Thanks,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 11, 2018 1:27 PM
To:
Cc: (b)(6)

(b)(6)

Subject: RE: Funding for Mobile Harbor

(b)(6),

All my funds for GRR are gone. I could use additional funds if there are still some. I was thinking a couple of weeks to wrap up the runs and report. Can we bump it to $20K to cover prepping for ADEM and EPA meeting? I have a feeling that that prepping for that will become higher priority once I have the draft done. If that isn't available I can use whatever is.

Thanks,
(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 11, 2018 8:12 AM
To: (b)(6)

(b)(6)

Cc: (b)(6)
Subject: Funding for Mobile Harbor

Gentlemen,

I wanted to touch bases with each of you on the status of your funding as you are preparing the modeling report. Do any of you need additional funds to finish that effort? We're in the process of setting up new labor numbers since we are now past the TSP milestone but (b)(6) (the PM) would like to pay for the preparation of the ERDC modeling report out of the funds we had to get us to the TSP (i.e., your current labor numbers). Please let me know if you have any funding needs (and how much) to finish the draft report so I can make sure you're taken care of.

Thanks,

(b)(6)

From:
To: (b)(6)
Cc:
Subject: RE: Mobile Harbor GRR Questions/Docs
Date: Friday, April 20, 2018 10:35:00 AM

Okay...works for me.

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 10:14 AM
To:
Cc: (b)(6)
Subject: [Non-DoD Source] RE: Mobile Harbor GRR Questions/Docs

Also, I am going to go ahead and make my reservations for being in Mobile on the 1st and 2nd

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 11:06 AM
To: (b)(6)
Cc:
Subject: RE: Mobile Harbor GRR Questions/Docs

Okay. Let's get me, you, and (b)(6) on the same page before going back to the port.

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 19, 2018 12:58 PM
To:
Cc: (b)(6)
Subject: [Non-DoD Source] RE: Mobile Harbor GRR Questions/Docs

This response has thrown us completely off track ... we were told they did not handle HW and have written everything accordingly ... I asked the question just to get the written confirmation ... that they did not handle HW ... we are revising the question now ... but this will require some serious reconsideration of a number of issues ... particularly transportation and the Africa-town Bridge issue

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 19, 2018 11:47 AM
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor GRR Questions/Docs

(b)(6) Attached are the 2012, 2016, and the 2017 refresh economic impact reports from Martin Associates. Please note the 2017 refresh is a supplemental report to 2016 but with updated volumes. Martin merely used the same methodologies in the 2016 report, but recalculated the numbers based on the uptick in FY2017 volumes.

First, yes the Port of Mobile handles hazardous material cargoes. But, please clarify your question as to "handle hazardous materials." Are you referring to hazardous material cargoes as regulated by 33 CFR and 49 CFR - USCG? Or some other federal list of Hazardous Materials? Further, are you referring to hazardous cargoes transiting in the channel? Lastly, if you are referring to hazardous cargoes in the channel, is this all hazardous cargo carrying vessels, or just deep draft ships? Please call me on this? (b)(6)

(b)(6)

-----Original Message-----
From (b)(6)
Sent: Thursday, April 19, 2018 8:32 AM
To:
Cc: (b)(6)
(b)(6)
Subject: Re: Mobile Harbor GRR Questions/Docs

(b)(6),

I can answer question 3. (b)(6) should be able to provide items 1 and 2. Can you give me the context of how question 3 was asked? It is extremely broad as worded.

(b)(6)
Sent from my iPad

> On Apr 19, 2018, at 7:39 AM, Newell, David P CIV CESAM CESAD (US) <David.P.Newell@usace.army.mil> wrote:
>
> (b)(6)
> Can you provide the following for the Mobile Harbor GRR Report?
> 1.) Martin & Associates Economic Report 2015 or later (the Port references this report in news releases)
> 2.) Alabama State Port Authority (ASPA) issued a report, "The Local and Regional Economic Impacts of the Port of Mobile" in 2012 that was referenced in the Mobile River Bridge Draft EIS.
> 3.) Verify that the port does not handle hazardous materials
>
>
>
>
>
>
>
(b)(6)

> [redacted]
>
>
>
>
>

From:
To: (b)(6)

Cc: DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Subject: Re: Chief meeting with SEN Shelby
Date: Sunday, April 22, 2018 9:09:06 PM

Okay. Latest we've been using is $2.5M total for PED.

