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Minutes

Inland Waterways Users Board Meeting No. 91

New Orleans, LA

May 23, 2019

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Westin New Orleans Canal Place – Azalea II Room
100 Iberville Street
New Orleans, Louisiana 70130

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The following proceedings are of the 91st Meeting of the Inland Waterways Users Board held on the 23rd day of May 2019, commencing at 8:00 a.m. at the Westin New Orleans Canal Place, Azalea II Room located at 100 Iberville Street, New Orleans, Louisiana 70130. Mr. Martin T. Hettel, Chairman of the Inland Waterways Users Board presiding. Inland Waterways Users Board (Board) members present at the meeting included the following:

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

MR. MICHAEL J. MONAHAN, Campbell Transportation Company

MR. MIKE FEWELL, Dow Chemical Company

MR. ROBERT J. INNIS, LafargeHolcim, Inc.

MR. DAVID KONZ, Tidewater Barge Lines

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

MR. DANIEL P. MECKLENBORG, Ingram Barge Company

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

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

MR. WILLIAM M. "MATT" WOODRUFF, Kirby Corporation

Board Member MR. DAVID A. EARL representing Marathon Petroleum Company was unable to attend the meeting.

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

MS. DEANA Y. FUNDERBURK, Deputy Assistant Secretary of the Army for Policy and Legislation, Office of the Assistant Secretary of the Army for Civil Works, Headquarters, Department of the Army, Washington, D.C.

MR. NICHOLAS MARATHON, Senior Economist, Agricultural Marketing Service, U.S. Department of Agriculture (USDA), Washington, D.C.

MR. JAMES J. MURPHY, Director, Central Gulf and Southern Rivers Gateway, U.S. Department of Transportation (DOT), Maritime Administration (MARAD), New Orleans, LA.

MS. HEATHER GILBERT, Senior Advisor, Office of Coast Survey, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, Silver Spring, MD.

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

MAJOR GENERAL (MG) SCOTT A. SPELLMON, Users Board Executive Director and Deputy Commanding General for Civil and Emergency Operations, Headquarters, U.S. Army Corps of Engineers, Washington, D.C.

MR. THOMAS P. SMITH, Chief of Operations and Regulatory Division, Headquarters, 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, Virginia.

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

MS. KATIE NOLAND, Alternate Designated Federal Officer (ADFO), Inland Waterways Users Board, U.S. Army Corps of Engineers, Institute for Water Resources, Alexandria, Virginia.

MR. DAVID A. FRANTZ, Inland Navigation Program Manager, Navigation Operations, Headquarters, U.S. Army Corps of Engineers, Washington, D.C.

MS. RENEE TURNER, Acting Regional Programs Director, Mississippi Valley Division (MVD), U.S. Army Corps of Engineers, Vicksburg, MS.

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

MR. STEPHEN G. DURRETT, Regional Programs Director, Great Lakes and Ohio River Division (LRD), U.S. Army Corps of Engineers, Cincinnati, OH.

MR. WILLIAM R. CHAPMAN III, Chief of Operations, Great Lakes and Ohio River Division (LRD), U.S. Army Corps of Engineers, Cincinnati, OH.

COL MICHAEL N. CLANCY, Commander, New Orleans District, U.S. Army Corps of Engineers, New Orleans, LA.

Program speakers in scheduled order of appearance were as follows:

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

COL Michael N. Clancy, U.S. Army Corps of Engineers, New Orleans District, District Commander.

Major General (MG) Scott A. Spellmon, Corps of Engineers, Deputy Commanding General for Civil and Emergency Operations.

Mr. Thomas P. Smith, Corps of Engineers HQ, Chief, Operations and Regulatory Division.

Mr. Martin T. Hettel, Chairman, Inland Waterways Users Board, Vice President for Government Affairs, American Commercial Barge Line LLC.

Mr. David A. Frantz, Corps of Engineers, HQ Navigation Operations Branch, Inland Navigation Program Manager.

Mr. Mark R. Pointon (for Joseph W. Aldridge, HQ PID), for Inland Waterways Trust Fund.

Ms. Martha M. Lucore, U.S. Army Corps of Engineers, New Orleans District, Senior Project Manager, Calcasieu Lock.

Mr. Michael J. Tarpey, U.S. Army Corps of Engineers, Rock Island District, for Inland Navigation Innovative Design/Techniques (for the Inland Navigation Design Center) and Upper Mississippi River-Illinois Waterway Navigation and Ecosystem Sustainability Program (NESP) Study.

Mr. Stephen G. Durrett, U.S. Army Corps of Engineers, Great Lakes and Ohio River Division, Regional Business Director.

Ms. Lenna C. Hawkins, U.S. Army Corps of Engineers, Pittsburgh District, Deputy District Engineer, for Upper Ohio Navigation Study and Monongahela River Locks & Dams 2-3-4.

Mr. Adam C. Walker, U.S. Army Corps of Engineers, Nashville District, Project Manager, for Kentucky Lock Addition and Chickamauga Lock.

Mr. Dewey Rissler, U.S. Army Corps of Engineers, Louisville District, for Olmsted Locks and Dam.

There was one public comments offered during the public comment period of the meeting; there was one written public comment submitted for the record prior to or during the meeting.

PROCEEDINGS

MR. MARK POINTON: All right. Everybody's grabbed a seat and a cup of coffee, I hope. We'll begin the meeting, now. My name is Mark Pointon. I'm the current Designated Federal Officer for the Inland Waterways Users Board. Welcome to the 91st meeting here in New Orleans. Hope everybody's been enjoying it. The weather's kind of cooperated. Been a little hot and humid, but considering what else we might get down here, that's good.

We haven't been here in about five years. I think we were here in January 2014. Marty, I think you said it was Meeting No. 70; I think that is correct. We did come to Lake Charles a couple of years ago, so we weren't ignoring the state, but we were not coming to New Orleans.

I'd like to congratulate the current members that were reappointed. We do have six members that are cycling off after this meeting, so I appreciate their time that they put in on the Board.

I'd like to welcome what I refer to as the members elect. We have three of the six new members here, including Spencer Murphy of Canal Barge, Jeff Webb of Cargill, and Damon Judd of Marquette. They're not stuckies at the table yet like the current members, but the next meeting, they'll be sitting at the table with us behind the microphones.

Three other members that were appointed that are not here include Dennis Oakley from Bruce Oakley, Tim Power of SCF Marine, and Rob Rich of Shaver Transportation from the Columbia-Snake River System.

I'm obliged to read from the record that the Users Board was created pursuant to section 302 of the Water Resources Development Act of 1986 and provides the Secretary, the Army, and the Congress with recommendations on funding levels and priorities for modernization of the Inland Waterways System. The Board is subject to the rules and regulations of the Federal Advisory Committee Act of 1972 as amended. This is the Government in the Sunshine Act meeting, and as such, it's open to the public. So we've got our audience here today. Good to see you all. We've got a few faces that don't usually come, so we're glad to see a little change in the participation here.

The U.S. Army Corps of Engineers (USACE or Corps) is the sponsor of the Board and provides for the executive director, the Designated Federal Officer, and for all normal activities of administering the Board. Currently, we have no one who has requested to make a public comment at the end of the meeting. We did have one written statement that was submitted for the record from the Pacific Northwest Waterways Association (PNWA); there are some limited copies out on the desk, and all the members and the people around the table also have a copy of that statement. These proceedings are being recorded and we'll have a transcript available as soon as we can produce that after the meeting. It usually takes a couple or three weeks to get that done.

I'd like to invite Colonel Michael Clancy, District Commander for the New Orleans District who is actually hosting us here today. Sir.

COLONEL MICHAEL CLANCY: All right, well good morning everybody. Welcome to New Orleans. Thank you all for coming. I assume most of you have been here before. In the last few months, New Orleans celebrated its 300th birthday and the New Orleans District in October celebrated our 200th birthday; but this year, 2019 is a historical year. I think it's no secret to anyone in this room that we are in a historic flood year – this is the wettest year on record in the 124 years records were kept. That's really when the weather service started keeping records.

We're breaking records up and down the Mississippi right now for the longest period in flood stage. Here in New Orleans, we've been in flood stage for about 220 days, which is just incredible.

I'm responsible for about a thousand miles of Mississippi River and Tributary system levees on the Mississippi and the Atchafalaya, so we inspect all those levees every single day. It's just a tremendous amount of work. You probably saw that we opened the Bonnet Carre Spillway about two weeks ago. This is the first time in history we've opened it twice in one year. We opened it in February, closed it in April, and then re-opened it again in May. You'll probably be seeing in the news today that we are awful close to opening the Morganza Floodway. We're not there yet, but based on the forecasted rain in the coming week, we think we'll hit the triggers for Morganza during the first week of June.

I'll apologize up front that I was planning to stay here this morning, but I am leaving as soon as I'm done here. I'm off to Baton Rouge to go brief the governor and his cabinet on Morganza; a totally different operation than Bonnet Carre. With Bonnet Carre, the U.S. Army Corps of Engineers owns the spillway. We don't flood anyone. Morganza is a totally different story. We're going to be deliberately flooding private property. People have to evacuate property and livestock. We've got endangered species issues. It's an incredibly complicated operation.

On the navigation front, the high river obviously poses challenges. Bayou Sorrel Lock was closed for about two weeks. It opened yesterday afternoon, back in business. That's good news for the Gulf Intracoastal Waterway (GIWW) Alternate Route. Old River Lock is closed. It's been closed for a couple of weeks. Really no end in sight for that one, all based on the height of the river. Old River was closed back in February and March as well, so we'll just keep after it.

Other news on that front, this year was a good year for the New Orleans District in terms of funding between the Fiscal Year (FY) 2019 budget and the Bi-Partisan Budget Act of 2018. New Orleans District got over $2 billion. Now most of that's going to flood risk management, but a tremendous amount went to navigation, dredging, and a lot of lock repairs that you are familiar with. New guide walls on the Calcasieu Lock posed some challenges. We worked through that, trying to reduce the queue there. As soon as the river drops, we're going to start new guide walls on the Bayou Boeuf Lock; lots of other small repairs that are much needed to just keep our locks in operation.

Dredging never ends. The high river brings a tremendous amount of sediment, so here this morning, we've got nine dredges working in the New Orleans District; five at Southwest Pass (on the Mississippi River). You can see that little map up there. You can't quite see, but there's little stars where all those five dredges are. Two starting to work on the crossings, because we know as soon as the river drops, the crossings will become a challenge in the middle stretches of the river between New Orleans and Baton Rouge. And then, dredge working on the Atchafalaya around Morgan City and into Calcasieu. It's a never ending battle keeping the river open. We've been fairly successful. We're at a one foot draft restriction at Southwest Pass at 44 feet. We have been maintaining that for about nearly two months now. We were below that, but it was 41 feet when the river first rose before we could mobilize enough dredge capacity.

Last thing I'll talk about is feasibility studies. New Orleans District has ten feasibility studies in the works. Most of those are flood risk management, but there are two navigation-related. The one most near and dear to the Inland Waterways Users Board as a non-federal sponsor for the Inner Harbor Navigation Canal Lock, we are in the final throes of completing the draft of that Chief's Report, the goal being to have the Chief's Report signed and to Congress by December. That is really not much change there from what you know.

The plan is a 900 foot long by 110 foot wide, 22 foot deep new lock in the Industrial Canal. The lock itself is actually the easy part. It's all the environmental and associated community concerns there that we're working through, but we're making good progress.

We just kicked off a feasibility study for deepening the Port of New Orleans. The main channel of the river through New Orleans is naturally well below 50 feet, but the Port itself, particularly the Upland Wharfs, the Napoleon Avenue Wharf, those are federally authorized to 45 feet; so we're working on that feasibility study. The Port of New Orleans is our non-federal sponsor for that.

Last summer we got authorization to start maintaining the river to 50 feet. We presently maintain it to 45 feet, so that was good news. Current plan is about $250 million. Our partner is the (Louisiana) State Department of Transportation. We have a seven year plan, and at this point now just waiting on the funding; so that's a quick couple highlights. I probably used up my five minutes, probably over my five minutes, but if anybody has any questions, I'd happily answer them.

If you are here from New Orleans District, if you could please raise your hand. I know we've got Vic (Victor Landry) here. Anybody else -- Michelle Daigle. So a couple of folks here; I know we've got Marty (Martha) Lucore, one of my project managers on the agenda. If you have any questions or just curiosities about New Orleans, New Orleans District, New Orleans District folks will be here at the meeting and will happily help you out. Have a good meeting and a good morning. Thank you.

MR. POINTON: Thank you Colonel, I appreciate your finding time this morning with everything going on in your area of responsibility, so thank you much.

COLONEL CLANCY: Thank you.

MR. POINTON: Next on the program, I'd like to have General Spellmon. I'm thrilled that he's here. I know that he had some travel issues, some challenges, so thank you, sir.

MAJOR GENERAL (MG) SCOTT SPELLMON: Thanks everybody. As Mark said, it is good to be here. I apologize for missing yesterday. There are a number of record flows in our rivers across the country this year as you all know. In fact, I tell folks that even out on the west coast in Oregon in the Willamette Valley, we've got two projects out there that have been in the ground, two dams, 70-80 years; and this year is the first time we've ever had to use the spillways on those projects.

The last couple of days with the record flows on the Ohio, the Upper Mississippi, certainly the Missouri - the Arkansas River must have been feeling left out, so it wanted to get in on the action. We were down there yesterday walking Keystone Dam, walked the levees there in Tulsa, Oklahoma, went to the city emergency operations center (EOC), and then, down into some of the impacted neighborhoods.

Don't know yet if our releases out of Keystone Dam are going to approach what the record was back in 1986, but we may get there. We'll know more later this morning and this afternoon after we get the latest forecasts and updated modeling. We tried to get here, but we ended up -- where's Captain Fletcher? Did Matt make it? He's here somewhere. He's probably over by the coffee. We ended up spending some time in the basement of Tulsa Airport. Some tornadoes were going through.

I just have some comments I'm going to save for the end. What this year indicates to me is the importance of this Board and our work in modernizing our infrastructure and getting it ready for the next generation, so I'll save those for the end. But again, apologize for missing yesterday. It's good to be here. I'm going to quickly go to each of our fellow observers just to see if they have any opening comments that they would like to make; and Heather, I'll start with you, from NOAA (National Oceanic and Atmospheric Administration).

MS. HEATHER GILBERT: Thank you, General Spellmon. Good morning, General Spellmon, Chairman Hettel, members of the Board, fellow Federal observers, staff and the public. For the record, my name is Heather Gilbert. I am the Federal observer to the Board representing NOAA, specifically Rear Admiral Shep (Shephard) Smith, who is the Director of the Office of Coast Survey, the National Hydrographer, as well as a Mississippi River Commissioner.

This is my second meeting in this role, and I feel I am coming into this meeting with a stronger understanding of the Inland Waterways System. Last week I had the chance to spend a few days in Paducah, Kentucky where I toured the Kentucky and the Olmsted Locks and Dams. Between that trip and yesterdays, I now better understand the similarities, and differences, between brown and blue water, along with how in my role as the NOAA observer I can provide you with beneficial information.

One item I'd like to make you all aware of is NOAA's Precision Navigation Project. This program integrates high-resolution bathymetry with real-time and forecast data - such as water levels, currents, salinity, temperature, and precipitation to provide mariners with the tailored information they need to make navigational decisions based on rapidly changing local conditions. NOAA is working to create a one-stop shop for NOAA's marine navigation data. End users like maritime pilots, port authorities, and shipping companies will be able to make decisions more accurately and efficiently than ever before.

Currently, mariners check 11 different websites each time they need updated data to plan their transits. Precision Navigation will make near-real time and non-real time data available via a data dissemination site. These data will be available at no additional cost to our users. In 2017, NOAA completed a pilot project for Precision Navigation in the Port of Long Beach. This served as a proof of concept. NOAA currently has Precision Navigation projects in the Lower Mississippi River Complex and in the shared ports of New York/ New Jersey.

Additionally, NOAA CO-OPS recently rolled out their Coastal Inundation Dashboard, which will now be the primary tool CO-OPS will be using to disseminate high water information and beginning this hurricane season, will integrate the Storm QuickLook product that CO-OPS issues during tropical cyclones. The Coastal Inundation Dashboard provides real-time and historic coastal flooding information at a majority of stations operated by CO-OPS and unlike navigation products, water levels are displayed relative to Mean Higher High Water (high tide) in order to better communicate the amount of extra water along the coast. Observed water levels and model forecast data are compared with known minor flood impact threshold and stations where water levels exceed this threshold are highlighted automatically, noting that flooding may be occurring or possible. The product also integrates the latest NWS tropical cyclone track information and active coastal flood and storm surge watches & warnings on the map. Users can dig deeper and view sea level rise information, top-10 water levels and annual historical flood days for most stations

June 1st is just around the corner, and with that comes the start of Hurricane Season, where the navigation and port communities are put on an elevated level of vigilance. For the Gulf and the southeast Louisiana/New Orleans area, NOAA's navigation response and recovery planning is working with their partners, and working to get the new incoming U.S. Coast Guard, USACE and other commanders up to speed.

One final item of note, the NOAA Hydrographic Survey Review Panel (HSRP) Meeting will be held here in New Orleans in August. The meeting notice in the Federal Register is available now.

That concludes my remarks. Once again I appreciated the opportunity to attend yesterday's site visit and today's meeting. Thank you General, Mr. Smith, Chairman Hettel and the Board for this opportunity to provide these remarks at today's meeting and I look forward to the rest of the meeting.

MG SPELLMON: Great. Thanks, Heather. Next we'll go to Mr. Murphy from the Maritime Administration.

