsylvania] indicated at the last meeting there is very little increase in the BCR with the Port Perry Bridge and the second lock chamber taken out.

CHAIRMAN HETTEL: Again, I am just going to reiterate. I made this comment at the last meeting. I struggle with the \$2.7 billion cost figure or \$1.2 billion cost figure with exclusion of Port Perry Railroad Bridge and the second chamber at Charleroi, how it would not change the benefit-to-cost ratio when we are talking about not spending \$1.4 billion.

MR. MCKEE: The BCR changes very little because the scheduled construction is so far out into the future.

CHAIRMAN HETTEL: Again, so then if we remove them, the schedule of construction wouldn't be so far out and would that, in turn, give us a more accurate BCR if we eliminate those two project features.

MR. MCKEE: If you eliminated them, no, it would be pretty close to -- my understanding based on the preliminary economics they did would be only slightly higher than what it currently is.

CHAIRMAN HETTEL: Not that I doubt you, Mr. McKee, but, General, maybe we can get Mark Hammond to look at that for us. I struggle with that, and I don't know if the rest of the Board members struggle with that.

MR. SOMALES: It seems like a lot of money. It is fair to assume that it would change significantly.

MAJOR GENERAL JACKSON: So we don't beat this horse to death with no outcome today, why don't we table this, Jeff, and let's have the right folks lay that out at the next meeting for the Board members.

MR. SOMALES: To finish the question for Marty, and in the name of brevity, as the primary operator in the area, the benefit of 18 inches at the Port Perry Railroad Bridge right above the dam where we can control that pool with the gates even in high flows, we are able to

keep that upper gauge down and again the benefit of raising the bridge is 18 inches and many areas operate with primarily only one lock chamber. We conceded early on in the discussions that we could live without a land chamber at Charleroi and without raising the Port Perry Bridge.

MR. DALE: Moving on the Kentucky Lock Addition project. I will be very quick. The existing project construction work is going on and progressing well and remains on schedule. The critical path construction work that we had scheduled for award in September occurred. That was awarded on the 27th of September at a cost of approximately \$42.4 million, which is right on target with what we were expecting.

The one thing I will draw your attention to here is that Kentucky Lock does not currently have a risk-informed cost and schedule estimate. We are working on that with an economic update. But when we do that, there is a high probability, because of the way we do risk and we roll that into the project costs that the BCR on Kentucky will come down. I cannot tell you how much it will come down.

That will present itself in the fall when we complete that revised total project cost estimate. But I did want to point that out to the Board that that could be a significant issue, but I am not to the point where I can tell you it is going to be below one or above one at this point in time, but it will be changing.

Next slide. You can see a photograph of the construction site with the major project features and contract award dates. As a summary, we awarded the Downstream Cofferdam base contract and two options, which is this part right here. That will set the stage, assuming funding will become available, to award the next phase of the lock contract.

And to answer the question of when would the lack of funding become critical for the project, funding on this project is really the end of September. The current schedule shows if we were to receive efficient funding, they would make the award on the next contract in the September time frame. For this project, funding does not become critical relative to the overall project schedule until September.

Next slide. A few photos from the project site. We were at the project site this past June in association with the last User Board meeting, so this is familiar to most everyone.

Next slide. Kentucky Lock Addition Project Schedule. Essentially no change from our previous update assuming efficient funding.

One thing I would like to point out is that there is a requirement to do a PACR, a Post Authorization Change Report, because we will exceed the authorized project cost amount. We are in the process of developing. Once we get the revised cost estimate in this fall, we will initiate the PACR and get that progressing pretty quickly and make sure it is positioned at the right time frame to get reauthorized as appropriate.

Subject to your questions, that completes my update on the Kentucky Lock Addition project.

CHAIRMAN HETTEL: David, where do we stand with respect to the Post Authorization Change Report? How is it funded, at what level of funding is it funded at now, and when do you expect it to be completed? And what is the difference in project costs? Do you have that number?

MR. DALE: Yes, give me just a moment. I have to tell you I don't believe I have those numbers handy at the moment. I can follow up with you.

CHAIRMAN HETTEL: Thanks. That would be great if you can get it out to the Board members. I think that is important for us to understand when you have to go through a Post Authorization Change Report.