Sent from my BlackBerry 10 smartphone.
Original Message
From: (b)(6)
Sent: Sunday, April 22, 2018 7:35 PM
To: (b)(6)
(b)(6)
Cc: DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Subject: FW: Chief meeting with SEN Shelby

Guys - Here are my recommended edits (in track changes) to the Mobile Harbor info paper in response to (b)(6) questions. Pls review/verify I've stated properly, in particular the part about how this satisfies the NFS's goals of wider/deeper at less than $400M. (b)(6), need to fill in the PED amount (I left it as $XM for PED). Will call in the AM before I fly. Thanks.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Sunday, April 22, 2018 4:35 PM
To: (b)(6)
(b)(6)
Subject: Fwd: Chief meeting with SEN Shelby

Fyi

From: (b)(6)
Date: April 22, 2018 at 2:28:06 PM PDT
To: (b)(6)
(b)(6)
Cc: (b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>, (b)(6)
(b)(6)
Subject: RE: Chief meeting with SEN Shelby

(b)(6) - I'll start to revise later when I can get on my computer. One nuance we need to clarify (b)(5)

(b)(5)

(b)(6)

From: (b)(6)
Date: April 22, 2018 at 1:00:12 PM PDT
To: (b)(6)

(b)(6)

Cc: (b)(6)
Subject: RE: Chief meeting with SEN Shelby

All- I can add some info from a call that occurred between SAM, SAD and HQUSACE in prep of a conference call conducted between HQUSACE and Shelby staff in January. Sen Shelby's staff asked if we had the authority to move seamlessly into PED once the Director's Report was submitted. That is scheduled to occur in May 2019. HQUSACE indicated that we do have the authority to move seamlessly into PED once the Director's Report is submitted, pending a PED funding decision which would be a new investment decision. Section 1003 of WRDA 14 allows the Secretary to proceed directly into PED in accordance with Section 910 of the Water Resources Development Act (WRDA) of 1986 if the Secretary determines that the project is justified and without substantial controversy (approval of the Directors Report) and subject to the availability of funding.

HQUSACE confirmed that a new start would not be required nor would additional authorization be required.

While none of this seems to have been put in writing, I confirmed my thoughts with (b)(6) and he remembers the events as I do. (b)(6) and (b)(6) participated in the calls as did (b)(6) and myself.

(b)(5)

Hope this helps!
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Sunday, April 22, 2018 3:40 PM
To: (b)(6)
(b)(6)
Cc: (b)(6)
(b)(6)
Subject: FW: Chief meeting with SEN Shelby

To All,

One correction to (b)(6) note - Senator Shelby asked why 49, why not make it an even 50 feet deep.

We will need to get this paper back to (b)(6) with any revisions as early as possible on Monday.

Best regards.

VR,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Sunday, April 22, 2018 3:17 PM
To: (b)(6)
(b)(6)
Cc: (b)(6)
(b)(6)
Subject: FW: Chief meeting with SEN Shelby

Gentlemen: The Chief is meeting with SEN Shelby on Wednesday - it was requested by the Corps as the Senator comes in as the new Chairman.

I have the attached Fact Sheet, which I modified a bit. I will verify that it is the intent to fully fund the GRR through to completion. I also believe we need a paragraph as to what he immediate next steps would be after the GRR was complete...for example, could the corps begin design while it was being reviewed? And, does it need to be approved by the ASACW, etc? From what I understand, it does not need new authorization. I am guessing it would not be a new start construction, but a new investment decision? Believe we need more info for the Chief before he goes in and meets with the Senator.