MR. JAMES MURPHY: Thank you, General, Mr. Chairman. I bring greetings from the Maritime Administrator, Admiral Buzby. Since I'm from around here, I want to welcome all to our neck of the swamps; and Maritime Administration is still working what we call our America's Marine Highways Program. We're trying to convince shippers to move freight by water when and where it makes sense. We are having some success in that, featuring a container-on-barge service between Baton Rouge and New Orleans, and would be pleased to chat with anybody about that offline.

Our agency will participate along with the U.S. Army Corps of Engineers and some other agencies in the Federal Emergency Management Agency (FEMA)-led national level exercise dealing with the New Madrid Seismic Zone early next month. Thank you very much for the opportunity to sit in.

MG SPELLMON: Great. Thanks, James. Thanks for being here. Next, we'll go to Mr. Marathon from the Department of Agriculture (USDA).

MR. NICHOLAS MARATHON: Thank you, General. I'd like to thank the Board for the opportunity to be here today and thank the New Orleans District for the tour yesterday. We have a few new projects we're doing, but I'd like to talk about one project today, and I have some prepared remarks on that.

USDA's Agricultural Marketing Service is working on a study to look at the importance of the inland waterways to U.S. agriculture and the national economy. The goal of this project is to document the need for increased investment in the inland waterways to maintain a competitive position of American agriculture in world markets.

The study was introduced to this Board by Jeanine Miller at the St. Charles (Missouri) meeting last November. Since then, Ms. Miller has accepted a position at the Department of Transportation as the Deputy Assistant Secretary for Policy. However, she will still be involved with the project until it's completed and released to the public. Throughout the many stages of this project, the U.S. Army Corps of Engineers has cooperated with the USDA and provided insight and input. USDA greatly appreciates the Corps' involvement in this study.

The study will look at how different levels of future funding will impact agriculture traffic on the waterways. The study will show how different funding levels will affect national economic indicators such as employment and GDP. But more importantly for U.S. farmers, the study will look at how increases or decreases in waterway funding can impact the amount of future farm exports and the market value of agricultural products, especially corn and soybeans.

The project is a high priority for us and has taken more time than anticipated to complete. Farm economics is doing the work for us and much of the work has already been done, but right now we are working on final refinements of the project and getting to the approval and clearance process. We think this project will be of importance and interest to this group and we'll get it out as soon as possible; when we do, I'll gladly share it with this group. Again, thank you for letting me be here today.

MG SPELLMON: Great. Thanks, Nick. And now, representing Secretary James today from the Assistant Secretary of the Army for Civil Works (ASA (CW)) Office is Ms. Deana Funderburk.

MS. DEANA FUNDERBURK: Good morning all. Thank you, General Spellmon. Glad you made it here safely. Chairman Hettel, just wanted to thank you. We really appreciate your work for the last six years as Chairman of the Inland Waterways Users Board and for the benefits and advancement to the inland waterways you've recommended.

Secretary James sends his regards. I look forward to hearing your recommendations and insights and ideas on improving and making better our Inland Waterways System and in ways that can help our economy and of course, most importantly, preserve and protect life along the river systems. Thank you very much.

MR. POINTON: Thank you, everybody. Thank you, General. Marty -- opening comments from the Chairman. You're up.

MR. MARTIN HETTEL: Thanks, Mark. Of course, the Board would like to thank the New Orleans District for all the logistical planning for our site visits to the Inner Harbor Navigation Canal (IHNC) Lock and to Bayou Sorrel yesterday. While the Board's been to IHNC Lock before, I believe this is the first time we've ever visited Bayou Sorrel. Of course, I'm going to thank also the American Commercial Barge Line (ACBL) New Orleans Operations office who sponsored our social event last night and to the Gulf Intracoastal Canal Association (GICA) for sponsoring our coffee service here at this morning's meeting.

Back to Bayou Sorrel. Yesterday, we learned that now that we are recording more accurate data for arrival times on vessels at Bayou Sorrel, when the 2013 report that was issued that we were given on the bus yesterday, the delays were averaging about 45 minutes. The lock master told us, now with more accurate reporting with LPMS (Lock Performance Monitoring System), those delays are averaging about 17 hours. So that would certainly change the benefit cost ratio for this lock.

This report, dated September 26, 2013, also indicates it was thought that significant chemical sector growth would translate to higher lock traffic volumes. However, when the new projections were translated and updated traffic forecasts for the GIWW, including Bayou Sorrel, it was discovered that the growth that was projected for the petroleum sector did not -- which is the single largest commodity for Bayou Sorrel -- did not develop. It also states in the conclusions, "In general, lock replacement costs have continued to escalate while transportation saving benefits have steadily declined." Again, correct logging of vessels awaiting Bayou Sorrel would change that.

Until the transportation savings benefits are projected to begin increasing similar to the project costs, it's unlikely that a new lock would be economically justified. Again, this is the September 26, 2013 report. Well we all know who operates on the Gulf Intracoastal Waterway that the chemical sector has basically taken off. That's a prime example of how much more

traffic we're moving on the Gulf Intracoastal Canal, and Port Allen is a very viable route that needs to be looked at. I want to know how we can initiate another GRR (General Reevaluation Report) on replacement of Bayou Sorrel. I'll leave any other comments on that up to the other Board members, and that will conclude my comments.

MR. WOODRUFF: This is Matt Woodruff. If we're going to talk about Bayou Sorrel, I certainly have a few words to add. Just historically, and it has been a few years, I do recall that the Users Board visited Bayou Sorrel a long time ago, but in 2007, Congress authorized the replacement of that lock.

I don't know if the 2013 numbers that you just referred to are the ones that I'm thinking of, but I know that at a prior meeting of this Board, I believe in Little Rock some years ago, there was a presentation that said that traffic is going to be decreasing through Bayou Sorrel; and we all looked at each other and said, "What?" They had taken 2008 numbers prior to the recession and 2009 numbers during the recession and extended that line out that said traffic went down from 2008 to 2009 and will continue that trend moving forward.

I can provide a slide that our company maintains of the investment in petrochemical facilities around the country, and there have been and continue to be billions of dollars of investment in petrochemical facilities along the Gulf Coast, primarily to take advantage of the low-cost shale gas and the ability to turn that into a variety of projects or products that are used throughout the economy. Perhaps some of the other Board members can speak better than I can as to exactly what the products are and how important they are. But that route is the gateway from the largest petrochemical hub in the country, the second-largest in the world in the Houston area to the heartland.

If barges are leaving Corpus (Christi), Houston, or Lake Charles, they are going to want to go through the Port Allen route, through the Bayou Sorrel Lock, up to Baton Rouge, and then, on to their destinations. So it's critical. We certainly don't see it as a dying route by any stretch of the imagination. At the appropriate time today, I would urge the Board to consider a motion to reinforce what Chairman Hettel just said, and ask that there be a re-evaluation of that project using the data post-shale boom to determine what the economics are for that project.

MR. FEWELL: Mike Fewell, Dow Chemical. I want to 100 percent agree with Mr. Woodruff on his comments. We have major production facilities outside of Baton Rouge and outside of New Orleans. Our normal transportation route is the Port Allen alternative route instead of going through Algiers.

With normal delays at Algiers, not talking about flood or anything, we save two days transit to go up the Port Allen route to Baton Rouge down to New Orleans. Right now it's taking us five days additional transit to get from the Houston area to New Orleans. Bayou Sorrel most definitely needs to be looked at again; and when we do that economic study, I think we also need to look at the commodities being shipped, and take into consideration the value of those commodities versus some other commodities. You know, gasoline, diesel, jet fuel and all your refined chemicals are the building blocks for everything else that this country needs to maintain the economy we have right now.

MR. HETTEL: Thanks Mike. Marty here, again. Just to back up Mike's statement on the times of transit, I do a morning report for our logistics and sales group on lock delays. This morning, Algiers yesterday passed 20 tows that averaged 64.03 hours of delay. This morning, we have 45 tows that have averaged 31.76 hours of delay. And that's due to the fact that Bayou Sorrel's been closed for flooding.

If we had a major catastrophic failure at Bayou Sorrel, it would be detrimental to us delivering our customers' commodities of which Mike's one of them. Matt, I would certainly like to bring up a motion to the Board that we recommend the USACE do another general re-evaluation report on feasibility for Bayou Sorrel to build a new chamber.

MR. MECKLENBORG: Yeah, I'll move in favor of that motion and also add that the value engineering approach that's been used successfully at the Upper Ohio, on the Lower Mon Project, be considered for application to the Bayou Sorrel design in the event a new study is conducted.

MR. WOODRUFF: I'll second that.

MR. RICKETTS: If I could just add a little bit more to emphasize what Mr. Fewell said. The issue is not getting cargo eventually from point A to point B. The issue in the chemical industry is getting a ratable supply on a regular basis. So if a facility, a receiving facility, needs 10 thousand barrels a day, they need 10 thousand barrels a day. If it takes five additional days, then that means five additional barges full of cargo in that transit lane, so that one can hit the day that it needs to hit. So it's not just a matter of Barge A going to take a few more days to get there. When Barge A takes a few more days to get there, that means more barges and more cargo in transit, which means more costs. I think it's essential that when we're evaluating the cost of the delays and the value of fixing Bayou Sorrel and all these other projects, that if we're not accounting for that significant cost to the customer, then we should certainly do so.

MR. MONAHAN: This is Mike Monahan with Campbell. Now Matt, if I could add, I guess, listening to the dialog from you and Mike, I fully support that we need to update the study process. I would also recommend that we make sure that we have key stakeholders involved in trying to define that evaluation process, so we capture the right data that you guys are seeking for the proper evaluation.

You know, one of my personal concerns is in the actual looking back two years on data instead of looking forward on data for these evaluations. We continually underestimate the real value to the nation. We're in a time of unprecedented economic development with these petrochemical plants throughout the United States, not only along the Gulf Coast, but up in the Ohio region as well.

We need to find a way to capture the forward looking data and the value to this nation for our system. We're failing to do that. As we conduct this new evaluation, let's see if we can find a way to incorporate that into the process. Thank you.

MR. INNIS: Just to piggy-back on what Mike said there. With two of the largest LNG (liquid natural gas) projects going on the Gulf Coast right now, it was actually the Bayou Sorrel Lock that made it possible for us to bid that for a construction permit from the U.S. side.

It was going to be that it was actually Mexican stone and imported cement. Using the Bayou Sorrel, we were able to bid that efficiently and make that brought in from the U.S., so those two projects are going to be constructed with U.S. stone and U.S. cement. That was a big factor in us being able to do that.

It's been a little tough right now. We realize it's the river and we're having to go around it. Getting back to Bayou Sorrel working again, we'll be able to deliver that 60,000 tons of rock and 25,000 tons of cement every week that way. So very important.

MR. SMITH: This is a timely discussion. Later on this morning, we'll make some comments about the next few months of work about our new Capital Investment Strategy. Bayou Sorrel is one of the types of projects that is in that top 25 that we already know is going to be part of the process that we need to discuss more deliberately and take the input like this as we try to identify for our leadership, General Spellmon, other U.S. Army Corps of Engineers leadership, and then, the Assistant Secretary of the Army (ASA(CW)).

This is a healthy dialog and I think later this morning, you'll hear a little bit about how we're going to approach that study to get this input in an environment of competing demands.

MR. FEWELL: One more comment. I can't pass up the opportunity to say one more time. We cannot run a major petrochemical facility with any other mode besides barge. Railcar is out of the question. Truck is totally out of the question. Thanks again for that opportunity.

MR. HETTEL: Let me summarize, so we can get back on our agenda. The Board has a motion in front of us to recommend a re-study of the replacement for Bayou Sorrel Lock along with using the value engineering process that was successful on the Upper Ohio Navigation Study and along with getting the appropriate information to look at that study. Moving along, any other comments? Those in favor?

(BOARD MEMBERS COLLECTIVELY RESPOND, AYE)

MR. HETTEL: Any objection?

(NO VERBAL RESPONSES)

MR. HETTEL: Motion passes. Thank you.

MR. POINTON: Thank you. May I move on now? We're not off schedule yet, Marty. We're going to approve the minutes of the last meeting, Board Meeting No. 90, which was held in Galveston in February. Those minutes were sent out to you in the read-ahead and they're also included as, I believe, tab two in the information notebooks that you all have received. So can I get a motion to approve those minutes?

MR. MECKLENBORG: So moved.

MR. POINTON: Dan Mecklenborg, thank you. Second?

MR. FEWELL: (Raised Hand)

MR. POINTON: Mike Fewell, second. All in favor, aye?

(BOARD MEMBERS COLLECTIVELY RESPOND, AYE)

MR. POINTON: Any nays or should I ask?

(NO VERBAL RESPONSES)

MR. POINTON: All right. Motion is approved unanimously, thank you.

We did transmit the Users Board Advice and Recommendations on the FY 2020 Budget to Congress on May 13, a day after the 60 day period, but that was on a Sunday so we sent it the first business day. I appreciate all your help getting all that prepared and getting that through, so thank you.

Moving on in the program, actually it's not going to be Kathy Griffin. It's going to be David Frantz, which I'm sure you can tell by his appearance that he is not Kathy. He's going to be providing information on the FY 2020 navigation budget for inland and coastal. There has not been an appropriations bill produced and approved by either chamber of Congress yet.

MR. FRANTZ: Thank you. Good morning, General Spellmon, Chairman Hettel, Board members. Thank you for the opportunity to join you at the table today, and thanks to the New Orleans District for the site visits yesterday. I think you've heard that everybody really appreciated the opportunity to go out and see those sites and get some first-hand information about the conditions on the ground.

As was mentioned, our Acting Navigation Chief, Kathy Griffin, was not able to make it. She asked if I could come and make her presentation remarks for her, and as Mark pointed out, I'm David Frantz. I'm the Inland Navigation Program Manager for the U.S. Army Corps of Engineers at Headquarters.

Just a quick overview of our USACE vision and mission statement. There are a lot of parts that go into our vision, but we aspire to remain a world-class organization now and in the future. The most strategic thing we can do is simply deliver our program with exceptional quality on time and on budget.

For our new members and for members of the public and for the record, I just wanted to re-emphasize what the USACE Navigation mission is - to provide safe, reliable, efficient, effective, and environmentally sustainable waterborne transportation systems for movement of

national security needs, commerce, and recreation. There's a lot of work that goes into accomplishing that.

This is the navigation system that you may have seen in previous presentations. It captures everything that we have going on and that we're focusing on. You can certainly see the systems, all of the cities that are affected, all of the ports.

On the left-hand side, you can see just a quick summary of all the material, all the commerce, all the economic muscle and power that is moved by the navigation systems.

For the Civil Works budget timeline, as you can see, we're completely done with the FY 2018 program. We are currently executing the FY 2019 program. For FY 2020, we are currently defending our budget submissions, answering questions from Congress providing affect statements, working with ASA(CW) and folks on the Hill to defend our program.

We are also currently working on developing the FY 2021 budget. The update presented at the last meeting is that one that the FY 2020 budget has been released. It was released in March. As far as the FY 2021 budget, at that point in time, the Districts were still working on their packages. Those have gone through the Division screening that are now up at Headquarters, where the packages are being reviewed, evaluated, and ranked. That's our endeavor right now with the anticipation of submitting our budget to the ASA(CW) in the July timeframe, and from there, off to the Office of Management and Budget (OMB) in the September timeframe.

This next slide shows the investment trends and you can see that the budget amounts have remained somewhat stable. The supplemental appropriations have increased significantly over the years above and beyond the original budget submitted by the President.

For the FY 2020 Budget, the total Civil Works budget was $4.8 billion of which navigation was $2.3 billion, so that's approximately 48 percent of the total Civil Works budget is for navigation. We have also broken that out by coastal and inland, so you can see the respective funding streams for both those programs. Navigation budget by accounts, again broken out by Investigations, Construction, Operation and Maintenance (O&M), Mississippi River and Tributaries (MR&T). That was what represents the $2.3 billion for the navigation account.

MR. HETTEL: David, Marty, here. If you've got a minute, on this slide, it says fiscal year. That's actually the President's Budget request, is it not?

MR. FRANTZ: Correct.

MR. HETTEL: Okay. Thank you.

MR. MECKLENBORG: This is Dan Mecklenborg. David, the Construction dollars indicated for Fiscal Year 2020, just in general, what's included in that larger number, the $625 million?

MR. SMITH: If I might, David, I think you have a slide on the President's Budget for Construction, coming up. It doesn't reflect Congressional marks.

MR. FRANTZ: Oh, yes.

MR. SMITH: If you could, maybe you can go to that, yeah.

MR. FRANTZ: That's fine. I'll get to that here in just a moment. Thank you. The Board had previously asked if we could break down the coastal navigation budget and the inland navigation budget just to show how the money is spread. So here we have coastal and how that $1.4 billion is broken out.

MR. HETTEL: David, I'm sorry. Marty, here. Let me clarify what we asked for at the last Board meeting -- not only the President's Budget request but the actual appropriations.

MR. FRANTZ: Okay. And we don't have that for FY 2020 yet.

MR. HETTEL: I know you don't have it for FY 2020 yet, but could we get this type of slide up through the most recent appropriations process?

MR. FRANTZ: Absolutely.

MR. HETTEL: Great. Thank you. Both on coastal and inland.

MR. FRANTZ: Yes, sir.

MR. HETTEL: Great. Thank you.

MR. FRANTZ: And again, here's the inland navigation breakdown for the $852 million. It shows how it is split.

MR. HETTEL: David, I'm sorry, Marty, again. Back up to the other slide in reference to Board member Mecklenborg's question. The President's Budget request of $138 million for inland navigation. That's the $111 for the Lower Mon (Monongahela River Locks and Dams 2, 3, and 4 Replacement Project). Is that also the funding to fix the problem up at Melvin Price Locks and Dam, the additional $27 million? I believe that's what it is in the President's Budget request.

MR. POINTON: It actually includes the Regulating Works on the Mississippi River as well, but that's a very small piece of that $138 million.

MR. HETTEL: Thank you.