MR. DALE: I will get it to you. I thought I had that here with me, but I don't seem to.

Next project, Chickamauga Lock Replacement project.

CHAIRMAN HETTEL: David, I apologize. You do have the 902 limit for Kentucky Lock on page 19 of your presentation. It says here that the 902 limit is \$811 million and the current Total Project Cost Estimate is \$874 million. Therefore a PACR is required.

MR. DALE: Very good.

CHAIRMAN HETTEL: Correct me if I'm wrong, but the 902 limit is \$811 million versus the current TPCE of \$874 million. Really good reply. You were so fast in replying with that information to us, David. We appreciate it. That's what I like. Instant reaction from you. Thank you.

MR. DALE: Thank you. Back to Chickamauga Lock. Bottom line up front. Again, the project is progressing well, the work that we have got in place. The economic re-evaluation is done. We just need to publish that, the numbers that you see here. This is probably the big news, I guess I will call it big news. The economic update was completed. The updated BCR, the benefit-to-cost ratio, at a 3.125 percent interest rate is 2.4, and that is what we use for authorization purposes.

From a funding perspective, we tend to run a BCR at 7 percent, and the answer is 0.8. So we have a benefit-to-cost ratio of .8 at the 7 percent interest rate, which is what generally gets used in the funding process. That brings to a close a fairly long-term effort of doing the economics update on the Chickamauga Lock project.

You may ask yourself what this other RBRCR is. That is the remaining benefit to remaining cost ratio. It is essentially for the dollars that we have to invest versus the benefits. It kind of takes out of the equation the sunk cost, but the official numbers we use are to the benefit-to-cost ratio in total.

We have awarded a critical path construction contract in September. It was a \$27 million contract we awarded on the 26th of September, and that will allow that project to continue and progress forward.

Again, to the question of when would the lack of funding in FY 2017 become an issue, and it would be late in the September 2017 time frame. That is when we would plan, assuming we had efficient funding, to make the next significant contract award.

MR. MECKLENBORG: David, you came out with the updated 0.8 BCR, what impact is that going to have longer term?

MR. DALE: It will not compete as well in the budget process as projects that have a higher BCR. That is really the outcome of that.

MR. MECKLENBORG: Okay. Thank you.

MR. DALE: Thank you.

CHAIRMAN HETTEL: David, did that BCR take into account that if we do nothing at Chickamauga, we've got to invest \$360 million in major rehabilitation work of the existing one-barge chamber just to keep it functional?

MR. DALE: Yes sir.

CHAIRMAN HETTEL: It did take that into account?

MR. DALE: Remember when Mr. Hammond talked about the "without project" condition?

CHAIRMAN HETTEL: Yes.

MR. DALE: The "without project" condition is the assumption that we continue to operate Chickamauga Lock and we have to do something to it to take care of that Federal investment and maintain the benefits to navigation. So that investment is, in fact, factored in.

CHAIRMAN HETTEL: And that \$360 million cost figure was used in the "without project" condition in the report?

MR. DALE: That was part of the "without project" condition, the assumption that we would have to spend that level of funding to maintain the structure.

CHAIRMAN HETTEL: And, again, that cost figure is split between with the Trust Fund because that would be major rehabilitation project or are those Operation and Maintenance dollars?

MR. DALE: That would be a major rehabilitation project.

CHAIRMAN HETTEL: Okay. So with \$538 million -- \$539 million to complete the project, half of that is \$270 million from the Trust Fund versus \$180 million from the Trust Fund if we do nothing. When we look at it as a Trust Fund differential, \$90 million more gets a nine-barge chamber. If we do nothing, we are still spending \$180 million from the Trust Fund.

MR. DALE: Again, I think you have to go back to the reason we had Mr. Hammond here is to understand that what we look at is we are looking to optimize net economic development benefits in accordance with the guidance that we have. If you want to do that, the answer is a new lock that we have got laid out here with a 0.8 BCR. You have to run through the economics, but in the end when we're true to that process, we ran through the economics, we did the analysis, we factored in all the factors into it, and those are the numbers that came out.

CHAIRMAN HETTEL: Just doesn't seem like a very good utilization of Trust Fund dollars to spend \$180 million just to keep a one-barge chamber operational, but I don't want to drag this on any longer, so thank you.