In the hearing last week, the chief mentioned 49 feet and SEN Shelby asked why not 49. I see that the TSP is 49...perhaps need a bit more info here too.

Finally, I think we should be prepared for the Chief to discuss the litigation? I see that the contributed funds agreement didn't come up in your meeting and I don't think we should offer info as we don't know what will

ultimately happen here? Thoughts. Do you have talking points the Chief could use in his meeting?

Do you think it would be helpful for the Chief to quickly speak to you all before the meeting?

I need info asap tomorrow on this as the meeting in Wednesday. THANKS so much. (b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 1:33 PM
To: (b)(6)
Cc: (b)(6)
Subject: FW: Chief meeting with SEN Shelby

(b)(6) - latest Mobile Harbor fact sheet -

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 10:00 AM
To: (b)(6)
Cc: (b)(6)
(b)(6)
Subject: FW: Chief meeting with SEN Shelby

(b)(6) - See attached for info on Mobile Harbor.

In January, SAD and SAM participated in a HQ call with Senator Shelby's office. (b)(6) and (b)(6) were on the call as well as (b)(6) and myself. The staffers were interested to know if we had authority to move seamlessly into PED once the Directors Report was submitted. This is to occur in May 2019. HQ staff informed them that we had the authority to do so, and that PED could start once a funding/new investment decision was made. The topic of whether a new start would be required came up. We remember that answer being no, that a new start would not be required, but that has not been provided to us in writing.

Let us know if you have any questions!
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 19, 2018 9:08 AM
To: (b)(6)
Subject: Fw: Chief meeting with SEN Shelby

(b)(6)

Have you seen this? Anything from (b)(6) We probably need to run something down if we do not have it already.

Thanks,

(b)(6)

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.
Original Message
From: (b)(6)
Sent: Thursday, April 19, 2018 5:26 AM
To: (b)(6)
Cc: (b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US); (b)(6)
(b)(6) Holland, Diana M BG USARMY CESAD (US)
Subject: FW: Chief meeting with SEN Shelby

(b)(6)

Please see the below note from Jennifer regarding a planned meeting between Senator Shelby and LTG Semonite on Wednesday, 25 April 2018. Please see the request for a paper that discusses a "very tight, concise story of where we are on Mobile Harbor GRR...funding needs, timeline, etc."

I assume that you are already working this.

Best regards.

VR,

(b)(6)

-----Original Message-----
From: Holland, Diana M BG USARMY CESAD (US)
Sent: Thursday, April 19, 2018 5:14 AM
To: (b)(6)
Subject: Fwd: Chief meeting with SEN Shelby

FYI...

_____

From: (b)(6)
Date: April 18, 2018 at 5:34:56 PM EDT
To: (b)(6)
Cc: Holland, Diana M BG USARMY CESAD (US) <Diana.M.Holland2@usace.army.mil>, (b)(6)
(b)(6)
Subject: Chief meeting with SEN Shelby

(b)(6) the Chief is meeting with SEN Shelby on Wednesday, 25 April. We need a very tight, concise story of where we are on Mobile Harbor GRR...funding needs, timeline, etc.

Can you please get that to me by Friday? I am happy to do the RAH documentation, but we need to have a very tight set of facts/talking points.

Thanks, (b)(6)

(b)(6)

From: (b)(6)
To:
Subject: FW: Mobile Harbor GRR - IEPR
Date: Monday, April 23, 2018 10:18:00 AM
Attachments: 2018-04-17 Mobile Harbor - Charge.docx

(b)(6): Do you know what Appendices we'll have in the report so that I can ask those folks approximately how many pages they will have?

I checked the main report and they were not shown yet.

From: (b)(6)
Sent: Tuesday, April 17, 2018 8:32 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Hi (b)(6)

I'm working on the Mobile Harbor IEPR docs and need your help on some items:

1. I need a page count of all the report docs so the OEO knows how much they'll be reviewing. Can you please fill out the table below (in html) and send back to me? Perfect accuracy isn't necessary, but I do suggest rounding up if you're not sure of the exact page count for a particular report/appendix.