MR. FRANTZ: And then, I believe, this is what you were looking for in the breakdown on how we have our Construction.

MR. MECKLENBORG: It's obvious that most of it is coastal Construction.

MR. FRANTZ: Correct. I do want to point out though that, like you say, the Lower Mon was funded for $111 million through completion. And then, this is the last slide. It's somewhat of a summary, overall budget outcomes, a couple highlights.

The budget continues to focus on the highest performing studies in design activities. Unfortunately at this point through the budget, no new Construction starts and no new Investigation starts were identified.

For the accounts Investigations, $77 million, down slightly from previous amounts. Construction is $1.2 billion up from $910 million; and as we've mentioned, that includes money from the Inland Waterways Trust Fund for the completion of the Lower Mon Project. Operation and Maintenance is down, slightly, and the Mississippi Rivers and Tributaries is also down, slightly. Pending any questions from the Board, that concludes.

MR. SMITH: Just wanted to make one comment. I think it's known, but just in the last week the House has at least posted their initial marks on the FY 2020 budget. I don't think all of us have completely digested it, but it does have, for example, six new starts and substantially different numbers across the board. So that's been typical of the past few years and it makes it tough for the Board here I think to digest the President's Budget in light of that type of information.

MR. FRANTZ: Thank you.

MR. WOODRUFF: This is Matt Woodruff. That's the point that I was hoping that for anyone who's here for the very first Users Board meeting in the audience and getting depressed as they hear those numbers, I think it's important to note that notwithstanding the President's Budget, what Congress has ultimately appropriated and the President has signed into law have been substantially higher numbers than these that are reflected.

MR. POINTON: Any other questions for David? Thank you, David. We're going to move on in the program now. Our colleagues from the Program's Integration Division and Headquarters are busy working on the FY 2021 budget and the FY 2020 defense, so I'm going to provide the Inland Waterways Trust Fund status for Joe Aldridge.

The first thing I'd like to point out, the read-ahead materials that we sent out to the Board had the wrong information. Those cells in blue for the fuel tax revenue and the interest are the actual ones reported by the Treasury through April 30. So what you've seen are numbers that are considerably less than that, because they are from two months ago. They are not from the end of April, so that gives you a much better indication. Marty, you've made this point a number of times about the revenue flow, and that is ahead of our historical income from the fuel tax.

I can't explain why the Treasury has not posted any transfers to USACE for the work that we're doing out of the Trust Fund. That kind of inflates the availability of funds in there, because they haven't transferred anything out. Those funds are committed, but it's not being reflected in

the Treasury statement yet, so we're bird-dogging that to see if we can figure out why that hasn't been reported by Treasury.

MR. HETTEL: One statement. While you can't figure that out, we, on the Board can't figure out why the U.S. Treasury continues to forecast downward trends in our Trust Fund. We had a record $118 million last fiscal year. As you've stated, we're pacing ahead of that $118 million this year. It sure would be nice to have somebody at the Treasury Department explain to us how they come up with the downward trend in our Trust Fund numbers. Thank you.

MR. POINTON: That's not the first time you've pointed that out. I'll reinvestigate and see if we can get somebody from Treasury to come to a future meeting. They are sometimes reluctant to come and talk at a public forum.

MR. HETTEL: I understand. It just would be nice.

MR. POINTON: We'll see what we can do.

MR. HETTEL: Thank you.

MR. POINTON: Yeah, so you know how that's going to work out, don't you? As soon as you cycle off, they're going to come to the next meeting, so I'm going to invite you back, okay?

MR. HETTEL: Maybe, respect for the incoming Chairman.

MR. POINTON: Well, you will be the Chairman Emeritus. Here's your comparisons by month of the revenues coming in from the fuel tax into the Trust Fund. Again, these aren't changing all that much from what you've seen in the past few meetings. And these are your bar charts that show for the last three months.

MR. HETTEL: Yeah, Mark. This is Marty, again, just a point. We're pacing $3 million above FY 2018 right now on this bar chart. From the record, $118 million into the Trust Fund. Thanks.

MR. POINTON: Yes, sir. Here's that table that shows our fuel tax and the cost share projects including Olmsted and Lower Mon. It shows you the funding that was received in the President's Budget and the total allocation that was received in a work plan through the appropriations acts.

As you can see in FY 2020, Lower Mon has received funding to completion, $111 million. That will be a 50/50 cost share unless Congress does something in the markup of their appropriations bills to change the cost share on that. I'm not suggesting that's happening, but they have done that the last couple of years where they've changed the cost share. Check for example FY 2019.

I don't think there's anything new on that slide. You can see detail allocations that were received for FY 2019, which was based on the work plan funding that we received from

Congress. As far as I know, all those projects are underway. I know that, Marty, you've mentioned the situation at Olmsted with the high water that's affected the construction there.

I'm going to briefly talk about the Mississippi Valley Division projects, and I would point out that I have some of the Division staff here, so if I need a lifeline, I can reach out to them. We do have Pat Chambers, Chief of Operations from the Division, and we have Renee Turner, the Civil Works Programs Integration Division Deputy, here who's acting in charge of their funding.

All right, so for the Inner Harbor Navigation Canal Lock, which we saw yesterday, these are the current numbers. I don't believe anything has changed on this slide since the presentation that was received in Galveston.

MR. HETTEL: Mark, this is Marty.

MR. POINTON: Yes, sir.

MR. HETTEL: While nothing has changed on the slide, I want to make note of the fourth bullet point on the fiscal close out still in progress. At our last Users Board meeting, we requested if we could get some idea on how much funding would be returned to the Trust Fund. I don't know if anyone here from New Orleans has an idea on that, or if we can even talk about it until the physical close out is completed. But once it is completed, we'd certainly like to know that number unless we can get if prior to. Thanks.

MR. POINTON: I believe they're calculating what that total after the fiscal close out would be.

For LaGrange Lock and Dam, it was funded to complete for the major rehabilitation. I do have some additional information there. Marty, I understand that you wanted a little bit additional information there, so the contractor's actually mobilizing their setup. They've setup their project trailer site there. I believe they've also set up a communication tower, which I understand they have an extreme problem of communicating there, because of the location where LaGrange is.

The contractor actually did an analysis of the water flows through there, of the high water marks, and they've built that into their proposal. They've got some sense of what the high water might be. If that actually exceeds anything that they thought they might have, obviously, we'll reach out to the Users Board and the industry to coordinate any kind of adjustments that might have to be done to that schedule.

MR. HETTEL: Mark, if I may just give an update to the rest of the Board members. I spoke with Tom Holden, MVD Regional Business Director, and he expects everything to be on schedule. He said the only thing that could delay us, and it would be minimal delay, is if they couldn't get out to the middle wall at LaGrange by July.

MR. POINTON: Right.

MR. HETTEL: And my goodness, I hope we don't have flooding by July.

MR. POINTON: That's kind of what he told me too, and they're anticipating getting out there in the summer, getting out to the I-wall.

MR. HETTEL: Right. During the last Users Board meeting, I asked on the Supervision and Administrative (S&A) expense cost of $3.5 million, if that was all for major rehabilitation or if that included the major maintenance, and if so, what portion of it was major rehabilitation versus major maintenance?

MR. POINTON: I'll have to do a little research on that one. I believe we are only showing the numbers here that are related to the major rehabilitation, so my gut instinct would be that, that's just related to the major rehabilitation work, not the major maintenance work.

MS. TURNER: That's correct.

MR. POINTON: Yep. Renee Turner from the Division.

MR. HETTEL: So, the $3.5 million S&A is on the major rehab?

MS. TURNER: Yes, sir. It's only on the construction portion of it.

MR. HETTEL: Okay, thank you.

MR. POINTON: Thank you. For the record, that was Renee Turner from the Mississippi Valley Division. So yes, you're on the record now, ma'am.

MR. HETTEL: Well I just need to follow up with a question. So there's no Supervision and Administrative costs for the major mechanical work being done?

MR. POINTON: The major maintenance work?

MR. HETTEL: Major maintenance.

MS. TURNER: Major maintenance, yes, sir. We're not fully funded in the O&M portions. We still have, I think, a $3.5 million need that we're going to have to try to get in a work plan if we're afforded the opportunity to do so by Congress, but there are S&A costs on the major maintenance, too.

MR. HETTEL: Okay. With both these major maintenance and major rehab going on at the same time. We've had this discussion at Users Board meetings before, hopefully in the process to future Users Board meetings, you can inform the new Board on how much the spending is for major maintenance versus major rehab. I could see where those two could get intertwined at some point in time and not being disrespectful, but we just don't want to see our Trust Fund going for major maintenance, so to speak.

MS. TURNER: Yes, sir. Understand.

MR. POINTON: Thank you. Last input I have from Tom on the LaGrange Major Rehab is they're still on schedule. They're still on budget right now. So far, it's all thumbs up, but the rehab will be July 1 through the October closure, 120 days. Considering what's going on in various places in the country that could change depending on where all the water ends up.

We do have the regular project updates for the Great Lakes and Ohio River Division (LRD) for Olmsted, Lower Mon, Kentucky Lock, and Chickamauga Navigation Lock. I'm not going to spend any time on that; I'll let the project managers that are here address those, because they've got the same information that I have here in their presentations for the most part.

Emsworth Locks and Dam would be the only one that's a little different. I don't think anything's actually changed on Emsworth. When the project is going to be closed out, there are going to be funds returned from that project. The funds will return to the accounts in Headquarters, so it will be properly recorded in the Construction account and the Inland Waterways Trust Fund account when those funds are returned.

The next step is down in the lower right side with the fiscal close-out memorandum approval. They'll reprogram that $297,000 in FY 2020. Anyone have any questions?

I will defer anything on the LRD Projects. We have Adam Walker, Nashville District, Project Manager who will present on the Kentucky Lock Addition and Chickamauga Lock; Lenna Hawkins, Pittsburgh District, Deputy District Engineer, who will cover the Upper Ohio Navigation Study and Monongahela River Locks & Dams 2-3-4; and Dewey Rissler, Louisville District, for Olmsted Locks and Dam. They know way more about any of that stuff than I can answer, so I throw them out as a lifeline. And they are going to give their presentations later on in the program, so any questions to the Board? Marty? Going once, going twice, all right. Thank you all.

All right. Next on the program, we're going to talk about the Calcasieu Lock and the simulation results that have come out of what that project was looking at. We have Ms. Lucore from New Orleans. She is the Project Manager for that. All right. All yours.

MS. LUCORE: Good morning, everyone. As Mark said, I've been asked to give a brief overview of what happened with the Calcasieu Lock ship simulation that we did this past January. I'm going to give a really brief overview about the project for those of you who are not familiar with it.

Just a little background on the project. What we got authorized to do was to address problems with drainage in the Mermentau Basin. We were experiencing delays at the lock due to the fact that the lock was being kept in the open position during the spring to drain high rainfall in the Mermentau Basin.

The Calcasieu Lock is actually a saltwater barrier to prevent water coming from the west of where the Calcasieu River is, inland to the east. When the lock is kept in the open position, the

tows heading east cannot manage the current. So what we did is we built a bypass channel, so that during the periods of high rainfall when the lock is being used in the drainage position, the waters could be diverted and the lock could be operated as normal and so that tows would not be held up.

We did a ship simulation to ensure that this would actually provide a fix and several assumptions were made. We picked a standard tow; we addressed the environmental conditions; and this actually tells you -- the graphic shows you where we start and stopped. The star is on the left graphic at the bottom. It's where the modeling started on the west. The blue dot represents where the lock is located. The right graphic, the start all the way in that bottom right corner, is where the modeling started on the east side in relation to the lock.

This is a representation of all the modeling runs. We try to look at every potential condition: tugs going east, tugs going west, lock in the open position, lock in the closed position, the proposed project in the open position, closed position, and all the combinations of those factors.

There was another factor with the Black Bayou structure which everyone visited a few years ago when y'all were at the Calcasieu Lock. That is a Natural Resources Conservation Service (NRCS) project that also provides flow from the east to the west and it is not a USACE project. It belongs to NRCS. We also kept that factored into the modeling with that in the open position and the closed position.

With all of those different variables, the pilots met at the end of January and conducted the runs. It was not good. We had four experienced pilots. They did the validation and said, yes, the validation of the model is exactly how we experience it to be.

When they started going through all of the runs of the different scenarios, they had problems. They did not have problems going from the west to the east, which was the original problem; but we created a new problem. They were having trouble going from the east to the west. The diversion channel that we had was drawing them in to the left. It was pulling them to the left, and they could not get aligned to lock through.

We talked about it with the pilots. They made some suggestions. The modelers at the U.S. Army Engineer Research and Development Center (ERDC) made some suggestions and the suggestion was, why don't we try looking at going through with the lock in the open position? We never looked at having the lock in the open position for vessels transiting westward. And they also proposed some modifications to the geometry of the entrance to the channel. They went back to the drawing board, tweaked a few things with the modeling, and re-ran the results at the end of March.

That's just the scenarios that we did at the end of March. We didn't have to re-run everything, just those that were impacted by the proposed changes. We did that at the end of March. Unofficially, this has not been published yet, again, it was not good. The pilots said this is not acceptable. "We're seasoned pilots. We can manage it, but anybody who has no

experience, they're going to get pulled into that channel." It was too hard of a pull to the left to overcome even with all of the modifications.

It was pretty much the consensus of all the pilots and the modelers that this proposed fix to the problem was a no-go as far as the pilots are concerned. We have not figured out what to do next. Some COAs have been developed by the team, and it's with leadership back at the District to discuss. They have yet to be briefed, because again, the report still hasn't been published. I've only seen a very rough draft of the report, but the feedback from the pilots immediately after the modeling was not favorable.

MR. HETTEL: Martha, this is Marty. These sluice gates that you're talking about installing, are they either all the way open, or all the way closed?

MS. LUCORE: During the rainfall season in the spring, we would have them in the full open position.

MR. HETTEL: I realize that, but could you lower them to half-way when we have westbound transits, and then, open them all the way on the eastbound transits?

MS. LUCORE: Not really. The problem with that is you would end up creating, it takes too long to get them open and closed, and that would just slow the traffic. The only proposal that we've really seen is perhaps helper boats, which we're doing now. But opening them less, you're still going to have that pull, the pilots said. They looked at two different currents, full current and half current. They did look at adjusted flows, and the lower flow didn't really help.

MR. HETTEL: Is this project now so-to-speak unfeasible?

MS. LUCORE: With the way it's designed now, yes. We're looking at possibly talking to NCRS and entering into a Memorandum Of Agreement (MOA) with them and see if modifying their project might be an option. The team is still looking at different ways of going forward, but with this one, the pilots said, absolutely not.

MR. HETTEL: Well the reason why I ask that is Tom mentioned, we're going to be starting our process for the second look of the Capital Development Plan, and Calcasieu is one of the projects that are in that plan. It would be great to know whether this thing should or should not be included going forward when we look at our capital investment strategy.

MS. LUCORE: Right now, we would not be ready to go forward with this next step, which originally we were hoping, you know, we would be prepared, positioned to move forward to construction next year. Right now that is on hold.

MR. HETTEL: Okay. Thank you.

MR. WOODRUFF: If I could weigh in on this since this is sort of my area and provide some perspective on this for the Board. This is an especially big concern following a hurricane.

When you have flooding in the Calcasieu Basin, you also have a situation where there is stress on the nation's refining system. The ability to get the refineries up and running and to distribute fuel and other necessary commodities throughout the Inland Waterways System is very important at those times. Everyone literally from the White House down is focusing on whether tows are getting through the Calcasieu Lock.

At that very same time, we're opening the lock and essentially using the Calcasieu Lock as a drain plug for the Mermentau Basin. This project was envisioned as a fairly low-cost simple solution to create a new drain plug, so that we're not having to use the navigation lock.

The local community is very focused on this, and they get very upset if you just pinch down those lock gates for even a short period of time, so that a tow can get safely through there. We're put in the very unenviable position of asking pilots to consider pushing against a current flow through an open lock. Literally, as the plug is out and we are using it as a drain, we're asking people to push tows of highly flammable dangerous petrochemicals through the drain plug while it's open. Not a good thing to do.

I think one question I would have, and it sounds like the problem isn't that the concept was bad, it's that the new drain plug is too close to the lock. The Mermentau Basin is a fairly large area. It would seem to me that one thing perhaps to explore is finding a different place to put the new drain plug that's further away from the Intracoastal, so that we can still get in and out of there without being sucked through.

MS. LUCORE: We actually did look at that. The problem with pushing it any further to the east is that we have to go under a highway. This is squeezed in between the highway bridge and the lock. If we pull it any further away from the lock, which was something we did look at, we would have the additional expense of going through or under a highway.

Right now our benefit to cost ratio (BCR) is just barely above one with the costs that we do have. The total project cost is right around $20 million with the latest inflation. Moving it and encountering a highway, you're going to add significant costs. That's why we were looking at possibly discussing things with NCRS and see if they would be amenable to us modifying their project, but we still haven't approached them yet. It's just one of the brainstorming.

MR. WOODRUFF: First of all, I congratulate you for your due diligence on this project, because nobody wants to spend money and find out it didn't work. We're very grateful for that, but this is important, especially in hurricane season. We appreciate y'all exploring all the different options.

One question I had looking at the six-pack tow with the 1200 horsepower boat, I am not a mariner, but I'm just curious if anybody on the Board thinks that might be a little bit light horsepower for that tow, and that maybe we're under powering the boat.

MS. LUCORE: We actually picked that through consensus. The planners went down to the lock. We had mariners, folks with the lock, folks from the industry, and the large powered vessels didn't have trouble transiting the lock. Those weren't the ones that have the trouble.

We got an average vessel that was having trouble navigating through the lock. The larger powered ones, why model those? They didn't have the trouble. It was the ones that were of slightly less horsepower that were having the difficulty, and that's how they came to figure out what the design vessel should be.