MR. DALE: Thank you. Continuing with my presentation on Chickamauga. Next slide. This picture shows the project site and the award of particular contracts for various project features. There you can see the Lock Excavation base contract award and two options in September for \$26 million. I think we have all seen Chickamauga Lock.

This is the contract that we awarded for the lock excavation contract. Next slide. Some pictures of the project site and the cofferdam when it was dewatered in June 2016. This is a picture of the dewatered chamber.

Next slide. The Chickamauga Lock Project Schedule. No changes here from the last time, with the exception of some minor resequencing of a little bit of work on the project, but overall completion, assuming efficient funding.

MAJOR GENERAL JACKSON: David, can you go back? I want to make sure. Can you explain to make sure everybody understands what you mean by the term "assuming efficient funding"?

MR. DALE: One of the dilemmas we have is that you have to have a schedule to complete your project. In order to come up with a schedule to complete your project, you have to assume some sequence of work to get there. Obviously, we look for the shortest path to get the project done. Then, once you have done that, you get a cash flow stream associated with that work. That is how we come up with efficient funding.

What is the shortest path between here and completion for the project? What does that require on a yearly basis relative to funding to support that work, and that is that efficient funding stream that we talked about. It is not a commitment that the Administration has bought into it or not bought into it.

It is not capability funding. It is nothing but our efficient – it is the basis for our schedule analysis, is ultimately what it is.

Did I answer your question for you, sir?

MAJOR GENERAL JACKSON: Yes, but I am going to add to it, if you don't mind. Just to make sure that everybody understands. Basically for every year that we don't get efficient funding, for whatever reason, because of the competition for dollars that we work through, that is going to change the schedule, basically change the cost of the project because it

pushes it out further to the right. I just want to make sure everybody understands that because as I talk to different stakeholder groups many times people don't understand that. And how we formulate our projects is to the optimal, or efficient funding limits so we can evaluate each project based on the same standard, not really knowing what future appropriations will be made available to us and placed against those particular projects.

It is sort of an expectation management comment, for lack of a better term, because -- and you wonder why numbers change over time and schedules change. This is a factor that goes into that because oftentimes if we don't get that number from year to year, then the schedules will adjust and the costs will go up accordingly, even if it is just as a result of increases due to inflation.

MR. DALE: That is absolutely correct. The costs will go up. The schedule will extend. The BCR will likely go down. Which, it's almost a downward spiral. Now, maybe you will get lucky if the economy takes off and your benefits start growing at a faster rate. But all other things being equal, it is really not a good thing because it just drives the BCR down and drives the costs up.

The other thing you can't ignore is that we go through a lot of economic analysis and we identify the benefits of the project. Not just do we drive up additional costs associated with the direct project costs, we are foregoing benefits that we would have reaped. For every year -- and I don't know what the benefits of Chickamauga Lock are off the top of my head, but they are significant. Even on Chickamauga Lock, which has a fairly low BCR ratio, they are real numbers, and those are benefits that we don't reap when we delay the project, but those are fiscal realities that we all have to live with and we work within them.

CHAIRMAN HETTEL: I think I will coin the phrase "great minds think alike" because I was just going to remind General Jackson of the forgone benefits also of a project being extended. General, I think the majority of the Users Board members here, if not all of them, certainly understand that deferring funding for a project certainly increases the cost, whether it is materials or labor. Certainly, our goal is to get efficient funding, get these four, what I will call, legacy projects behind us, so then we can move on to recapitalizing other infrastructure projects, such as we saw yesterday that are in dire need of funding also.

MR. DALE: My last slide on the Chickamauga Lock replacement project is a summary of the project. I will draw your attention to the last bullet on this slide. The Chickamauga Lock replacement project will also need a 902 fix associated with the authorization. Currently the 902 limit is \$476 million, and our current total project cost estimate is \$755 million. You see there is a difference that we will have to get corrected at some point in time.

My intentions are to do that almost immediately, begin to work on the PACR so that we assure that the next time the Congress is in a place to act on an authorization bill, we have this ready to go.

Subject to any further discussion or comments or questions, that completes my presentation on the Chickamauga Lock Replacement project. And thank you once again for your interest and attention and support of our ongoing construction projects and the Corps overall inland navigation program and mission. Thank you.