Mobile Harbor GRR

June 12, 2018

Approximate Number of Pages

Draft Integrated GRR and SEIS

June 2018

300

Appendix A: Economics

June 2018

100

Appendix B: Real Estate

June 2018

50

Appendix C1: Hydrology & Hydraulics

June 2018

80

Appendix C2: Civil Design

June 2018

60

Appendix C3: Cost Engineering

June 2018

100

Appendix C4: Structural Engineering

June 2018

50

Appendix D: Environmental and Cultural Resources

June 2018

100

Public Comments

June 2018

50

Risk Register

June 2018

40

Total

930

2. What are the start/end dates for concurrent review? Also, what is the scheduled date of the ADM?

3. Attached is a draft Review Charge. We provide this to the Panel to help guide their review of the documents and to help ensure they're aware of unique situations or conditions of the study area, design, formulation, etc. The first 13 questions are standard so they won't change. The rest are study-specific but I don't have the background to develop them. Please take a stab at adding some additional questions to the Review Charge to help define its scope and send back to me. Please keep in mind questions for the required disciplines (planning, econ, env, H&H, and geotech) but limit questions to 30 or so max. Once I have that I can engage others as needed in case something needs to be added.

That's all for now. Please let me know if you have any questions,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 16, 2018 10:59 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Great, thanks, (b)(6) !

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 9:19 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR - IEPR

Thanks (b)(6)! With the Review Plan, Report Summary, and initial funds I believe I have everything I need to develop the PWS and IGE. I will need some help from you on the Charge, but we can get to that a little later. My goal is to have all docs ready to send to IWR in the next 10 days or so to give us time for their processing and contracting steps.

Once I have the IGE I'll need you to set up two MIPRs: one for the Panel contract cost and one for IWR admin fees. That will come shortly as well so just giving you a head's up.

Please let me know if you have any questions,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 8:05 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: Mobile Harbor GRR - IEPR

(b)(6)

Let me know what you need from us in order to get the IEPR for Mobile Harbor started. The anticipated start date is June 12, 2018.

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:53 AM

To: (b)(6)
(b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

Thanks, (b)(6)

(b)(6) Welcome to the team...we'll get the funds set up shortly.

-----Original Message-----

From (b)(6)

Sent: Thursday, March 22, 2018 8:46 AM

To:

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

David,

(b)(6) (MVN) will serve as the ATR Lead for subject study (cc'd on this email). Following is his CEFMS information. I believe he is available to call into the TSP meeting next week; I will forward him the invite. For ATR Lead of Draft Report review, he will receive $4K (then $4K again for final ATR). His participation in the TSP and any other meetings (ADM, other?) will be at additional cost. Accordingly, would suggest going ahead and funding his efforts as ATR lead plus participation in next week's meeting (1/2 day's funding for the TSP milestone meeting plus getting up to speed on read aheads) or $4,500 total at this time. Please let me know if you have any questions or need additional information at this time. Thanks! (b)(6)

DISCIPLINE

LAST NAME

FIRST NAME

PHONE

Email

Division

CEFMS ORG CODE

TECH POC

TECH PHONE

FINANCIAL POC

FINANCIAL PHONE

ATR Lead

CEMVN

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, March 5, 2018 7:45 AM

To:

Cc: (b)(6)