MR. INNIS: We do run in the Calcasieu with the 1200, not regularly, but we have done it in the past, depending on the flows.

MR. MONAHAN: This is Mike Monahan with Campbell. I guess, Matt, from an operational perspective, years ago, we used to use valve thrusters. I don't know if that was considered in the simulation process, or not. That gives you on the smaller horsepower boats additional navigational capability, and that may be another avenue to look at. You may forfeit the six to a four pack in the process, but still improve navigational safety.

Secondly, I'd like to echo Matt's comment that I really appreciate the Corps involving the local mariners in the process in the simulation. We may not always like the outcome, but we want to have the right outcome, so we're not misappropriating money on the projects. Thank you.

MR. WOODRUFF: But I do think that six pack with a 1200 is on the low side of horsepower to tonnage ratio, and you know, there are many places on the system where in high water situations, we reduce that ratio to improve the margin of safety. If that's an alternative either through specifying the horsepower to tonnage ratio change or a helper boat, the key is to be able to get through there safely. And so under the current situation, we can't get through there safely, regardless of the horsepower applied to the situation.

If we could turn it into a situation where with the appropriate horsepower or helper boat, we can get the job done safely, then that is an improvement. If we're just saying that the problem and the unsuitable result is only with a marginal setup, maybe the answer is, eliminate the marginal setup.

MR. HETTEL: Matt, you're correct. I believe at Morgan City, we have horsepower to barge ratios in high water; and if you don't have the horsepower, then you have to have an assist boat to get through Morgan City bridges. That might be a viable option. I certainly agree with that. I mean, our shop, and I know everybody's different, we're in that 2000 horsepower range. Do you know what horsepower you said the higher horsepower navigated safely? Do you have a range of what that horsepower was?

MS. LUCORE: I think it was closer to 1800 or 2000.

MR. HETTEL: Okay. Thanks.

MS. LUCORE: One of the reasons helper boats had been eliminated as one of the alternatives during the feasibility report was because we were actually trying to find a permanent fix. We had actually eliminated those from consideration, because you would need those in perpetuity. We were hoping to find something that would eliminate that, a structural fix.

MR. WOODRUFF: Well I would just urge us to look at this very holistically, because I don't want us to say that the problem can't be fixed, because we're using a scenario that is an outlier scenario. And that's my concern based on first of all, a six-pack, which technically is an oversized tow for the Gulf Intracoastal Waterway, and if I'm not mistaken, requires an oversized tow permit. You shouldn't even be running a six-pack without a permit. The other you know option is if you want the oversize tow permit during high water conditions, you have to have the appropriate horsepower or a helper boat. Am I mistaken that a six-pack is an oversized tow?

MS. LUCORE: No.

MR. WOODRUFF: So what we're doing is we're modeling this based on a tow size that isn't even permitted in the absence of permission.

MS. LUCORE: Okay.

MR. WOODRUFF: So that could be a solution, if they don't grant permission for an oversized tow that doesn't have appropriate horsepower for the then-existing conditions.

MS. LUCORE: Yeah. Any other questions? Thank you.

MR. POINTON: We're going to move on in the program. Mike Tarpey is here representing the Inland Navigation Design Center (INDC). He's on the Capital Investment Strategy Action Team. He's part of the infrastructure team and he's out of Rock Island District.

MR. TARPEY: Good morning. Yes, I'm Michael Tarpey. I sit in the Rock Island District, but I am working for Headquarters on the infrastructure team. I've been doing that for about two years. I've got a background in engineering and project management, construction, so I've been around USACE in multiple roles. I'm very happy to be working for Headquarters on a number of things.

Good morning. I was here for a planned meeting for the Capitol Investment Strategy, and am presenting on behalf of Fred Joers, Director Inland Navigation Design Center, Engineering and Construction Division, Rock Island District. He wished he could be here, but he had some scheduling conflicts when this came on the agenda. I'm here to talk to you today about the Inland Navigation Design Center as well as some recent cost-saving initiatives.

First, INDC is a relatively new center. It was established about five years ago. It's a small center right now. There's a small permanent staff, which I'm one of as well. It leverages staff virtually across USACE, finding those experienced senior people to help deliver our Inland Navigation Design mission.

INDC sees itself as kind of the intersection of the research side from ERDC or asset management operation side and engineering construction. INDC believes in bringing the right people together to solve the problem that's there.

As a National Design Center, we have an enterprise approach to solving problems. One of the key areas that INDC is focusing on is standardization of designs, inspections, and repair to improve the service, and reduce costs.

INDC is looking at the tech transfer, leveraging lessons learned when you bring the right people together, incorporating best practices, methods, and technology into our designs whether it is new construction, major rehab, major maintenance or regular, operations and maintenance repair. INDC is focused on the design construct processes and incorporation of best practice from really the military side where you try to get the design team together with your reviewers, national experts, and the project delivery team early in the process.

You want to bring those people together to talk about your design path up front to look at your design solutions and what your path forward is. You want to incorporate those best practices and lessons learned early. When you're in a review and you find cost savings and design improvement late in the cycle, it involves extending the schedule and increasing your cost, so by promoting this design strategy, you're bringing that quality up front.

The design strategy process is scalable to project size. You bring the people in, small effort, accomplish quickly. Larger efforts like the Upper Ohio study can involve significant pre-planning and work to bring the quality and the cost savings you're looking for.

The focus areas for the Upper Ohio study were standardization first, then design. The team was looking at standardization. Let's look at concepts for one lock, and then, apply them to the other two locks as opposed to individually designing three locks. Looking at innovations in the construction method, how do we bring those best practices to bear to reduce costs? Looking at alternative design solutions.

To reduce risks encountered during the design solutions, they looked at disposal alternatives, because there's large costs in that. The team pulled together to do this had nineteen experts from INDC, from the Cost Center in Walla Walla (the USACE Cost Engineering Center of Expertise), ERDC, the asset management team, several construction representatives from various projects USACE is executing, as well as several districts.

This is the summary of the savings that people have heard about. You have significant cost savings, approximately $1.2 billion. With construction, there is shortening in the schedule of approximately two years.

The significant savings came in the cofferbox construction, the filling and emptying system, looking at the dam modifications, disposal costs, guard wall, and then, design and staffing.

There's two bars for each of them. Hopefully you can all see it. On the left, you'll have the original concept and on the right, it says value engineering (VE) Emsworth. Those are the projected savings through some of these modifications.

Below, if you can see it, there's the brown bar on the bottom which is the lock cost. Then there's the next bar is the dam cost. You have design S&A, engineering and design cost (EDC) and then the contingency savings for each one of these.

The largest cost savings is the construction method. The original construction method was a cofferbox solution. You had high construction costs as well as an extended construction schedule because you had several sequential tasks to construct it. You can see the design concept on the left there. The green is the cofferbox and the yellow is the cofferdams.

The revised solution is this hanging form system that was successfully used at Charleroi Locks and Dam 4. It eliminates the need for the cofferboxes and the cofferdams, and it also minimizes the impact to the existing dam and surfaces. Those three areas accelerate construction schedule and reduce your overall construction cost.

The second area of significant cost savings was replacing the mechanical gates with a passive weir resulting in significant savings in your up-front construction costs. You've reduced your need for cofferdams, and you're having long-term Operation and Maintenance savings, because you don't have to operate and maintain tainter gates.

The third area was a combination of reducing your risk and a design change, changing from drilled shafts to excavating rock and then using a spread footing. Looking at the filling emptying system was the third area that resulted in significant savings. The original concept was through the sill, which involved more rock excavation and longer culverts. The value engineering (VE) team looked at it and proposed using a traditional through-the-wall system that you see in that graphic, which significantly reduced your rock excavation and your culvert lengths.

INDC cost savings analyses have led to $1.5 billion in cost savings over the last five years. The biggest one is the Upper Ohio, but the new Soo Locks had significant savings as well. I think it's validation of what INDC can do, and the value it brings to the inland navigation design. You tap senior experts to look at the problem from the outside, challenge the assumptions, find the solutions that maintain quality and our design standards, but deliver a better project or the same project at a lower cost. Questions; comments?

MR. MECKLENBORG: This is Dan Mecklenborg. That's very interesting. A couple of the concepts there I'm not real familiar with - when you talk about avoiding the cofferbox and the hanging apparatus, what are they hanging from? –

MR. TARPEY: Let's go back. I'll admit, I'm not the deep expert on this. You're building the new monoliths in the wet using proven technology. It's what they did at Charleroi. As opposed to sequentially building the cofferbox and then building with the coffer, and then, building one model at that time, with the hanging form system you would build one monolith --

MR. MECKLENBORG: Build like a discrete monolith.

MR. TARPEY: Right. And each time in the wet. You can actually have two or three of those going and then you fill in the gaps as you go along. That's where the savings comes in. You're re-using that hanging form system multiple times.

MR. MECKLENBORG: Okay.

MS. HOEY: And I would just add, it saves a significant amount in the steel that we need.

MR. TARPEY: Correct.

MR. MECKLENBORG: Okay, and then, the other question related to the next slide, which is the elimination of the tainter gates with a type of weir system. How does that work?

MR. TARPEY: The passive weir. If you can see the picture, the original concept to build the tainter gate, that's where you see the cofferdam coming down that kind of v-notch. We're losing a section of the dam because we're moving. We're building the lock over, so we've got to replace that capacity. You could either do it with a tainter gate, or the weir is what you have. You have a passive weir and the w-shapes per recreate that same overflow length. You're looking at a different concept, because we couldn't just do it in kind, because you'd lose it. So that's where we're --

MR. MECKLENBORG: So at lower elevations, it prevents the flow, and then as it rises, it goes through the weir.

MR. TARPEY: Correct. Goes over it. Yes, Marty.

MR. HETTEL: First of all, for Mr. Pointon, this is different than what our read-ahead materials were. Could you distribute this to the current Board members and future Board members?

MR. POINTON: Yes, and that will get posted on the website with the other presentations from this meeting. Mike revised them earlier this week, and there wasn't opportunity to ship them out to you before the meeting.

MR. HETTEL: I understand. Mike, in our last Users Board meeting when we first heard about this on your bar graph, I don't want to estimate the actual costs through your value engineering study. The original presentation that we have has the authorized cost per lock.

MR. TARPEY: Correct.

MR. HETTEL: Could we get the actual costs after the value engineering per facility?

MR. TARPEY: That information should be available.

MR. HETTEL: Okay, yeah, because the graphs -- I don't want to round up or round down on the graphs, okay?

MR. TARPEY: Correct. Okay.

MR. HETTEL: All right. How long did this study take?

MR. TARPEY: There was significant pre-planning that came before it including assembling that large team. They had several months of pre-planning. They got together, you know, came up with the concepts, and then there's significant work after it. I'll turn to see if either Lenna or Jeanine have an idea. I believe it took eight or ten months of effort.

MS. HOEY: Oh, yeah. It was a multiple month effort. It was always envisioned we would go through a VE study after the feasibility report. The feasibility report set a threshold. We looked at proven concepts to establish that cost and used that high bar and examined how could improve upon it.

MR. HETTEL: Okay. Well just to be fair, I'm going to just say, roughly eight to ten months in the whole process. And any estimate on what that cost was to do that value engineering study?

MR. TARPEY: I don't have that with me Marty, but we can find that estimate and get back to you in both the time and the dollars.

MR. HETTEL: Okay. Was that money from the Investigations account or Operation and Maintenance?

MR. TARPEY: It would have been money from the Investigations account as part of that study process.

MR. HETTEL: The point being, using 8 to 10 months and identifying savings of $1.176 billion suggests to me this is worthwhile to do on many other projects. Whether it be the NESP Locks or others, why aren't we doing this on every authorized project?

MR. TARPEY: We do. I mean on all our authorized projects. VE is part of the USACE's design process. Any project above a $1 or $2 million dollars has a mandated requirement to undergo a VE.

MR. HETTEL: This is the first time we've ever heard of a value engineering study on the Board. If it hasn't been done on the seven locks on the Upper Mississippi River in Illinois, why don't we do it?

MR. TARPEY: When the design work was going on a decade ago for the seven locks, there was VE going on at that time to validate your design, find better ways to do the construction at a reduced cost. But your point, yeah, should it be done in the future? Yes it should be done and will be done in the future on the Upper Mississippi as well as all projects, because we're required to do that.

MR. HETTEL: Well again, we're getting into our Capital Investment Strategy. We've got a $1.7 billion reduction in cost on the Upper Ohio Navigation Study, but we haven't done that on the NESP block. How do we get those on the same playing field when we go into our Capital Investment Strategy so we have the actual benefits to the nation?

MR. TARPEY: I don't have an answer for you right now. I'll be honest. My next presentation is talking about the Upper Mississippi cost estimate update. It's a good comment that we should do that on all the systems, yes.

MR. INNIS: Why in the feasibility study if we can save $1.2 billion by doing the value engineering do we not do the value engineering with the feasibility study so that we have an accurate costing that allows us to look at a real benefit to cost ratio (BCR)?

MR. TARPEY: I can't answer why. I'll turn to either Lenna (Hawkins) or Jeanine (Hoey) on this and what happened during that study because there a presentation on it a bit later.

MR. INNIS: My biggest concern is that if we can save $1.2 billion, what would the BCR have been? What's the BCR on the remaining projects if we do this value engineering?

I'd like to also understand how much of the value engineering was from efficient funding, and how much of it was actually cost savings as well. Two years in getting efficient funding is going to have a big impact on that. I was trying to determine what the contingency dollars were, and it was just hard to figure out. What of this is from efficient funding, what of this is from value engineering, and how do we make those determinations?

MR. TARPEY: Those are good questions. I don't have the information to be able to answer you today, but this would be a good topic to cover at a future meeting.

MR. INNIS: One last question. When we say value engineering, it can sound like buzz words. Is there a set process that we can point to and say this is how we're going to do it for a small project, a medium project, and a large project so that we can take this and say hey, we're going to do value engineering and this is how you move forward with it? Like the team is this big and this is what they're going to look at? How do we make sure that the design you found here is used for future locks and taken into consideration?

MR. TARPEY: The value engineering process is scalable to the project and the size, and what your opportunities are for savings. That's where bringing in national experts, the centers like INDC, and others that bring people in from the outside to challenge those assumptions is helpful. You're focused on maintaining your quality, adhering to your design standards, but finding different ways to get to that final design and construction. I think that's where the value comes in.

You have teams or people coming in to challenge what's been done and refined those designs and construction methods. That's the concept, and you have to scale it to the project. What do you need? Some projects, you know, there's proven methods that we've done over and

over again, so that you don't have savings there. But maybe are other places to look at, so you bring people in to do that. USACE has a very mature process in value engineering.

MR. INNIS: Okay.

MR. SMITH: I'm hearing the Board challenge us to get even better. I mean, there's an excitement about what we've shown and I would just highlight that this is the tip of the iceberg and the number of activities that General Spellmon and the Chief have put a lot of pressure on us. Divisions weren't waiting for the INDC. We do owe ourselves and the Board some continued discussion on how we're synchronizing. Because you make an obvious point. Why would you put out a $4 billion cost and then later say well it's actually $2.5 billion?

This synchronization of a capability that's been maturing for four to five years or so is a little different than just our standard VE study process because there is another set of metrics and oversight that Mr. Dalton and General Spellmon do on the application. But this is taking some time to really ensure that we know who our world-class experts are, to keep sending those folks to places that they can truly sustain world-class skill, and then bring them together.

But I'm hearing the Board very clearly and we hear that from our bosses too. Let's keep talking, keep pressing us on it. I'm in agreement with all of what you guys have all shared.

MR. HETTEL: Okay.

MR. INNIS: Marty, I'd like to make a motion that when we're doing the feasibility studies, we also do value engineering so that we have accurate costs to go forward with.

MR. SMITH: I would add one other comment too, which is just for insight to the Board. I know you're focused on our construction, but we have another set of activities to standardize our maintenance processes, our staffing at our locks and other things. We know there is always room to continue to do things better, but I know the construction big dollar cost is the focus here.

MR. MONAHAN: From a process perspective as we move forward, we're really at a critical juncture where we'll be developing the new capital development plan. It would help also to develop the key metrics of success of execution of the projects. What I'm hearing is some confusion between the chicken and the egg of, you know, is this engineering through your center taking place before or after the BCR.

MR. INNIS: Right.

MR. MONAHAN: From this Board member's perspective, I'd like to see a one-page paper clearly delineating the process that USACE uses and what ultimately goes into the BCR for the project. If we're back-dooring this on the back end, then we're going to end up doing additional engineering studies. We've already seen those delays multiple times in the system. Let's make sure that whatever number we come up with is used properly on the front end and the BCR calculations, so we're doing the study once.

MR. HETTEL: Future Chairman, let me understand your motion. The Board is recommending that they do a value engineering study when they do the feasibility study for a project, correct?

MR. INNIS: Correct.

MR. HETTEL: What about projects that have already had a feasibility study performed and authorized?

MR. INNIS: We would want to do any that we have got out there that are on the priority list so that we can have appropriate BCRs to determine which way we move forward as we go into prioritization for the capital development plan.

MR. HETTEL: Your motion is to recommend doing a value engineering study on all, not only future projects during feasibility, but all authorized projects?

MR. INNIS: Correct.

MR. HETTEL: Okay.

MR. MECKLENBORG: Yeah, I'll second that. Dan Mecklenborg.

MR. HETTEL: Any other discussion? All in favor?

(BOARD MEMBERS COLLECTIVELY RESPOND, AYE)

MR. HETTEL: Any opposed?

(NO VERBAL RESPONSE)

MR. HETTEL: Motion carries. Thank you, Rob.

MR. RICKETTS: One last question on your numbers here just to help me understand the math. I'm looking at your page that has the bar charts, shows the breakout of the different savings. It's hard for me to see the actual numbers versus having a table or something that shows what it cost before and what it costs now. This is showing me that you had savings by figuring out a better way to build the project; but you also have savings that are a reduction in the contingency dollars for the project.