MS. DARCY: Unfortunately, I am going to have to leave, but I appreciate being here at what might be my last Users Board meeting. But I think one of the things that we are all challenged with is these four legacy projects, getting them done, and having to do PACRs all the time is not the most beneficial way to get there, but hopefully we won't have to do it on all of them, but it's looking that these last four -- well, not Olmsted, but the other three might have to do that. Again, thank you very much. I appreciate it.

CHAIRMAN HETTEL: Safe travels.

(Exit Ms. Darcy.)

MR. POINTON: We are now at the point in the agenda where we are going to move on to the public comment period. I have two individuals who have expressed an interest in making a public comment. I would remind them that there is a three-minute limit on public comment and please take the podium. I would like to call on Ms. Lynn Muench first to provide her comments. Ms. Muench.

MS. LYNN MUENCH: Good afternoon. I am Lynn Muench with the American Waterways Operators, a national trade association for the tugboat, towboat, and barge industry.

Today, although obviously, as was discussed earlier, the Brandon Road study isn't under the purview of the Inland Waterways Users Board the outcome of this study could seriously impact the flow of navigation and impact the nation's economy and its environment. We are hoping that the outcome of the study will be based on science and logic and not emotion and hype.

Let me be clear, AWO and its allies are fully supportive of stopping the forward movement of invasive species moving between the two basins in both directions. Unfortunately, the Brandon Road alternatives fall very short of accomplishing the goal that was directed by Congress.

The industry is grateful that the study team has met with industry to discuss safety and economics. However, we are very concerned that both these meetings were held very far into the study, and perhaps we will not get the type of information that could provide and have ensured correct, complete, and robust real world information.

The industry goals in this study are very simple. We want to protect our crew's safety. We want to protect the potential impacts to our vessels. We want to protect the Corps' infrastructure and the economic and environmental impacts to the nation when the towing industry is seen, becomes, or is perceived to be unreliable. AWO also wants the Corps to strongly consider the two nonstructural options.

Alternative 1 is not a do-nothing or no-action alternative, as was stated yesterday. It is a group of measures that are being undertaken now and are working. And Alternative 2 would further increase and improve the nonstructural options. We ask the Corps to consider both of them strongly.

Since all of the technology options include an engineered channel, they will all restrict and/or make movement unreliable, not only during construction but after construction and

completion. So for the nation's economy and environment, Alternatives 3 through 7 are not acceptable.

I will stop there, but I would like to say one thank you to both the Corps -- both the Generals, General Wehr and General Toy, and their Divisions and their Districts for fully embracing the spirit of the RIETF MOU [River Industry Executive Task Force Memorandum of Understanding]. It has really improved communications and collaboration between the Corps and industry during some very recent troubling times at Lock 52 and also Lake Providence, but a lot of other smaller incidents that have improved greatly. So thank you.

MR. POINTON: Thank you, Ms. Muench.

MS. MUENCH: Thank you.

MR. POINTON: Next I would like to ask John Doyle to come up to the microphone and provide his public comment.

MR. JOHN DOYLE: Thanks, Mark. I am John Doyle with the Jones Walker law firm. We represent the Waterways Council Inc. and a number of other navigation interests throughout the country.

I know we don't want to beat Lower Mon's BCR to death, but I would like to take a real quick attempt to try and illustrate for you why that issue keeps coming back, at least in my understanding of things, and why so many of us are so confused by the answer that it doesn't matter whether the scaled back project or the larger project goes forward, the numbers are about the same.

What works best for me, and I don't know if we can go back to do this. Joe Aldridge's briefing slides on the Lower Mon project, on page 16, is the summary slide for that project. And you had some discussion earlier. That is the one we were talking about the double asterisks and what project we were talking about. Is it the \$1.22 billion scaled back project or is it the \$2.733 billion full project.