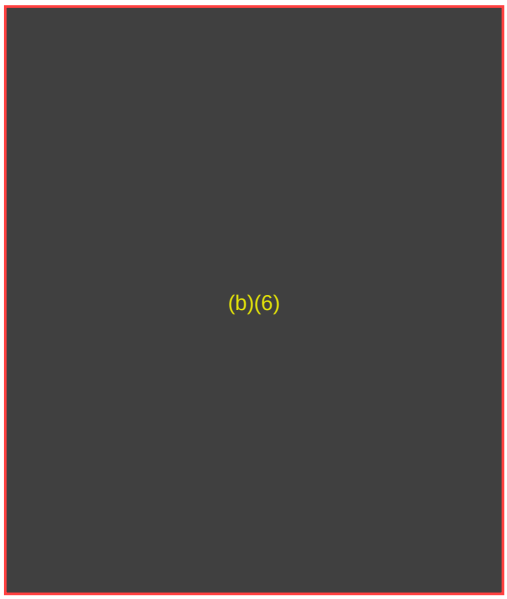
Subject: FW: Mobile Harbor GRR

(b)(6) : Please create labor numbers specifically for (b)(6) as follows:

Mobile Harbor GRR ATR: $4,000

Mobile Harbor GRR IEPR: $5,000

(b)(6)



-----Original Message-----

From: (b)(6)

Sent: Monday, February 26, 2018 8:36 AM

To: (b)(6)

Cc (b)(6)

(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

I tried to summarize below. Please let me know if you have any questions.

TSP. Since much time has evolved since ATR lead activity occurred, I will need to replace the prior lead. At one point it was (b)(6) He's moved to a MSC position. Accordingly, that effort will begin as soon as funding is provided (see funding amount below...included with Draft Report ATR funding requirements).

Draft Report ATR. ATR of the draft report will occur after DQC is complete (assuming ATR start date of 12 June per below). A complete copy of the DQC comment response report and report revisions resulting from DQC will be required/provided to the ATR team prior to initiation of ATR. Typically I recommend that PDTs assume 45 days for ATR of the draft report (from start to completion - completion is when the ATR report and certification are sent from me to the PDT leads). Typically, we estimate $5K/reviewer for the Draft report ATR + $4,000 for the ATR lead + $4,000 for the DDNPCX Review Management Organization (RMO) (i.e., for me to form teams, coordinate scope, etc.). FYSA, ATR lead participation in milestone meetings, etc. is at an additional cost. After I identify the ATR lead, I'll have that person coordinate with you to provide their funding requirements for that meeting.

IEPR. Panel review would begin at same time as vertical/atr/public review of the draft report. Contract cost is running between $40-$70K, depending upon project/scope (the contract cost is 100% Federal cost and doesn't count against $3 million 3x3). DDNPCX RMO total costs average $22-27K, COR $4K, and IWR admin fee 6% of contract value (these costs are cost shared). Initial efforts for me to begin work on the scope, IGE, etc. is $5K. Once we complete the scoping phase and the contract is awarded, I will provide my detailed cost estimate for my efforts during the execution phase of the contract ($17-22K).

When funding is provided for DDNPCX RMO (for me), it is requested that separate labor numbers be provided for my ATR and IEPR activities. The line item on each charge labor code should identify the project name and the RMO efforts to be covered by those labor funds (e.g., Mobile Harbor RMO Draft Report ATR). By doing so, it enables the DDNPCX to track funding and project reporting metrics. Please go ahead and set up funds for me to begin ATR and IEPR activities ($4K and $5K, respectively).

CEFMS ORG CODE: [redacted]

Amount: dependent upon activity (as noted above) Financial POC: [redacted] Technical POC: [redacted] Line item description: (as noted above)

Please send me a copy of the SAD approved Review Plan for my use in developing scoping documents/identifying ATR team. Please let me know if you have any questions.

Thanks,

[redacted]

-----Original Message-----

From: [redacted]

Sent: Wednesday, February 21, 2018 10:35 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

The TSP for Mobile Harbor is coming up March 28. Do we need to get ATR or IEPR teams started yet? We are scheduled for Public Release and ATR Review June 12.

(b)(6)

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, October 11, 2017 7:11 AM

To: (b)(6)

Subject: RE: Mobile Harbor GRR

I am. I'd suggest getting back with me after the first of the year about both. We won't need to start the contracting process for IEPR until February/March. Likewise, for the ATR team, I probably won't start lining things up until Spring as workload tends to change. Lastly, when is your TSP Milestone Meeting planned? I assume you'll want the ATR team lead available for it. I don't recall off hand who that was but will ensure they're available once the date is confirmed.