MR. TARPEY: Correct. They're also looking at some of the risks.

MR. RICKETTS: Let me finish my question. I'll get there eventually. When you look at your contingency dollar savings, is it linear with the savings driven by figuring out a better way to build the project, or in those contingency dollar savings, is there a different perspective on the risk of the project, i.e. the confidence level that this number in terms of cost would represent versus your prior number?

MR. TARPEY: The reduction in the contingency is a combination of factors from your change in construction method, simplifying that, which reduces your risk. It's also shortening your construction duration, which reduces your risk. It's a combination of all those factors as that senior expert team looked at it, including the cost center. Now at least you have more confidence in what our methods and designs are, so we reduce our overall contingencies.

MR. INNIS: Would there be a way to see what the original project was costed at without contingencies and what the project costed at after the value engineering, so that we could see what the difference was?

MR. TARPEY: At each stage of design you have those contingencies built in. It's the unknowns. It wouldn't be a fair comparison to release raw costs without those contingencies. That's part of our process to include those in it.

MR. RICKETTS: This is Matt, again. I think the piece that's hard to discern, at least for me, is how much truly is your cost saving coming from. We had one group of people looking at how to do this project, and they came up with a number and it was X billion. We've got another new group of people coming in and looking at this project and they've come up with a number that's a lot less.

When you say value engineering, I think of engineering the technical way, figuring out a better technical way to build the project. It's the contingency part that I don't fully gather from what's being presented in terms of how do you think about contingency when you're applying it to the cost of a project?

If it's a confidence level and it went from 75 to 50 percent because of these design changes, it would be helpful to see some explanation for that to help understand the breakout of the cost savings. Particularly, if we're recommending that we're going to take this approach that seems fantastic because we found a way to save $1.2 billion and we're going to apply it to all the other priority projects we have going on. I think it's also incumbent upon the Board to really understand what's driving the $1.2 billion in savings and what that's going to look like when we go to apply it to other projects.

MR. TARPEY: To understand the full cost estimating process, you'll need to get somebody really from the cost center to discuss that perhaps as a topic for a future meeting. The process to estimate those contingencies is an involved one. I don't have an easy answer for your question.

We try to look at it considering proven simplified construction methods that reduce your risk versus. We look at what the method is, the level of design, the information, and then, make a judgment on what the appropriate contingency levels should be for that.

When you look through the entire project, on each component and construction step, there's some contingency applied to that, which rolls up to the bars you see there. That's why I said I don't have a simple answer for your question. It's a long, detailed process that they go

through, and that's where bringing the experts in who have designed and built a number of projects, bringing their expertise to bear to come to the result that you're seeing here.

MR. MONAHAN: What I heard you say is that it's not a linear process on the contingencies. It depends on the timeline that takes place within the construction process. If that's true, can you provide the Board through the construction process what the dollars of when we can expect the trigger points of contingencies to be removed?

If it's a secure project, year one, you have 20 percent contingencies, but there's a major trigger point that we would see reduction in the cost of the project, so on and so forth. We can understand the key components you're articulating that are driving those contingencies, and when we can expect them to be removed from the project as it progresses. Thanks.

MR. INNIS: Could we have the engineering contingencies and the funding contingencies split so we could see them separately to see if we didn't get efficient funding and what the engineering was as well. I know there's a factor in the contingencies that's for efficient funding and a factor in "hey, we need to put a ten percent contingency on a project," just due to the fact that prices could go up.

MR. SMITH: Well Michael, let me help you out here. In response to the Board, LRD has completed a more detailed explication of contingencies on some of the projects that we'll walk through later to try to show you by increment the different areas that they take contingency. There's a couple of places where they show how it changes over time. I think that the LRD team did make an attempt to even to a further level than we have in the past on this. Is that fair Steve and Lenna?

MR. DURRETT: Yes.

MS. HAWKINS: Yes.

MR. SMITH: I think you'll see an attempt to get at that. It may still not satisfy, but I think it's the first time I've seen slides at that level, and I think it'll be helpful.

MR. TARPEY: Thank you. Now I'm going to leave the room and pull out the arrows from my back and come back in and be re-engaged for the next presentation, if I can go there, on NESP.

MR. HETTEL: Mike, I'm just happy all the arrows weren't coming from me.

MR. TARPEY: Thank you, Marty. I knew when I was voluntold to come do this presentation, it was going to be a difficult one.

MR. SMITH: To me, the numbers are going the right way.

MR. TARPEY: Okay. Can we have the next presentation? Okay, so up front I'll tell you I am not working on this economic update. I have limited knowledge. I'm sure the question up

front is everybody wants to know what the tentative benefit to cost ratio on this is. I have not seen the draft report.

I have been involved with NESP for many years. I led the design work in the mid-2000s. I was the project manager for a number of years, but I've since moved on to different assignments. There are other people working on it. If you ask me the BCR, I don't know it. I can't tell you. I know there's a lot of people working hard on it, and we are going to deliver it on time.

MR. HETTEL: Can you define that, "on time?"

MR. TARPEY: Hey, it's on this slide. There you go. Thank you for queuing the next slide. The economic update was started last summer, fall timeframe. It was a one year, $1 million effort, and the report is scheduled for completion this August. The scope is the component that was authorized in 2007 for the Upper Mississippi River including seven locks, five on the Mississippi, locks 20 through 25, and two on the Illinois, including LaGrange and Peoria, mooring cells and switch belts.

People are going to want to ask what the differences are from this economic update compared to the 2008 update, which I had worked on, and then, the original, feasibility study economic update. First, different models were used in the original feasibility study that was completed in 2004 and then in 2008.

This time, they're using the USACE certified enterprise model, the navigation investment model. That's one large change. Two, this study is looking at -- and as you know, putting a lot more effort into the engineering reliability using the OCA (Operational Condition Assessment) information that we have because roughly twenty-five years have gone by since the initial modeling work was done. We had different assumptions on when rehabs would occur and the age of infrastructure before these locks would come online. That's one of the big changes - incorporating better reliability information into the model than we had previously.

The checkmarks represent what is complete and where we're at. The engineering reliability work is done. The traffic demand work is done. Transportation elasticity is done. The transportation rate work is done. Cost estimates are done. That was one of the pieces of work on this going back, and you know, also looking at the design work we completed in the mid-2000s, which had different cost estimate work than there was done.

In the feasibility studies, you had more reliable, better information. The center of expertise in Walla Walla went back and looked at that information and updated the cost estimates. The final report preparation is ongoing and the reviews are going to be shared in the next several weeks.

MR. HETTEL: Can you define who's going to be doing those reviews? Is it within the USACE, or does it go up the line in OMB? Where does that review process take place?

MR. TARPEY: The review process will start in with USACE, then the report will get transmitted to the Secretary's office (ASA(CW)) and probably receive comments and questions.

If it follows the path of previously, it will go to OMB. Looking at what the scope of this is, a technical report. We're using our proven processes and models to come up with this report.

MR. HETTEL: Understand. And I probably know the answer to this question, but I'm going to ask it anyhow. I take it the report can't be public before it goes to ASA(CW) and OMB?

MR. TARPEY: Correct. We were asked to keep that information internal until it's completed.

MR. HETTEL: Okay. I thought I knew the answer. Thanks.

MR. TARPEY: Thank you. Any other questions or comments? Good. I got off a little easier this time.

MR. INNIS: Oh. Sorry, Mike.

MR. TARPEY: Oh, no. I didn't get off the microphone fast enough.

MR. INNIS: Just a quick question. I know we're redoing the economic update on this, but have we done the value engineering on this? If I just take the three locks on the Upper Ohio, we save $1.3 million; that's 400 million per lock. Roughly, we're looking at $2 billion in savings for the five locks that are in the NESP study.

MR. TARPEY: No. As part of this economic update, we did not do a value engineering study. If there were pegged dollars in the future, I think it is definitely a worthwhile effort that should occur and will occur.

MR. MECKLENBORG: In line with the other questioning, the concern would be that you're going to come up with a construction dollar figure that is higher than it would be if you applied the value engineering process. Therefore, you'll end up with a lower BCR, which may not support continuation of the project. This is absolutely the most critical project in the system for the agriculture community and those that transit to Chicago and those areas. That's the concern.

MR. TARPEY: I don't have an answer for you. We had a limited scope, limited time, and limited dollars that drove it to this. When you compare it to what we did in the original authorization and the 2008 update, which was all based on your feasibility level of information, USACE did significant design work when Congress was appropriating those dollars to the 2000s. At that time, we were looking at different designs that were in feasibility undergoing value engineering at that time. This cost estimate, or this design and cost estimate has refinements and improvements over the feasibility. I'm going to say implicitly, there is some value engineering savings in it, but is there an opportunity for more? There's always more and better ideas to bring on board.

MR. INNIS: All right. One last question, Mike. When they're looking at the economic update, is it always next best alternative for mode of transportation when you're looking at the

benefit-cost ratio? Is it hey, you know, if it's not going to move on barge, is the assumption that it's always going to move on rail or a track or is there a loss component in that economic update?

MR. TARPEY: I'm not going to answer your question as well as I could. That's where you need some of the people from the Inland Planning Center of Expertise in Huntington District who do the planning side of this and understand the economics better than I do. But it's based on transportation rate savings. They look at whatever that next best mode is and that's how we compute our benefits on this.

MR. INNIS: Yeah, I'd just like to make a comment on that. We know for a fact, as Mike has talked about earlier, that it's not going to be feasible for it to be the next best alternative. A lot of times, it's not set up for the next best alternative, especially things that are built along the water. They're set up to move along the water and so when that happens, the rail is not an option. Truck could be an option to actually move it, but there's not enough capacity to be able to handle that.

There's a huge loss there that we're not capturing when you're talking about that next best alternative being the economic benefit, because it could be much, much larger and the loss to the country or the loss to the individual person could be huge. Thanks.

MR. FEWELL: One other question on this next best alternative. When you're looking at that freight rate compared to a freight rate, that's very simple to do. But are you also going out and looking at the customer base at both the load side and discharge side? Because if you do not, if you're not rail capable already, are you considering the millions of dollars it'll cost to put in rail facilities somewhere? You'd have to go out to the actual customer bases to get that. Are you doing that?

MR. TARPEY: I can't answer that question. That's beyond my expertise. I'm sorry.

MR. FEWELL: I just think that's a piece of the puzzle you would have to look at before you consider a change of transportation mode and comparing your freight rates. Thanks.

MR. TARPEY: Looking around, I'll just say thank you for your questions. Hopefully the briefing was informative. The NESP study should be complete by the next Board meeting. You should have the results and you'll be able to answer a lot of these questions. Hopefully, the results will answer any concerns and comments you have. Thank you.

MR. POINTON: Thanks, Mike. We're at the point in the agenda to take a break. We're on schedule so far. Let's go ahead and take a 30 minute break, and let's reconvene promptly at 10:30. Thank you.

(THERE WAS AN OFF THE RECORD BREAK IN THE MEETING)

MR. POINTON: Next on the program as we reconvene the meeting is Lenna Hawkins from the Pittsburgh District who is going to give us a presentation on the Upper Ohio Navigation Project. I think she can also add some clarity to the discussion that happened earlier.

MS. HAWKINS: Good morning Chairman Hettel, General Spellmon, Mr. Smith, Mr. Pointon, Board members, observers, and other distinguished guests. My name is Lenna Hawkins. I'm the Deputy District Engineer for the Pittsburgh District and I'll be briefing the Upper Ohio Navigation Project today.

As an overview, the scope of the project is to construct one new 110 foot by 600 foot lock chamber at each of the facilities: Emsworth, Dashields, and Montgomery Locks and Dams. It would be in the existing footprint of the river chamber. Navigation would continue during construction through the existing 110 by 600 foot land chamber.

I'd like to address something that was brought up earlier -- this study took more than 15 years to complete. It was given very minimal funding in each of those years. As a result, one of the requirements for a feasibility study, which is a value engineering study was done at a very high level.

Over thirty items were identified to have further research into them, but because of the study taking so long and the political pressures to get the project authorized, it was determined that those items, the value engineering study, and an updated economic re-evaluation report would be done after it was authorized.

As you know through the value engineering study, the project cost was reduced from $3.1 billion to $1.81 billion. That is fully funded, and the 902 limit based on current certified cost estimate of a fully-funded estimate of completion at $1.81 billion.

Due to the current limited funding stream during pre-construction engineering and design (PED), design work is being focused on Montgomery lock. That is the lock that is in the poorest condition. The economic re-evaluation report is scheduled for completion in January 2020. A new benefit to cost ratio will be available at that time. Are there any questions?

MR. HETTEL: On this slide, would you help me understand the revised project costs. It says first cost $1.55 billion, fully funded $1.81 billion. What's the difference between those two? Can you explain that?

MS. HAWKINS: The first cost is if we were to do it today. A fully funded cost is to the mid-point of construction. If construction is ten years away, it would be inflated to five years.

MR. HETTEL: If you could build the whole project, wave a wand, get funded up front and build it, that's the $1.55 billion.

MS. HAWKINS: Correct.

MR. HETTEL: If you've got to do it over six years, it's $1.81 billion.

MS. HAWKINS: Correct.

MR. HETTEL: Okay, thank you.

MS. HAWKINS: We are actively pursuing the option of moving the project into Construction, General funding in Fiscal Year 2020. We are also positioning the project to capitalize on other funding possibilities such as an infrastructure bill or change cost share requirements for this or other inland waterway transportation projects. This is being accomplished through focusing on design activities necessary for physical modeling and preparing plans and specifications for preparatory construction activities and site development work to facilitate future major construction contracts.

Our goal is to use the limited funds we have in order to complete long lead critical path activities in order to be able to execute large amounts of design and construction work once funding is available.

One item I would like to point out, I did mention, the economic analysis will be completed in January of 2020. Additional restrictions on coal-fired power plants in the Pittsburgh region over the past 15 years has negatively impacted traffic resulting in a reduction in benefits from coal.

The value engineering study and the reduction in coal are in a sense balanced. It's very important to re-evaluate both. The longer it does take to get into construction, the higher the risks of failure. This is a condition-driven study project, and that is very important.

MR. HETTEL: Did the value engineering study take into account the reduction in coal?

MS. HAWKINS: It did not. It strictly looked at constructed methodology, life-cycle cost savings, et cetera.

MR. HETTEL: No benefit to cost ratio or anything like that there. That will be through your cost, your economic re-analysis, correct?

MS. HAWKINS: That is correct.

MR. HETTEL: Okay. Thanks.

MR. MONAHAN: When you say the reduction in coal, has the study process accounted for the value of the new $6.5 plus billion Shell cracker plant in western Pennsylvania that has to go through Montgomery to be constructed?

MS. HAWKINS: They're aware of that. They are considering that. Historically, petrochemicals going through the locks has more than doubled over the past 10 years, but it has not made up the difference in the decrement to coal at this point in time.

MR. MONAHAN: Has there been any accounting for the future development of cracker plants up in that region that are currently in the planning stage? How does USACE account for that value in this process?

MS. HAWKINS: I don't specifically know the details of that. I know they are aware of that. They're also aware of the investment that has recently been made, that $1 billion investment in the USX Plant. They've been made aware of that as well.

MR. MONAHAN: That's U.S. steel plant? You're talking about the cracker plant up on that Lower Mon?

MS. HAWKINS: Yes.

MR. MONAHAN: The only point I'm trying to make here is not only for the Upper Ohio, but the entire system. There's tremendous amount of new economic development going on within this country. I just don't think we're properly accounting for that in our study process. The question is how do we account for that properly?

Matt, you mentioned in your slide that it is north of $200 billion down along the Intracoastal Canal. Maybe that number is light, but it's a significant number and that cascades through the region because it is a system that's dependent on both ends of the spectrum, whether you're up in the hinterlands of the Illinois or Ohio or Minnesota, all the way down into the Gulf.

When you rack and stack future development, we have to solve how we account for that properly in these new construction projects. Otherwise, we're going to come to a conclusion that's not going to support the economic engine of this country moving forward or the real value to the nation. Thanks.

MS. HAWKINS: This table represents a first-cost funding profile to complete work at all three facilities, efficiently. One of the focuses that we are trying to highlight is efficient construction versus efficient funding. Design activities would be completed in Fiscal Year 2020 and 2021 and wrapped up in Fiscal Year 2022. Major construction activities at all three locations could start in Fiscal Year 2022 and wrap up with a completion in Fiscal Year 2026. If there are no further questions, that ends my presentation.

MR. INNIS: Just one quick thing after listening to that presentation. I'd like to change the motion earlier where we talked about doing value engineering studies for all of the projects. I think there's some changes that based on the length and when the value engineering is done.

I'd like to request that we change the motion to get a briefing from USACE on value engineering including what the procedures are, how it's done in the feasibility studies, and what can it mandate. It should also cover how do we do it better and what's been done so far on the current project so we have an understanding of that before we mandate anything further on having value engineering move forward.

MR. WOODRUFF: I'll second that. I think it's an exciting concept and I think we should always be looking for ways to do more for less. But we can't afford to delay the projects that we so badly need. I would not want to see all the work come to a screeching halt while we spend a couple of years or more going back, and what I like to refer to as paralysis through analysis.

At some point, we got to start turning shovels. While I think it is important that we look at these things, we have to do so in a way that doesn't delay construction of the projects. That's sort of where you're headed on this. With that concept in mind, I second it.

MR. POINTON: Got a motion from the members. Do I have a vote here? All in favor?

(BOARD MEMBERS COLLECTIVELY RESPONDED, AYE)

MR. POINTON: Any nays?

(NO VERBAL RESPONSE)

MR. POINTON: Motion passed to replace the motion that was passed earlier. That's all you have, Rob?