So those are the two projects I would like us to think about, and I would like to focus on his remaining balance figure, okay, which is \$474 million. So as of the data that Joe used to prepare this slide, spending \$474 million will finish the smaller scaled back project and produce the level of benefits that, I believe, that the record will show is 90 percent or more of the benefits that would be achieved by the larger project. So, essentially, the question, the investment question is do we spend \$474 million plus the \$1.5 billion difference between the total cost for the scaled back project and the larger project, or do we spend \$474 million to essentially achieve the same benefits. And it completely defies logic, at least in my logic system and my understanding of math, to believe that we're going to get the same remaining benefit/remaining cost ratio, particularly as we look at those two options.

And I would suggest that it's the remaining benefit/remaining cost ratio that's really the important public policy factor to look at because we've already spent what we've spent on that project, whichever way we go. If I've got an extra dollar to spend in this year's budget or next year's budget, which question best answers, "What am I going to get back for the expenditure of

that dollar?" I think it's the remaining benefit/remaining cost ratio. That is where we should be focusing.

So, General, as folks go back and look at that in detail, I would ask you to look very carefully at that because common sense and basic math suggests to me that the remaining benefit/remaining cost ratio for that scaled back project should be roughly three to four times the remaining benefit/remaining cost ratio for the larger project. Thank you.

MR. POINTON: Thank you Mr. Doyle. I am going to turn the microphone over to you, General Jackson, for your closing remarks.

MAJOR GENERAL JACKSON: Are there any other folks here for public comment?

MR. POINTON: No sir. Those were the two.

MAJOR GENERAL JACKSON: Is Colonel Drew still here? Drew's not here? Did he take off?

UNKNOWN SPEAKER: Colonel Drew has stepped out, sir.

MAJOR GENERAL JACKSON: He stepped out? Is he still on the premises or is he gone?

UNKNOWN SPEAKER: I believe he stepped out into the lobby.

MAJOR GENERAL JACKSON: Okay. Don't go chase him. That's fine.

Again, thanks everybody for being here today, and I just wanted to step up because, as has been our tradition, there are some folks who we want to thank for all the hard effort that went into making this possible, whether it was just the logistics associated with putting on this meeting or whether it was the logistics and the expertise that we witnessed yesterday when we went out to some of the site visits.

So I ask Colonel Baumgartner, if you would, to help me recognize a few of his great folks from Rock Island District. So, Craig, if you would please do that and I would like to present them a coin on behalf of the Civil Works Directorate.

COLONEL BAUMGARTNER: There are two folks that I would like to recognize and have Major General Jackson recognize for all their efforts. It's not only for putting the last two days together, but also for the great work they're doing within the Rock Island District.

The first one, Mr. Tom Heinold, if you can come up, please. He is our Deputy Chief of Operations, and does great work. As you've heard me say before, navigation is a large part of what we do in the District. That keeps a very busy Operations division. Tom's a large part of that.

And then First Lieutenant Robert Horey, if you could come up, please. Rob joins us as a lieutenant at the Corps, and the Corps has a program where we are looking to develop young

engineers and improve their technical excellence. He's coming through what we call the Tech P Program. He will be going off to the advanced course here in a couple months.

But both gentlemen did most of the work of all the logistics and everything that made both yesterday and today happen, so I would like to congratulate both of them.

(Applause.)

MAJOR GENERAL JACKSON: And, finally, before I step back to my mic and finish my remarks, Craig, stand by. I want to recognize -- there's Chris Drew coming up.

COLONEL CHRISTOPHER T. DREW: I was presenting an award to somebody out in lobby.

MAJOR GENERAL JACKSON: That's all right. That's the reason that I called you in here because I wanted to say thanks. We are really blessed in the Army Corps of Engineers to have unbelievably talented officers that command our districts, and I probably don't take enough time to recognize the leadership.

We love to recognize the folks who are doing all the great work in the field, and we do that quite frequently, but some of the senior leaders skate by without proper recognition. But I'm always very, very proud to be able to highlight the trust and confidence that we place in these colonels. These are brigade level commands for the Army Corps of Engineers. And I would say that the responsibility that we place on these guys, having been a District Commander years ago, far exceeds some of the things we ask our folks to do out on the battlefield. Their battlefields are different, but they are no less important, and so I just want to take an opportunity, guys, just to say thanks.

Chris, thank you for what you do at the Chicago District and, Craig, what you do for the Rock Island District. Very proud of you. Thank you very much for everything.

(Applause.)