Thanks for the heads up!

(b)(6)

DDNPCX Review Manager

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, October 10, 2017 2:43 PM

To: (b)(6)

Subject: Mobile Harbor GRR

(b)(6),

We are planning to send out the Mobile Harbor GRR for ATR and IEPR Review in July 2018. Wanted to make sure that we have the people lined up and the contracts in place well in advance. Are you the right person to talk to about this?

MATAGORDA SHIP CHANNEL, TEXAS
SECTION 216 – REVIEW OF COMPLETED PROJECTS
DRAFT INTEGRATED FEASIBILITY REPORT AND
ENVIRONMENTAL IMPACT STATEMENT
GALVESTON DISTRICT

INDEPENDENT EXTERNAL PEER REVIEW
REVIEW CHARGE

The following Review Charge to Reviewers outlines the objectives of the Independent External Peer Review (IEPR) for the subject study and identifies specific items for consideration for the IEPR Review Panel.

The objective of the IEPR is to obtain an independent evaluation of whether the interpretations of analysis and conclusions based on analysis are reasonable for the subject study. The IEPR Review Panel is requested to offer a broad evaluation of the overall study decision document in addition to addressing the specific technical and scientific questions included in the Review Charge. The Review Panel has the flexibility to bring important issues to the attention of decision makers, including positive feedback or issues outside those specific areas outlined in the Review Charge. The Review Panel can use all available information to determine what scientific and technical issues related to the decision document may be important to raise to decision makers. This includes comments received from agencies and the public as part of the public review process.

The Panel review is to focus on scientific and technical matters, leaving policy determinations for USACE and the Army. The Panel should not make recommendations on whether a particular alternative should be implemented or present findings that become “directives” in that they call for modifications or additional studies or suggest new conclusions and recommendations. In such circumstances the Review Panel would have assumed the role of advisors as well as reviewers, thus introducing bias and potential conflict in their ability to provide objective review.

Panel review comments are to be structured to fully communicate the Panel’s intent by including the comment, why it is important, any potential consequences of failure to address, and suggestions on how to address the comment. The IEPR Performance Work Statement (PWS) provides additional details on how comments should be structured.

The Review Panel is asked to consider the following items as part of its review of the decision document and supporting materials.

Broad Evaluation Review Charge Questions

1. Is the need for and intent of the decision document clear?

2. Does the decision document adequately address the stated need and intent relative to scientific and technical issues?

Given the need for and intent of the decision document, assess the adequacy and acceptability of the following:

3. Project evaluation data used in the study analyses;
4. Economic, environmental, and engineering assumptions that underlie the study analyses;
5. Economic, environmental, and engineering methodologies, analyses, and projections;
6. Models used in the evaluation of existing and future without-project conditions and of economic or environmental impacts of alternatives;
7. Methods for integrating risk and uncertainty;
8. Formulation of alternative plans and the range of alternative plans considered;
9. Quality and quantity of the surveys, investigations, and engineering sufficient for conceptual design of alternative plans, and;
10. Overall assessment of significant environmental impacts and any biological analyses.

Further,

11. Evaluate whether the interpretations of analysis and the conclusions based on analysis are reasonable, and;
12. Assess the considered and tentatively selected alternatives from the perspective of systems, including systemic aspects being considered from a temporal perspective, including the potential effects of climate change.
13. Does information or do concerns provided in the public comments raise any additional discipline-specific technical concerns with regard to the overall report?