MR. INNIS: That's it.

MR. POINTON: Thank you. Thanks, Lenna. Moving on in the program, now. We have Adam Walker here to go through the construction projects for the Great Lakes and Ohio River Division. He's going to start with the Chickamauga Lock Project update.

MR. WALKER: Thank you. General Spellmon, Mr. Chairman, distinguished Board members, observers, and guests, I'm Adam Walker, the Project Manager for the Chickamauga Lock replacement in the Nashville District.

The bottom line up front, we have a couple of construction contracts. The lock excavation contract is actually physically complete. We're just working on the financial close-out of that one and putting our attention on the lock chamber contract, which we've exercised four additional options as of March of this year.

That contract is making preparations now to put in place the conveyor system. That'll be what brings the concrete down to the cofferdam location, and we'll actually start seeing some concrete placements as early as next month. The post-authorization change report, PACR, is still undergoing OMB review.

There has been some coordination from Headquarters to the Assistant Secretary's office (ASA(CW)) earlier this week. I'm optimistic that we'll be bringing that one to a close in the very near future. The overall project view, y'all have seen this many times before. I'll just draw your attention to the top right corner, the expenditures through the end of last quarter, end of March, were $255 million, which brings the overall completion of the project to about 34 percent.

This is a graphical representation of what the options include for the overall lock chamber contract. Again, it's a 13-option contract, total value is $240 million. It's updated this go around with checkmarks next to the options on four, six, seven, and eight, which is what we exercised in the March timeframe, bringing the total awarded value up to just under $156 million, which

translates to a completion date for that work of November 2020. That does not account for any kind of high water delays we've had recently, so that might add about a month or so.

No questions, I'll keep moving forward. This photograph was taken in the middle of April when the contractor had gotten back into the site after the high water and doing some mucking out of different areas. It's taken with a panoramic view, so you get a little bit of a fish eye. That wall across the bottom of the picture there is actually straight, not curved. That is where the contractor has been working over the last few weeks. When you see an updated picture of this next go around, a lot of that wall will be taken out because that'll be making room for the new concrete for the upstream-most portion of the new lock.

It's hard to make out and I don't have a pointer here, but there's two foundations that will go in place for tower cranes that are going to be located inside the cofferdam, which will be how they do the final delivery of the concrete. They've finished that work at this point. You'll see in the next photograph at the next Users Board meeting the actual structure for those tower cranes in place.

The financial slides, no real change from the last time. The highlighted red items are the changes. It's very small to read. I apologize for that, but essentially, just updating the percent complete for the different contracts. Lock chamber is essentially 17 percent done. The lock excavation is physically done. We're just doing the final negotiation to close that one out.

We had those options executed end of March for the lock chamber contract. We have a few more long lead items that are currently in options nine and ten that are non-exercised. We're looking to possibly get those done so that we can help reduce schedule risks to the contractor by having those items on the contract sooner than when we would have had we waited for the full funding for all those options. We'll be looking to do that probably in the August timeframe.

No change to the schedule slide from what was presented in the last Users Board meeting. The time and cost score card, as far as expenditures go, our actuals are about $11 million behind the plan. That translates to about 4 percent. The traffic light on there shows it green, but according to that target scale it should be red at four percent. That's primarily due to the lock excavation contract not being executed quite as fast for close-out; it was a couple of months slower than anticipated. The high water back in February and March actually slowed down the chamber contractor from doing the work there, so just slightly behind on our planned execution. Yes, sir.

MR. HETTEL: Help me understand. Your estimated completion cost is $669.2 million, but in the financial side the total project cost is $7 billion. That's a difference of about $88.5 million. Is that contingency difference?

MR. WALKER: It is. The total project cost includes the full contingencies that we budget for. This estimated completion number does not include contingencies, because it hasn't been realized yet. As the project progresses and we do realize differences or things that happen on the project that need to execute some of those contingency dollars, it'll show up in this estimated completion. That's the difference that you're seeing.

MR. HETTEL: When do you think we can realize that $88.5 million possible savings in contingency?

MR. WALKER: Anytime between now and the end of the project. It's really project dependent. As we award future contracts, then there's contingencies built into those unknown bid amounts. That's when we realize some of those contingencies. The other contingencies are just based on quantities. A high degree of uncertainty is included when we do work below ground. Anything that's rock excavation or drill shaft related carries a lot of contingencies. Once we get above ground, we would start seeing some of those numbers come down to lower percentages. And I'll touch on that I think some in the future slides unless you have a follow up question right now.

MR. HETTEL: I understand future contract award contingencies, but the reason I bring that up is because you don't know what the contract's going to come in at when you award it. But your lock construction contract is a fixed price. I know it's based on options and to be able to exercise options at certain times, but you only have two more contracts to award. That's your site restoration and your approach walls and decommissioning of the old chamber, correct?

MR. WALKER: Yes, sir.

MR. HETTEL: With the fixed price contract on the lock I'd, my hope is that those contingencies can be realized sooner rather than later. It looks like your award timing is 2021 on the approach walls and decommissioning of the chamber?

MR. WALKER: Correct.

MR. HETTEL: I would think, the site restoration wouldn't be a very large contract.

MR. WALKER: That'll be very small, yes, sir.

MR. HETTEL: Hopefully by September 2021 when you get that contract award, we can realize some of those contingency savings.

MR. WALKER: Right. We update our costs every two years. We'll do another one for Chickamauga in 2020. That contract would not be awarded at that point in time, so you won't realize it during that cycle. Following that two-year cycle in 2022, that contract should be awarded assuming we get efficient funding between now and then. That would be the time when you'd realize the contingency savings that are included for that unknown bid amount.

MR. HETTEL: What happens if we give you efficient funding and you come in and you save $88 million, for rounding numbers of contingency, $40 million General Treasury, $40 million Trust Fund? I've found that in the last six years, it's very difficult to get Trust Fund dollars contributed back to the Trust Fund. That's my whole concern - we wait until the end of the project and then we've got $40 million worth of Trust Fund money sitting out there that

doesn't get back to the Trust Fund account to be used for anything else. That's my concern on when we can realize these contingency savings.

MR. WALKER: The presentation that Mr. Durrett gave during the last Users Board meeting where we were going to try to modify how we actually budget and using smaller contingency dollars across the whole program would help to alleviate some of your concern, I believe. But we definitely need to budget to some degree what might occur during those contracts.

MR. HETTEL: Oh, I understand the reasoning for budgeting. I'm just making the point that hopefully you realize these $80 million contingency in savings. At what point in time do we stop funding the project when we can realize those so we don't overfund it and then can't get the funds back to the Trust Fund. That's the only point I wanted to make. I'm retiring after this one. I think that's an important point for the Users Board members to keep in mind going forward.

MR. WALKER: Understood. Finishing up this slide, on the schedule side we're still showing it green, because we have not had any impacts to the overall project schedule as a result of these intermittent delays on the contract. We're still green there. Major activity is in the bottom right corner. We didn't have a firm date on when we anticipated the review to be complete, but as I said earlier we're hopeful that might be in the near-term future. I mentioned earlier that the June timeframe is when we expect to have those initial concrete placements on the lock chamber contract. August is when we think we'll have some more additional obligations on that one as well.

During the last Users Board meeting, there was a lot of discussion on contingencies as there has been this morning as well. I've incorporated a couple of slides here to try to help describe the process that we do go through to develop those contingencies and hopefully that'll answer some of your questions. Every two years, we do update our total project cost estimate. As part of that effort, we do a cost and schedule risk analysis, or CSRA. That process is where the team of experts could be anywhere from internal to the District or reach out to the Inland Navigation Design Center (INDC) or other experts, whatever's necessary. We'll actually go through and try to brainstorm as many potential items that we can come up with that would potentially have impacts to either the cost or the schedule of the projects. That covers all the different project features through all the different phases from design to construction. The tangible product that comes out of that is the register, and that is where the team actually tries to identify each risk event, describes a statement of what that risk could impact either on a cost, or a schedule side, and then actually assigns the likelihood and the impacts.

We do all that, collect all that data, and run that through a probability analysis, a Monte Carlo-style statistical simulation. It will run through ten thousand iterations of different combinations on a statistical basis of how these potential impacts could be seen on the project at varying different values. That produces a chart of contingencies for both cost and schedule, separately, at different confidence levels. USACE guidance is to report that at the 80 percent confidence level. I'll show a slide on the next one of how that shook out for Chickamauga.

But before I get there, I just put a very simplistic sample of how those risk registers are developed. This is boiled down, because it is a tremendously large spreadsheet with a lot of different columns. Essentially, we'll just identify the risk, starting on the left, state the statement of impact that they could have, and then we actually try to categorize that impact through a descriptive moniker. The impact could be negligible, marginal, significant, and critical. Each project has the ability to tweak those percentages, but a negligible cost might be zero to one percent and marginal might be one to five or 10 percent, something along those lines.

The team will actually try to bookend these costs as best they can in those different categories. Then they will look at the likelihood of occurrence, how likely is this to happen, certain all the way down to very unlikely. It's percentage-based. If it's certain, it's like a 99.9 percent likelihood that that will occur. It will go in the certain category. If it's very unlikely, like one to 10 percent chance, it would be a very unlikely. It goes into that risk matrix and it develops the risk level, either low, moderate or high based on criteria that you see in that risk matrix.

The model value column there, you see that under the project cost and the project schedule. I've only shown one column, but in reality it's three. It's usually bookended by lowest possible impact that this item could have on the project and an upper. This is the most it could impact that project and then a best guess at the most likely scenario. There are actually three different figures that go into that Monte Carlo simulation for each risk item. So just, for instance, Chickamauga's risk register has about ninety different risk items on it that the team, brainstormed as potential things that could happen through the course of this project. Any questions on that before I go on?

MR. INNIS: Where does the 80 percent confidence level come from?

MR. WALKER: That's my next slide, so I'll hit that unless there's other questions on this one.

MR. INNIS: And how many of those 90 are very unlikely and how many are certain?

MR. WALKER: I do not know the answer to that one. I can look into that for sure. But to answer your first question on the confidence level – here are the results of the Chickamauga CSRA from 2018. On the left, you see that we have a composite cost contingency of 19 percent for the overall total project cost and the way we develop that in this update. Again, we update this every two years based on what currently ongoing contracts as well as the future contracts.

You can see the current ongoing work. At the time of this update, we had the lock excavation contract and the lock chamber contract ongoing. We're only accounting for about 13 percent contingency on those two ongoing contracts to handle any kind of changing quantities, changing site conditions that weren't apparent to us when we started, and that sort of thing.

The future contracts include those same quantity uncertainties, but they also add the uncertainty for budget, or for bidding. Obviously, we do our best to try to do an independent government estimate when we do contract solicitation, but we don't know exactly what the bidding environment's going to be. We have additional budgetary contingencies involved, which

results in us having about 30 percent contingencies for those future contracts. Once you take the weighted average of those, it shakes out to be about a 19 percent contingency for Chickamauga, specifically.

As far as the contingency or the confidence levels, the chart on the right is where that is broken out. This is a product of the Monte Carlo simulation where you go through and do all those different permutations. I've highlighted the 80 percent, because that's what USACE reports. For Chickamauga in 2018, our cost value contingency was 18.99 or 19 percent. The separate contingency for schedule resulted in 24.7 months, rounded to 25. Again, those are broken out from awarded contracts and future contracts.

Just for comparison sake, when we did the CSRA back in June 2016 before we had awarded either the lock excavation or the lock chamber contract we still had those uncertain bid amounts and the cost contingency for the entire project at 29 percent. In contrast to that now, two years later, we're tracking 19 percent. You can see the trend does show that as we move forward and have more awards and have scope completed on projects, the contingency numbers are turning downwardly. Any questions on this slide?

MR. HETTEL: When you go through this process, this CSRA, are you using the total cost of the project or the remaining cost of the project?

MR. WALKER: It's usually done in first cost, I believe. We try to do everything in the first cost, then escalate it up to the durations that we think would occur.

MR. HETTEL: You're basing that on the $757.7 million for the total cost of --

MR. WALKER: That's the fully funded numbers. Our first cost, if you compared the $757 million, which is an October 2017 price level, the first cost is $731 million.

MR. HETTEL: Why wouldn't you do that on the basis of the remaining cost because you've already had the other costs allocated? Wouldn't it be more accurate to do it on the remaining cost that needs the remaining balance to --

MR. WALKER: I'm sorry. I misunderstood your question. We're doing that on the remaining values. All the costs that have already been expended and are done for those scope items. Those are not included in this. I'm sorry. I misunderstood you.

MR. HETTEL: Okay. Thanks for the clarification.

MR. WOODRUFF: I think I can, perhaps address Rob's question about where the 80 percent came from. That was the result of a lot of discussion through the Capital Development Plan process that was undertaken almost ten years ago now. Others in the room can probably explain it more accurately than I can, but we looked a lot at if you want 100 percent certainty, then that means you're over-estimating 100 percent of the time.

And as I recollect, when we looked at the various options, and you can sort of see it in this table - there's a little bit of a hockey stick. As you increase your confidence level, the cost estimate increases slightly. To get those really high confidence levels, the 90 and 100 percent levels, on most of these projects the cost went up to what was an unreasonable amount for planning purposes.

After days of discussion, the group came up with was 80 percent as a level that gives you relative certainty that the cost is not going to exceed that level, but also, not a cost estimate that is likely to be wildly higher than what the actual costs are. That was what we felt was the balanced approach to that against a backdrop of projects that had been dramatically under-estimated, Olmsted being a good example where we had a cost estimate originally of $770 million that ended up costing about $3 billion.

We were trying to get away from the scenario where we would understate a project's cost at the authorization point and then find out that it was going to cost far more. What we said was the right thing to do was come up with a realistic cost estimate that accounted for a lot of the unknowns, such as site conditions and geology, that we had seen in the prior projects to give us what we thought was a good estimate that would be the right place to start for planning purposes. Did I get that right, Jeanine (Hoey)?

MS. HOEY: (Nods in the affirmative.)

MR. WALKER: Thank you, sir. Anymore questions on this slide before I move forward? During the last Users Board meeting, I talked about what's driving these contingency costs. I've got two slides in here that show the sensitivity analysis on how these contingencies are impacted and what drives those. So first, the cost side. Nineteen percent contingency is about $91 million in contingencies for Chickamauga. The large driver of that is the construction modifications on the currently awarded contracts. As we move forward and execute those options, then this risk driver would obviously fall down and another one would probably rise up and take its place. Number two on the list is funding variations of the awarded contracts in the event that efficient funding doesn't come to the point where we can award that next contract in 2021 and have to push that back another year. That would obviously add some additional costs and push the contract out.

The other slide for sensitivity deals with the schedule contingency of 25 months, and again, there's two large drivers there: variations both on the awarded contracts and future contracts. If we're not able to exercise the options on the awarded lock chamber contract in time, we have to go back and re-package that into a new contract, and re-solicit it. That would take time and add to the project, and same goes for the second one there for future contracts. Adding a year or more to the contract as funding variations occur. Any questions on the two sensitivity charts?

In conclusion, the lock excavation work is wrapping up. The lock chamber contract is ramping up. The efficient funding profile is shown there for the future fiscal years. That's all I have for Chickamauga.

MR. HETTEL: Anymore questions for Adam on Chickamauga Lock? Okay, you get to keep the mic.

MR. WALKER: Mr. Getty has allowed me the opportunity to come and brief his project, the Kentucky Lock Addition. Getting into the bottom line up front for it, the downstream cofferdam contract is experiencing some pretty significant delays due to the high water, about six months of delays to this point, and that's through April. There's still high water now in May and it's forecasted for June, so we anticipate that delay to increase.

I wanted to highlight two items on that. This is a firm fixed-price contract, so all these time delays are mostly being borne by the contractor with the exception of any kind of monthly pay items, which is primarily the helper boats and any instrumentation reviews that are happening on those monthly bases. Up until now, we've had enough overlap or sequence in the contracts that these delays weren't going to impact any kind of critical path activity. We are to the point where it is going to start impacting the overall critical path of the project because the lock excavation contractor needs to get inside this cofferdam that is being delayed at this point. As we move forward, we will start seeing overall project delays unless we're able to rectify those in the near term.

Second bullet there on the site demolition utilities contract. We call that the SDU contract. It is physically complete. They're just going through the final punch list items now for that contract. The third bullet tied to the FY 2019 funding, there was enough provided in that to exercise all five remaining lock excavation contract options. To date we have exercised one of those and we plan to exercise the remaining four by the end of September of this year.

Right now, we are going through some discussions with the contractor on the potential impacts that they're going to see from this time delay. We wanted to have that discussion and get the cost impacts ironed out before we exercise those options, which is planned for September 2019.

Finally, the economic update and post-authorization change report is progressing. The review of that document is scheduled to start at the end of this month. We'll be making progress on that throughout the summer, looking at the project overview for Kentucky. It does incorporate the new certified cost that was verbally told to you all last Users Board meeting, but now it's actually made it into the documentation. The new certified fully funded cost is $1.216 billion. From an obligation standpoint, $534 million has been obligated, so the project is about 40 percent complete in terms of obligations. The SDU contract changed from yellow to gray, indicating that it's anticipated to be closed out in the very near future.

Some project photos. Back on March 1, the high water was to the point where it had fully submerged the three shells that had been placed for the downstream cofferdam. By April 1, the water had receded enough to the point to where they could place the fourth shell. Then, right after that on the 13th, in the bottom left corner, you see them putting the fifth shell into place as well. They took advantage of a very limited window there with low water to get a couple of shells in place. I believe the sixth shell is anticipated to be set on around June 6th pending water elevations.