MAJOR GENERAL JACKSON: Thanks for obliging me and enabling me to do that. Again, I always enjoy coming to these Users Board meetings. I enjoy the comradery. I enjoy the things that I learn from the speakers. I enjoy the comments and the challenges and the thank yous. And I do appreciate the attaboys.

And I'll pass on to Dr. Sudol, Mr. Woodruff your comments on what you guys did. I think that is important as well.

We do all these things together, so I really appreciate all that's done. There are a lot of do outs that we have. I know we'll capture those, hopefully, Mark, very quickly in some notes that we'll send around to all the Board members so you know kind of what to expect when we get together in December.

Our meeting in December is going to be a little less logistically straining, so we'll probably not do a tour of any kind. I'm not sure what we would show you in Washington, D.C., anyway, although there are a lot of opportunities on the civil side to talk to you about

navigation stuff, but we will really focus on just some business work, Mr. Chairman, that you and I have talked about, and so hopefully everyone will be able to attend that. And I know, Mark, you'll talk about the dates and times for that.

I appreciate, again, just the opportunity to be here. I appreciate what you guys are doing. And we have -- it's always -- and the comments that came in the public period here.

I understand the frustration that people have with some of our processes, and I don't profess to be an expert or fully understand all of them myself. I ask a lot of questions of my staff, but I appreciate the questions because it helps us be able to ask ourselves those questions and ask ourselves, "Are we doing that just because that is what we have always done?" Are we doing this because this is what we're driven to do? How can we improve? I think everybody on our team is always committed to improving.

Before I turn the microphone over, Mr. Chairman, to you, I do want to give our Federal observers one more chance for any final comments.

Ms. Brand, I don't know if you have any final comments.

MS. BRAND: No. Thank you very much for the opportunity to attend and participate in today's meeting. I will see you in December.

MAJOR GENERAL JACKSON: Thank you. Mr. Marathon.

MR. MARATHON: Thank you General for a very interesting and information meeting and site visit yesterday. Thank you.

MAJOR GENERAL JACKSON: To all the Board members, thanks again for your participation and for all that you do for navigation and for the Army Corps of Engineers. With that, Mr. Chairman, I pass it to you for closing remarks.

CHAIRMAN HETTEL: Thank you, General. Before I have my brief closing remarks, I will go around the members to see if anyone has any closing comments. Everybody good?

(No response.)

Well, we're planning on -- I've asked Mr. Pointon to look at the dates of December 5th, 6th, 7th for our meeting in D.C., our Board Meeting No. 81, if we can abide by that schedule. Again, the reason why I bring this up is it's important for us to start the process on our annual report, Mark, which would mean that all the data that we requested today, if we stay with our two-week schedule of read-ahead materials should be deliverable to us somewhere in the week of November 21st, which will give us a great start on our annual report for this year.

I will end up with just saying I enjoy the fact that Corps can challenge industry and industry can challenge Corps in these meetings without any obstruction or confrontation. The collaboration and communication and what this Board and the Corps does, I think, is extremely important in moving these projects forward. I certainly thank your leadership for that, General Jackson. That will end my closing comments. Thank you.

MR. POINTON: With that, then I believe we need a motion to adjourn.

MR. MECKLENBORG: So moved.

MR. POINTON: Do I have a Second?

MR. HAUN: Second.

MR. POINTON: All those in favor of the motion to adjourn the meeting, say "aye".

BOARD MEMBERS: Aye (unanimous).

MR. POINTON: Thank you. The meeting is adjourned. Safe travels and we will see you at the 81st meeting of the Inland Waterways Users Board.

(Whereupon, said meeting was adjourned.)

STATE OF ILLINOIS)
) SS
COUNTY OF LASALLE)

Kelly A. Siska, being first duly sworn, on
oath says that she is a Certified Shorthand Reporter,
Registered Professional Reporter, Certified Reporting
Instructor, and Certified LiveNote Reporter doing
business in the City of Chicago, County of LaSalle and
the State of Illinois;

That she reported in shorthand the
proceedings had at the foregoing meeting;

And that the foregoing is a true and correct
transcript of her shorthand notes so taken as
aforesaid and contains all the proceedings had at the
said meeting.

KELLY A. SISKA, CSR, RPR, CRI, CLR

CSR No. 084-002761