Specific Technical and Scientific Review Charge Questions

14. Given strong currents (up to 6 knots in the channel and a 4 knot cross current in the Bay), were assessments of vessel operations and navigation adequate?
15. Did the measures/alternatives considered adequately address the offshore bar that forms in the channel (i.e., as a result of the large shoal)?
16. Were the geotechnical and dredged material management plan (DMMP) analyses and conclusions reasonable considering the following:
    a. All work was performed based on existing data; therefore, additional field studies, such as soil borings, may be required in Preconstruction, Engineering, and Design phase if sufficient data is not be available for the final design. Existing data is old, less technically precise, and could contain errors, and scattered across the projected area.

b. Between boring locations in the existing information, it was assumed that depths of material layers changed linearly. In some locations, the boring logs did not show vertically for the depths extending fully to the bottom of the proposed channel. In these instances, it was assumed that the last shown material layer continued to the proposed depth. In areas where there was laterally limited information, it was assumed that the soil conditions were similar to the closest available boring log.
c. DMMPs had been established previously in the Final Environmental Impact Statement for USACE dated 2009 and Section 204(f) Feasibility Report for Calhoun Port Authority (CPA), dated 2014. However, all mitigation sites in these DMMPs contained a logistical issue associated with the areas to be dredged compared with non-mitigation sites and resulted in increased project costs. The new low cost plan was developed with the idea of eliminating the mitigation sites and rearranging the dredge materials from the mitigation sites to the new placement areas.
d. The potential (or candidate) unconfined placement areas were proposed to accept additional new work or maintenance material should the placement areas (ER3/D, P1, and Sundown Island) have insufficient capacities to receive the dredged material estimated. These potential unconfined placement areas consist of PA 14 to PA 16, NP 4 to NP 6, and NP 7 for new work materials and PA 14 to PA 16, OP 8 to OP 10, and OP 7 for maintenance materials, respectively.
e. The northern part of PA ER3/D was excavated during initial remedial activities at Lavaca Bay Superfund Site prior to the establishment of the remedial action objectives. Sediments on this PA are impacted by mercury with concentrations above the Lavaca Bay Superfund Record of Decision sediment remedial action objective (RAO). Dredged sediments will be placed over the area to cover the impacted sediment. Several measures will be employed to remove or reduce the potential disturbance of mercury-impacted sediment.

From:
To: (b)(6)
Cc:
Subject: FW: Reconvening of Mobile Harbor GRR Environmental Focus Group Meeting - 11 May 2018
Date: Monday, April 23, 2018 8:32:00 AM

(b)(6) Per discussion, the Environmental NGO Focus Group Meeting will be held May 11, 2018 at 1300hrs in the Planning Division Conference Room.

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 17, 2018 1:20 PM
To: (b)(6)

(b)(6)

Cc: (b)(6)

(b)(6)

Subject: Reconvening of Mobile Harbor GRR Environmental Focus Group Meeting - 11 May 2018

The U.S. Army Corps of Engineers (USACE), Mobile District is reconvening an environmental focus group meeting and requesting your participation for the Mobile Harbor General Reevaluation Report regarding the potential deepening and widening of the Mobile Harbor navigation channel. The meeting will be held at the Mobile District Office, 109 St. Joseph Street, Mobile, Alabama 36602, on Friday, 11th at 1:00 PM central. The meeting will focus on and provide the opportunity for those involved in environmental activities associated with Mobile Bay and its connected watersheds to hear about updated environmental evaluations that have been conducted as part of the study and to provide your comments and concerns related to potential impacts of the project. Members of the project team will be on hand to discuss and answer questions related to the proposed project. This meeting provides the opportunity for organizations such as yours to share comments and concerns that will be considered in the preparation of the Supplemental Environmental Impact Statement. Due to a limited capacity of the meeting room, we are asking that only one representative from your organization be in attendance. Please respond to let us know if your organization will be represented. For more information, on the proposed Mobile Harbor Federal Navigation Channel project, visit http://www.sam.usace.army.mil/.

Thank you and looking forward to meeting with you.

(b)(6)

(b)(6)

(b)(6)

From: (b)(6)
To:
Subject: FW: Benefits curve for Mobile Harbor
Date: Tuesday, April 24, 2018 2:04:00 PM
Attachments: Copy of Mobile Harbor Benefits Costs.xlsx

I assumed you prepared this table...