The bottom right corner just highlights one of the lesson learned from the earlier shell placements where they're having issues with actually keeping those shells in place until the final concrete could be installed to lock it into place. They're now using these post-tensioned all-threaded rods, which it's probably not the most detailed picture, but that's what the workers are actually standing on, on the side. As they install the new shells, they were actually connected to the previous shell that was put in place. They're stable to hold it in place. That has been beneficial to where they have not had these movements after the shell's been placed before the concrete can lock into position.

In the last meeting, there was a slide on the potential risk reduction things that could occur to help gain back schedules. I just wanted to update you on this one item that actually has been implemented, which is the diving. The original plan was to have diving activities occur in between lockages, but since we've had these delays they're going to start doing lock outages for the diving operations. They're scheduling two days of closure every time we set a shell. Good news on the shells four and five - when we actually did those, diving activities only took one day as opposed to the two that was planned. Hopefully it won't be as invasive as it potentially could be for the navigation community.

The Kentucky Lock financial slide does represent this new certified total project cost that was completed back in February. It's at the October 2018 price levels. Down in the bottom left corner on the funding overview, you see those authorized costs and 902 limits updated to the October 2018 price level as well for an apples-to-apples comparison. You can see the total cost is exceeding those numbers, which is why we're proceeding forward with the PACR. We anticipate having that PACR by the end of summer. We hope to have the report signed by then. Under current project status, the updates are highlighted in red for the different contracts on their completion dates, or completion progress.

Time and cost score card expenditures are showing red primarily due to these six month delays and not being able to set those shells as planned. Schedule-wise, it's still showing a green traffic light at this point, but as I mentioned, at this point, we are starting to see those impacts. I would expect in future updates to the Board that the traffic light would not be green anymore, but that's yet to be determined. In the bottom right, just activities there. A couple of actualized dates for the certified costs back in February, and the completion of the site demolition utilities contract in March, and then tracking that the PACR. We expect it will actually be at the USACE Headquarters for review in the July 2019 timeframe. Yes, sir.

MR. HETTEL: Looking at your total project cost of $1.216 million, I'm going to round it up. Your estimated cost of completion of $1.048 million, that's another $168 million differential. I know this project has got further out to go, so it's going to be more dollars for contingency. Couple that with Chickamauga, approximately $90 million, now we're upwards of $258 million in contingency between the two projects.

We're in the same scenario with the Lower Mon of $141 million between the total project cost and the estimate at completion. Now we're pushing $400 million. That's $200 million from the Trust Fund, and $200 million from General Treasury. That would just about pay for another

lock. That's the importance of hopefully us being able to realize this savings in contingency before we fully fund the project. I want the new Users Board members to remember that I'm repeating that, because I think it's really important for us not to fund these projects based on the total projected cost when we know we're going to be able to achieve some savings in contingencies. Thanks.

MR. WALKER: Thank you, sir. Project schedule, only changes here are highlighted in red, pretty well picking up the delays on the cofferdam construction now showing a June 2020 estimated completion date. We've actualized that total project cost estimate back in February.

Similar to what I showed in Chickamauga, here's the two sensitivity charts that go along with the Kentucky Lock CSRA effort. Their contingency is showing up at 25.5 percent, which translates to about $156 million. You can see the drivers for that. There are primarily two: flash availability is one that the team identified and productivity assumptions, which are basically our estimate of how the crew sizes will be developed when the contractor actually performs the work. If there are any drastic differences from what we estimated to what they actually produced on the field, we're showing that as a potential for driving up some cost contingencies.

MR. INNIS: The flash availability - I assume, it's for alkali silicate reduction?

MR. WALKER: Largely. Yes, sir.

MR. INNIS: Are we looking at alternatives other than flash?

MR. WALKER: We have. I think that was a question you asked previously. Mr. Getty had done a little research that he provided to me. He reached out to one of the USACE's concrete experts and got some background information on different alternatives. Flash is the positive choice for us because it does a two-fold: it actually adds concrete strength while also mitigating for the alkali silicate reaction (ASR). Slag is another option for utilizing cementitious properties. It does not necessarily mitigate for ASR as well as the flash does. It helps in the sense that it will reduce your pull-in cement contents. There's not as much in that product to react.

Other options that are listed out there is metakaolin. That is more of a man-made product that does emulate better pozzolanic actions as opposed to the slag. Moving forward, our perspective from the Nashville District would be that we would continue to use flash as our main source of pozzolan, because there are still supplies. We're tracking the potential impact for the supply that we would need. We still do have the flexibility to add a tertiary mix, which is where we historically put slag into the mix. It's when we have Portland cement, the flash, and a slag type cement in there as well. That's kind of the gist of what I got from the research. You have a follow up question, it looks like.

MR. INNIS: Well, I asked that previously because you could increase your amount of slag versus cement. You could reduce the total amount of cement in there, reduce the total cost, and help the alkali silicate because you can put more slag in there than flash, and it could end up impacting the cost beneficial and reduce your ASR that way, too.

MR. WALKER: Okay.

MR. INNIS: I just want to make sure that we're checking with the right people to understand, because I would say that the availability of pozzolans especially in that area is not as high-risk with the alternatives that are available.

MR. WALKER: Okay. Duly noted. I'm definitely not the concrete expert that needs to be answering all those types of questions I appreciate your comments. Moving to the next schedule contingencies sensitivity chart, you see again there's two primary drivers there. Inconsistent funding does show up there as again. If we are not able to award contracts based on the planned schedule and have to delay those awards that could result in some schedule contingency usage. Reauthorization delay is actually number two on the list. If we're able to get the PACR through and approved, then we would mitigate that risk and that would come off the chart as well. Any other questions on the sensitivity charts?

In summary for Kentucky Lock, high water levels have and are likely to continue to negatively affect the overall project schedule. We are working in a very constricted marine area and working underground. There are still a lot of risks associated with that cofferdam construction contract. With this diving plan of action that we have in place, we're going to start doing more impacts to the locking efficiency of the old lock until this work is completed. In the past few years the traffic at Kentucky has been very robust. Still seeing over eight-hour delays there, so hopefully. That's translating into a beneficial bit, or positive benefits on the economic update front. The last slide has the efficient funding by fiscal year for the Kentucky Lock Project. That's all I had for Kentucky Lock unless there's any questions for me.

MR. POINTON: Lenna is going to step back up to the microphone to cover the Mon River 2-3-4 Project.

MS. HAWKINS: Good morning, again. Some key points on this slide I'd like to highlight. As far as schedule goes, we have skipped one month from May 2023 to June 2023, and that is due specifically to adverse weather events. When you move down to the budget, the estimated project cost remains approximately the same as last reported to the Board. As you can see it has been previously reported, we're expecting to obtain 90 percent of the project benefits at a cost of about $1.1 billion, about $100 million below the estimated $1.23 billion.

We are hopeful that the President's Budget will actually become more allocation of that $111 million for the project. That will also weigh into the contingencies and the total timeframe for the project. As far as schedule goes, the Pittsburgh District expects to award the Charleroi River Chamber Completion Contract options four and five this fiscal year. That will complete all options for that contract.

There are no changes to the scope on the project. So pending questions, I'll go to the next slide. Again, on this slide all changes to the dates are based on adverse weather conditions. Any questions?

Ongoing and pending construction, I'll give you a quick update of changes. Starting at the top working your way down, the monolith 22 to monolith 27, M22 to M27, progressed 5 percent since last reported. The base contract for the River Chamber Completion Project has also gone up by 5 percent since last reported. Option one has gone up 2 percent, option two has gone up 1 percent, option three has progressed about 1 percent total, and option four and five have not been awarded yet. The Stilling Basin Contract has not progressed, but that is due to the water conditions in that lower pool, which prevented it from moving forward until the middle of April.

This are some images of ongoing construction. The first one is of monolith 27, M27, and it's just drill shaft construction. This is actually repeated in the next slide as well, and you can see a lot of reinforcing steel as required. Structural steel is required to complete this work. The slide on the right side is the upstream end of the middle wall, and that is monolith M1. That is part of the base contract for the river chamber completion contract. The first photo shows the river chamber completion contract, base contract options one and two work that is ongoing. Photo two is a repeat from the previous slide.

We really wanted to show you and give you an understanding of the footprint of construction. You can see, we have three contracts currently ongoing. It is a very constricted work area. You can see the M22 to M27 contract, the river chamber completion base options one and two, and the stilling basin. One thing I did want to point out is in order to ensure that those work areas remain safe, due to the congestion, we have weekly coordination meetings with the contractors and our contracting office to make certain that work is completed efficiently and safely.

The changes on this slide are highlighted in red. The project was allocated $89 million in Fiscal Year 2019 in the work plan, and as Mark Pointon had mentioned, 213,000 was reprogrammed from the Emsworth Dam Rehabilitation Project. In total, the project has been allocated to date just over $1 billion. The FY 2020 allocation amount is shown as to be determined. Even though there is $111 million in the President's Budget, until it is actually allocated, we will leave that as to be determined. If allocated, the total allocations would be $1.124 billion.

There are no changes to this slide since the last Board meeting. For the time and cost score card, I'd like to bring your attention to the upper left-hand quadrant under expenditures. Under the column that says contingencies included, the cost performance index (CPI) is indicating a value of 1.06. What that means is that we're under budget.

Under the schedule quadrant, we are indicating we are yellow. Until we receive full funding for the project, we will remain there. Under the budget quadrant, if we stay on this efficient funding trend, we expect to come in at about $1.1 billion, which is about $100 million below our baseline estimate. I had already mentioned the major activity at this time is the River Chamber Completion Contract and awarding options four and five.

Our efficient funding profile is shown here. The upper line, which totals $111 million, includes what we believe to be reasonable contingencies, not full contingencies on this project. The lower line totaling $85.2 million as reported at the last Inland Waterways Users Board

meeting was based on an overall inland waterway transportation funding strategy and did not take into account the potential to receive completion funding in Fiscal Year 2020. Because of this potential, we'll have to do a re-analysis of what the true contingencies and total project costs will be.

MR. HETTEL: I won't bore you again with your estimated at completion cost versus your total project cost, as I already mentioned that. The Board was pleased to see the President's Budget request to fund this project to completion. If the appropriations go through as that $111 million and your contingency comes in at $85.2 million, it's a difference of $26 million. Again, here we are, $13 million in Trust Fund and $13 million in General Treasuries that we could be possibly funding this project in 2020. When would that come back to the Trust Fund, or it would probably get re-programmed to another project, would it not?

MS. HAWKINS: I can say for the Lower Mon Project, we would re-evaluate what contingencies we believe we need on that project. The determination would not be made at the Pittsburgh District. It would be made at a higher level, what the next priority was, and where it should go.

MR. HETTEL: If we got to the point where we have money left over from a project, can that not be transferred back to the Trust Fund until the final close-out on the project?

MR. SMITH: Acknowledging the question, I think it's a good one. There's a difference between this one and some of the other scenarios. If that $111 million is fully funded, it's actual money. It's not a reduction in a future appropriation request. This is a scenario we need to talk about. I'll talk to Eddie Belk and the team about how this does get credited back to the Trust Fund or reprogrammed to another project. It's a little different than these other ones, which were just forecasts. We don't ask for as much the next year. When you start fully funding projects, you're exactly right we're tying up actual dollars and we have to re-program them.

MR. HETTEL: With it being fully funded to completion, there’s a possibility of $26 million, $13 million Trust Fund, $13 General Treasury. That's a fine example on why we don't want to get to that point on Chickamauga and Kentucky.

MR. SMITH: Right. Right.

MR. HETTEL: To try to whittle down these savings so we fund it to what you need and not over-fund it so our dollars don’t sit there not doing anything when they can be utilized on other projects. Thank you.

MS. HAWKINS: The last slide I have is just some photos of the project. So pending other questions, that completes my presentation.

MR. HETTEL: Thanks, Lenna.

MR. POINTON: Moving right along then, we're going to pick up with the Olmsted presentation, and we have Dewey Rissler here to talk about Olmsted.

MR. RISSLER: Thank you Mark. Good morning Chairman Hettel, General Spellmon, Mr. Smith, other Board members. For the record, my name is Dewey Rissler. I am the project manager for the Locks and Dam 52 and 53 Replacement Project, commonly known as Olmsted.

The picture you see here on the slide is one that we've shown. It's a couple of years old, but it depicts the overall project. On the upper portion of the picture is the Kentucky shore; the lower portion is the Illinois shore. You see the two twelve hundred foot chambers there just off the Illinois shore, the five tainter gates, and across through there is where the wicket dam is located.

For our bottom line up front, we went operational in September of last year. As you can see there under the current cost, our total estimated price right now has increased from our last briefing. That was primarily due to extending our cost reimbursement contract due to the high water that we've been experiencing there at the project location.

We still remain under our authorized amount of $3.1 billion. Again, the keys to our success are the same ones we've been briefing: the efficient funding that we've been able to acquire throughout the years and taking advantage of, opportunistically, the river conditions.

Next slide is a hydrograph update. As you can see on the far left, that begins the low water season of 2018. The yellow line going up and down the middle is the end of the low water season 2018. Continuing on to the right is what the river elevations have done since that time. The red line there is the top of the lock wall at Olmsted. You can see that the locks have been under water for a significant portion of the year. The water elevation is at 315. The top of the lock wall is at 310, so the locks continue to be underwater.

These are some of the items that were impacted by the loss of the 2018 low water season. Some of these items, for example, the repairing the concrete spalls, those are a lifespan type of repair. We make sure that we get the 50-year lifespan that we project out of this facility. Other items are, for example, the left boat abutment and the fixed weir work, those are more operational and safety type items. This is what our plan is to recover from the loss of that 2018 season. We have extended our cost reimbursement contractor to complete all those key items as we've noted. We're currently estimating that extending that is going to run about $63 million. We continue to work hard to minimize this amount, again, working opportunistically when the river condition allow. For example, even though the locks and the water elevation is very high, with the high water in the Mississippi River, our velocities now are very low. We're running about 2 -- 2 1/2 feet per second. That allows us to go out there, do some diving work, and do some of these repairs, for example, the small repairs. We're being able to progress with those, because of the low velocities.

We are completing that work repairing Wicket 32 that was damaged during 2018; we should complete and reset Wicket 32 tomorrow. This is way ahead of schedule, because we're able to get in there with the velocities low, even though the water is high. We take advantage of every opportunity that we can to get out there and get this work completed.

Next slide. There's really no change to this slide. I've just updated the current status of the project. There again, the 53 demo phase one is progressing.

MR. HETTEL: Dewey, this is Marty. Question for you. On this slide, the remaining total project cost (TPC) balance of approximately $76 million, the $63 million that you need to complete this project now, is that part of that $76 million, or in addition to?

MR. RISSLER: It's part of that $76 million.

MR. HETTEL: Okay. So you're remaining TPC balance would be around $14 million.

MR. RISSLER: Yes, sir.

MR. HETTEL: With the additional $63 million needed.

MR. RISSLER: Yes, that's correct.

MR. HETTEL: Okay. Thank you.

MR. RISSLER: Okay, next slide. The update I have on this schedule, due to the high water, even though we're able to do some work, we're not able to complete the river dikes. We extended the completion date of those river dike installations out until the end of the calendar year.

Our project costs and score card. We're still ahead of schedule, under budget. We continue to show project completion in 2021, late in 2021. Major activity schedules, there are some of those, the key items. I want to draw your attention to the second one to the bottom. Again, that Wicket 32 repair originally was projected to not be complete until the end of August. Again, with the ability to get in and take an opportunity while the river conditions allowed, we were able to get in there early and get that work done.

Another thing, when we're doing work, especially on this Wicket 32, we'll have to get some very short river closures to make sure that we'll be able to work safely in that area. We coordinate with industry and make sure we look at the tows that are coming up and down and see if there's a gap in that line, so we can get out there and not really impact any of the navigation as we go through.

Here's just an update of the 12 month total project cost schedule (TPCS) and total estimated price. Our total estimated price has gone up now to about $2.84 billion.

Next. Just a summary, again. The high river conditions impacting the ability to complete the key features of work on the dam and the 53 removal of Phase 1. This is what we're projecting: needing additional funding for over the next few years to complete everything.

MR. HETTEL: You've got FY 2019 here needing $3 million. You were appropriated and budgeted for about $50 million in FY 2019. So is that now $53 million you need this year?

MR. RISSLER: Yes.

MR. HETTEL: And where will you get the other $3 million from?

MR. RISSLER: We're going to be reprogramming that.

MR. DURETT: We're going to reprogram that. We're re-evaluating for the year on the status and the appropriation and a Continuing Resolution (CR) in FY 2020. We need to make sure we've got enough money in Olmsted so we can keep paying bills in early 2020 until our appropriation hits. That $3 million is what we're thinking we're going to do. We keep looking at it, and we're delaying that execution, that reprogramming. We're actually asking for $38 million in the 2020 work plan. We're going to move $3 million off Kentucky to Olmsted and in early 2020 we'll move money back.

MR. HETTEL: Okay. The $50 million that you got in FY 2019, wasn't that for a new wicket lifter barge and a vessel?

MR. DURETT: Yes.

MR. RISSLER: It was for a vessel.

MR. HETTEL: The $15 million was for the vessel?

MR. RISSLER: Yes, sir.

MR. HETTEL: And have you executed the contract on that?

MR. RISSLER: No, sir. We were in the design process. We anticipate awarding that by the end of the fiscal year.

MR. HETTEL: Okay. That money will be used up, that $50 million that you got in FY 2019. I didn't know if you could move $3 million of that and pay it back in 2020.

MR. DURETT: That's why we have not executed this $3 million. We're playing the game. How well does the river react and how much money do the contractors spend. We may not have to move that money, but we may have to move that money.

MR. HETTEL: Understand.

MR. DURRETT: We're looking at this case as a day-by-day, month-by-month, and re-evaluate it.

MR. HETTEL: Where are we at on the construction of the second wicket lifter barge?

MR. RISSLER: The second wicket lifter barge, the barge itself is about 15 to 20 percent complete. I was just out there on Tuesday. We've awarded the crane contracts. All the contracts have been awarded on that. We're on track to receive that probably in the March/April timeframe.

MR. HETTEL: Good. All right. Thank you.

MR. RISSLER: Okay. One of the things going on at the site, you know, site restoration and everything. We changed the landscape quite a bit a couple of weeks ago, on the fourth of May. It's kind of interesting, because it was Derby Day in Louisville. The super gantry crane, you know the very large 5,300-ton capacity crane. What I've got here is a series of four pictures that depict the demolition of this project. This is taken right at the point of ignition of the explosives. All that took eight seconds to reduce all that potential energy down to nothing. Since that time, both sets of legs have been cut up. About half of that has been hauled off offsite to the scrap yard and what just remains is the center beams. To get a perspective on that, those letters that you see there for the name, those letters are about six feet tall, and that beam is about twelve feet tall, so it was a huge piece of equipment. That's it. Any questions? Yes, sir.

MR. HETTEL: My last one for you, believe it or not. We're getting to the closing of this. Dewey. We received the sale of your assets in our read-ahead materials. It says, total proceeds as of April 23, 2019 was approximately $5.23 million.

MR. RISSLER: Yes.

MR. HETTEL: Where is that $5.23 million? Will that reduce the cost of the $63 million you need, plus whatever additional assets you've set, will you sell?

MR. RISSLER: It will. As Steve (Mr. Stephen Durrett) said, we continue to evaluate what those proceeds are and our future needs. Those proceeds may offset our future needs.

MR. HETTEL: Just out of curiosity, of that $55.3 million, is 50 percent of that Trust Fund dollars, because that was all purchased under a 50/50 contract?

MR. RISSLER: I don't know the answer to that. I'm assuming so since they were -- most of this was procured.

MR. HETTEL: Well when you look at the $63 million, at an 85/15 split, needing $35 million. The reason why I ask needing $35 million next year, that's about the Trust Fund dollars that were spent on this. Maybe the Trust Fund wouldn't be looking at 15 percent of that cost. When will we realize that? It goes back to the original question. We're funding up-front and when will we get paid back when we have excess funds left over, or a reduction of Trust Fund dollars going forward. Thanks.

MR. RISSLER: Any other questions? Thank you.

MR. SMITH: I'm going to just briefly mention something about the Capital Investment Strategy we have coming over the next few months. We've talked a lot about it. There's some slides. They're in your read-ahead. As you're aware, probably more aware than I am, because it wasn't with this for the last lifecycle of this, we have a requirement to update the Capital Investment Strategy of 2016 and it's a statutory requirement. We've already had some preliminary discussion. We've put together the USACE team. By name, there's a list here on the slide; the asterisk is to indicate that those are some of the USACE team mates who participated in the development of the 2016 capital investment strategy. They're the core of the effort that we're beginning. There's some best practices that we intend to follow, including a very thoughtful engagement with industry so that as we work through some of the discussions that we've had this morning from Bayou Sorrel to NESP to Upper Ohio, we appropriately form a document that once we route it through the Corps of Engineers to the Assistant Secretary's office and eventually to further to Congress, it reflects to the extent it can, the many different challenges to establishing the next suite of projects that we intent to move on.

This will all take place over the next six months. The dates on here are generic. There is a little bit of a time lag here, isn't there. The dates in here are generic, because we have to formally get the plan in place with our leadership at USACE, and then, with ASA(CW)'s office. We've talked a lot about the considerations of the type of things we'll need to work through in the next few months. Prepared to take any questions at this point.

MR. HETTEL: Tom, this is Marty. No questions, but when you say the next six months, our goal is to get the next rendition of the Capital Development Plan completed by the end of this calendar year?

MR. SMITH: Yes.

MR. HETTEL: Okay.

MR. SMITH: In some of the timelines we've worked out, we want to do better than that. We think we can, but I just don't want to get ahead of that in this general forum, because there's real work to do. There are many different things that could hang it up, but we should be talking about this quite a bit over the next, well the next Users Board meeting, probably the next two Board meetings.

MR. HETTEL: Okay.

MR. POINTON: All right. Thank you, Tom. Next on the program is public comment. We had one individual who wished to make a public comment. John Doyle. He's stepping to the podium now.

MR. DOYLE: Good morning everybody. I'm John Doyle with the Jones Walker law firm. Very little discussion this morning about what the House of Representatives did a couple of days ago. Perhaps you'd find it useful to at least get a rough cut recognizing that the report has not been filed yet. The committee approved the bill on Tuesday afternoon, and so as the General

and others made known, we won't know all the details until that report comes out. Here are some of the highlights that I think would be helpful for the Board to understand.

The committee bill provides $7.4 billion to the USACE Civil Works Program. That's more than a 50 percent increase above the level that the President had recommended in FY 2020 for the U.S. Army Corps of Engineers. The House bill would take that $4.8 billion proposed by the President and increase it by more than 50 percent for the overall Civil Works Program.

The Operation and Maintenance (O&M) account for the seventh year in a row in the House bill will have record level funding. According to, at least the draft committee report, at least $60 million of the additional funds being provided in the O&M account will come to the inland navigation mission area.

As it relates to the Inland Waterways Trust Fund, the committee calls for the obligation of an additional $52 million of Trust Fund monies on top of the $55 million that the Administration is recommending. That would leave the Trust Fund projects in a position of receiving at least $215 million in construction funds. We say, “at least,” because what will determine how much more than that, if any, the project gets depending on allocation decisions to the extent that any of that additional funding goes to a project like Olmsted or any other that might have a 85/15 cost share. That additional Trust Fund money will leverage even more dollars into construction of the ongoing projects.

There was record level funding from the Harbor Maintenance Trust Fund, $1.7 billion. That not only is a record for funding from the Harbor Maintenance Trust Fund, but it's also significantly above the spending target level called for in order for Harbor Maintenance Trust Fund activities.

Long story short, the changes that were made in the House bill track very well with the major recommendations that were included in the Board's 60 day report. You should feel good about that. We all look forward to the House moving that bill next month and the Senate beginning their action in committee next month as well.

MR. POINTON: Thank you, John. We'll move on in the agenda. General?

MG SPELLMON: Yeah, just a couple of things to wrap up. Just to end where I began this morning and the importance of this work, and then, thank you everyone for being here.

As it started out, it's been a banner water year. If you read the National Climate Assessment, we've got more years like this in front of us. Couple that with the economic development that our nation is experiencing, it just adds more urgency to the important work in front us. We could not do this without you. We couldn't.

When people dressed like me go to argue our budgets to Deana (Funderburk) and the Assistant Secretary, and then we go across the street to OMB, and then we head up to the Hill for testimony, we're armed with the expertise from this group. It is incredibly valuable. I want to thank you for that.

There's a few of the members I want to recognize here on their way out, because today's their last Board meeting with us. I hope it's not the end of a relationship or feedback that we get from you and we hope that you won't be strangers to us.

I'm just going to read these off and then I'm going to walk something around to each of you.

Matt, Mr. Woodruff, member from February 2012 to May 2019, Vice-chairman from June of 2015 to May of 2019.

Scott, Mr. Leininger, member from 2012 to May of 2019.

Looks like Tim had to leave early, member from 2017 to 2019.

I know Dan had to leave early as well, a member from 2012 to 2019.

David, our great partner from Tidewater, a member from 2017 to May of 2019.

Our great chairman, Mr. Hettel, member from 2012 to May of 2019, and certainly, our Chairman for the past four years.

Thanks to each of you for, as Tom Smith likes to say, forcing us to keep our pencils sharp.

Tom and I were talking at the break and just kind of getting notes from each other on how this is going. I answered Tom, I said they're asking questions we ought to be asking. Thanks for that. I didn't come armed with gifts today. Gifts get General Officers in trouble, so I brought tokens of appreciation.

(Applause)

MR. POINTON: I'm almost afraid to give Marty the mic one more time before he steps down, but I'd actually like to say thanks as well. I know you guys endure my nagging all the time about these things and I greatly appreciate working with all of you. I look forward to working with the new Board as well, reconstituted with new members and with some of your reappointments from the last cycle. We have a few of you guys here today. So Marty?

MR. HETTEL: Thanks, Mark.

MR. POINTON: Give us your remarks, sir.

MR. HETTEL: Well before I do my closing comments for the last time, I'd just like to take a minute and go around to the Board members that are rolling off the Board. I know Mr. Mecklenborg and Mr. Parker left, but usually I give my last comments, and then, ask for anymore comments. I'm going to start out with the Board members. Scott?

MR. LEININGER: Thank you, Marty. After six years, it's a bit bitter sweet as you roll off of here. I'd like to start by saying it's been a privilege to serve on this Board and to serve the nation for the last six years. I'd like to thank all the Board members that have been here during that period of time and thank the new ones who are coming on. They're sitting behind us right now.

Special thanks to Mark and Ken. You guys have always planned and have done a good job of getting everybody in the room at one time, so thank you for that.

General, to you and the generals that preceded you as Executive Directors, as always outstanding guidance and leadership and we appreciate it.

And Marty, I'd certainly be remiss if we didn't just have a special thank you for you for your tireless efforts not only on these meetings, but between the meetings to try to herd this bunch of cats in one direction and keep us going. Thank you, and again, it's been a privilege.

MR. KONZ: Thank you, Mr. Chairman. I want to echo some of Scott's comments. A big thanks all the way around. First thanking the Corps. General Spellmon, obviously we go back to the Northwestern Division. I was very thrilled that you were our Executive Director and I'm very excited for what the future holds for the Users Board with you in that position.

The rest of USACE, Mr. Tom Smith, it's been a pleasure working with you and Mr. Pointon as well. Just a wealth of knowledge, and I've learned so much in my time here.

Thanks to Chairman Hettel. I feel like you've been a true mentor to me. The amount of knowledge I've picked up from you and the other members has not been lost on me. I truly appreciate it and what Scott said, your tireless efforts to make sure that navigation voices are heard on this Board. Your leadership is unmatched, so I thank you for that.

To the rest of the Users Board members and the new ones coming on, I highly push for the continued effort to advocate for infrastructure, specifically, waterway infrastructure and how important it is to the value of this nation.

I'm the lone guy from the Pacific Northwest that has different challenges when it comes to infrastructure and the importance. I think that was outlined in the public comment letter that was submitted. But I think we're all in this together in terms of the value of the nation that we deliver with our infrastructure. With that, I thank you again for the time.

MR. WOODRUFF: I just was doing some quick math and actually, it has been six years. I've been a member of the Users Board for 10 of the past 12 years. I know that our company has been represented on the Users Board for decades. Because of the change in the policy to make the representatives a corporate rather than a personal representative, this will be the first time that our company hasn't had a seat at the table in a long time. We're the largest operator in the segment we represent and we won't be going too far away.

I think that the Users Board has done many good things during the time of my service, the initial Capital Development Plan being one of those. I look forward to still being a part of the discussion as we look at the next version of what our investment strategy should be. I think that this is probably one of the original public private partnerships in which USACE engaged. The whole purpose of the Users Board is that if the user is going to pay, the user should have some say as to where that money is spent.

We talk a lot about the efficiency of projects and spending the money wisely, but ultimately it's where the money gets invested. That is the primary purpose of this Board. It's an important duty to the nation. I look forward to working with those who are staying on the Board, those who will be joining the Board, and certainly bringing whatever resources we can to help in that process.

MR. HETTEL: Well thanks Matt. I'll do my best and consider this. Let me start off with a sincere thank you to these five organizations and their representatives who served on this Board for the last six years. Mr. Scott Leininger with CGB; Mr. Bruce Reed and Mr. David Konz with Tidewater; Mr. Charlie Haun and Mr. Tim Parker with Parker Towing; Mr. Dan Mecklenborg with Ingram; and our current Vice Chairman for a few more days, Mr. Matt Woodruff with Kirby. Please accept my sincere gratitude to you and your organization for serving on this Inland Waterways Users Board for the last six years.

Now I'm going to take everybody down memory lane for a little bit. We started with Inland Waterways Users Board Meeting No. 69 in Louisville, Kentucky on August 2013. Since then, we've held 22 additional meetings in 18 different cities, visiting 16 different projects. This was due to the Board's goal of looking at the entire inland waterways as a system.

During these six years, we've had 16 different Board members, four different executive directors, two different designated federal officers, along with two different Administrations. We have issued six annual reports along with five recommendations on the President's Budget requests. So what have we accomplished in these last six years?

As stated earlier, we've looked at the entire inland waterways as a system. We now receive our read-ahead materials ten to 14 days prior to the meeting. We now have a seat at the table when MVD and LRD are planning their maintenance at locks. The Lock Performance Monitoring System (LPMS) data is now reflecting more accurate arrival times at projects. We now have Inland Waterways Users Board appointments staggered, so we don't experience a complete turnover in the Board in one year.

We've gone through the Capital Investment Strategy in 2015, and we'll start our second round this year. We've seen efficient funding for our four priority projects every year since 2015. We have funding for our number one priority major rehab, that being LaGrange Lock. We've seen Olmsted become operational and we can now see when the Lower Monongahela Project, Kentucky, and Chickamauga Projects will become operational. All in all, I believe we had a good run at improving our inland waterways infrastructure for the past six years.

Finally, congratulations to Mr. Rob Innis in becoming the new Chairman, to

Mr. Mike Monahan in becoming the new Vice Chairman, and to incoming Board members Dennis Oakley, Spencer Murphy, Jeff Webb, Damon Judd, Tim Power, and Rob Rich, and to the remaining Board members, Mr. Mike Fewell, Mr. David Earl, and Mr. Matt Ricketts. Thank you to your organizations for stepping up to the plate and being part of the process to improve our inland waterways Infrastructure.

Finally, it has been my distinct pleasure and honor and privilege to serve as your Chairman these past six years. Thank you.

(APPLAUSE)

MR. POINTON: So your last action as a Chairman, sir. A motion to adjourn.

MR. HETTEL: Aye.

MR. POINTON: Got a second? All in favor?

(COLLECTIVELY RESPONDED, AYE)

MR. POINTON: I hope there are no nays. Motion passes. Thanks, Marty.

(The proceedings were concluded at 12:00 P.M.)

Appendix A

List of Participants

Inland Waterways Users Board Meeting No. 91

Inland Waterways Users Board Meeting No. 91		
New Orleans, Lousiana		
May 23, 2019		
List of Participants		
Last Name	**First Name**	**Affiliation**
Chambers	Patrick A.	USACE, Mississippi Valley Division
Chapman	William R. III	USACE, Great Lakes and Ohio River Div
Clancy	COL Michael N.	USACE, New Orleans District
Collins	Chris	Lousiana Department of Transportation and Development
Daigle	Michelle C.	USACE, New Orleans District
Dickens	Justin	Crounse Corporation
Dietrich	Kirk E.	USACE, New Orleans District
Doyle	John S., Jr.	Jones Walker LLC (WCI)
Duffy	Sean M.	Big River Coalition
Durrett	Stephen G.	USACE, Great Lakes and Ohio River Div
Felder	Ms. Cherrie	Channel Shipyard - WCI
Fewell	Mike	Dow Chemical Company
Fletcher	CAPT Matthew M.	USACE, Headquarters, Civil Works Executive Office
Frantz	David A.	USACE, HQ Operations & Regulatory Div, Navigation Ops
Funderburk	Ms. Deana Y.	HQDA, Assistant Secretary of Army for Civil Works
Gilbert	Ms. Heather	National Oceanic and Atmospheric Administration (NOAA), Office of Coast Survey
Hanemann	Regmar	Gulf Planning and Support Services
Harden	Ms. Phyllis	Pine Bluff Sand and Gravel Company
Hawkins	Ms. Lenna C.	USACE, Pittsburgh District
Hettel	Martin T.	American Commercial Barge Line LLC (ACBL)
Hoey	Ms. Jeanine M.	USACE, Pittsburgh District
Innis	Robert J. "Rob"	LafargeHolcim, Inc.
Judd	Damon	Marquette Transportation Company
Kearns	James A.	Bryan Cave Leighton Paisner LLP
Konz	David	Tidewater Barge Lines, Inc.
Lambert	Bruce	Mentis LLC
Landry	Victor A. III	USACE, New Orleans District
Leininger	G. Scott	CGB Enterprises, Inc.
Lichtman	Kenneth E.	USACE, Institute for Water Resources
Lucore	Ms. Martha M.	USACE, New Orleans District
Major	Lawrence	Frequentis USA, Inc.
Marathon	Nicholas	U.S. Dept of Agriculture (USDA), Agricultural Marketing Service
McCormack	Frank	The Waterways Journal
McCune	Rob	Crounse Corporation
Mecklenborg	Daniel P.	Ingram Barge Company
Monahan	Michael J.	Campbell Towing Company
Murphy	James J.	U.S. Dept of Transportation, Maritime Administration (MARAD)
Murphy	W. Spencer	Canal Barge Company
Noland	Ms. Katelyn M.	USACE, Institute for Water Resources

Parker	Timothy M. III	Parker Towing Company, Inc.
Pointon	Mark R.	USACE, Institute for Water Resources
Ricketts	C. Matthew "Matt"	Crounse Corporation
Riley	Steven D.	USACE, Institute for Water Resources
Rissler	Dewey W.	USACE, Louisville District
Smith	Thomas P.	USACE, HQ Operations & Regulatory Division
Spellmon	MG Scott A.	USACE, Headquarters, Civil Works Executive Office
Tarpey	Michael J.	USACE, Civil Works Infrastructure
Turner	Lawrence	Dow Chemical Company
Turner	Ms. Renee N.	USACE, Mississippi Valley Division
Walker	Adam C.	USACE, Nashville District
Webb	Jeff	Cargill
Woodruff	W. Matthew	Kirby Corporation
Zea	Tracy	Waterways Council, Inc. (WCI)
		USACE = U.S. Army Corps of Engineers