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 1:24 PM
To: (b)(6)
(b)(6)
Subject: FW: Benefits curve for Mobile Harbor

FYI

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 12:31 PM
To: (b)(6)
(b)(6)
Subject: RE: Benefits curve for Mobile Harbor

The numbers provided from 2017 are just deepening benefits. At that time we were optimizing depth before analyzing the width.

The April 2018 numbers are both. To determine the 49 foot alternative with the widener, you would need to add the two numbers together.

I added another table to the top of the spreadsheet that has both included. Also, I noticed an error in the previous document. I graphed deepening benefits instead of net benefits. That has been corrected.

(b)(6)

-----Original Message-----
From: (b)(6)

Sent: Tuesday, April 24, 2018 11:54 AM
To: (b)(6)
(b)(6)
Subject: RE: Benefits curve for Mobile Harbor

(b)(6) do these include numbers include the widener or just deepening? Thanks.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 10:18 AM
To:
Cc: (b)(6)
Subject: RE: Benefits curve for Mobile Harbor

Attached are the benefit/cost numbers for Mobile Harbor. The plan that maximizes net benefits is a 51 foot channel depth. I believe the Port has chosen 49 foot plan as the LPP due to financial constraints. Mobile can provide more detail.

The spreadsheet includes two graphs. The top is the latest numbers as of April 2017. The bottom graph provides the numbers that were used to screen out the 52 foot alternative but you can see 51 is where the net benefits begins to decline.

Let me know if you have any questions,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 9:38 AM
To:
Cc: (b)(6)
Subject: Benefits curve for Mobile Harbor

(b)(6),

Please send me the benefits curve and corresponding depths for Mobile Harbor. I am hearing that Senator Shelby is asking why not 50 feet versus 49'.

Thanks,

(b)(6)

(b)(6)


(b)(6)

Total Benefits - April 2018

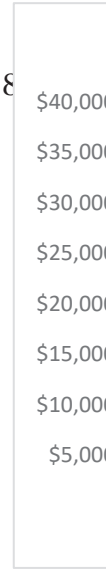
	47	48
Total Benefits	$ 22,004,000	$ 32,578,500
Total Costs	$ 8,128,800	$ 11,247,200
Net Benefits	$ 13,875,200	$ 21,331,300
BCR	2.7	2.9

April 2018
2.75% discount rate

	Deepening	
	47	48
Deepening Benefits	$ 21,316,000	$ 31,890,500
Deepening Costs	$ 7,626,000	$ 10,687,000
Deepening Net Benefits	$ 13,690,000	$ 21,203,500
BCR	2.8	3.0

3 Mile results	500' widening @47'	500' widening @48'
AAE BENEFITS	$ 688,000	$ 688,000
AAE COSTS	$ 502,800	$ 560,200
NET BENEFITS	$ 185,200	$ 127,800
BCR	1.37	1.23

Alternative Depth	Deepening Benefits - April 2018
47	$ 13,690,000
48	$ 21,203,500
49	$ 28,717,000
50	$ 33,967,000
51	$ 37,761,000



Preliminary Runs - 2017

	47’	48’
Total Annual benefits*	$ 22.0M	$ 32.6M
Ann. Cost*	$ 7.6M	$ 10.7M
Net Benefits	$ 14.4M	$ 21.9M
BCR*	2.89	3.05

Alternative Depth	Deepening Benefits - 2017
47	$ 14,400,000
48	$ 21,900,000
49	$ 29,400,000
50	$ 34,400,000
51	$ 35,500,000
52	$ 33,100,000

49	50	51
$ 43,153,000	$ 51,535,000	$ 59,229,000
$ 14,379,200	$ 17,601,800	$ 21,468,000
$ 28,773,800	$ 33,933,200	$ 37,761,000
3.0	2.9	2.8

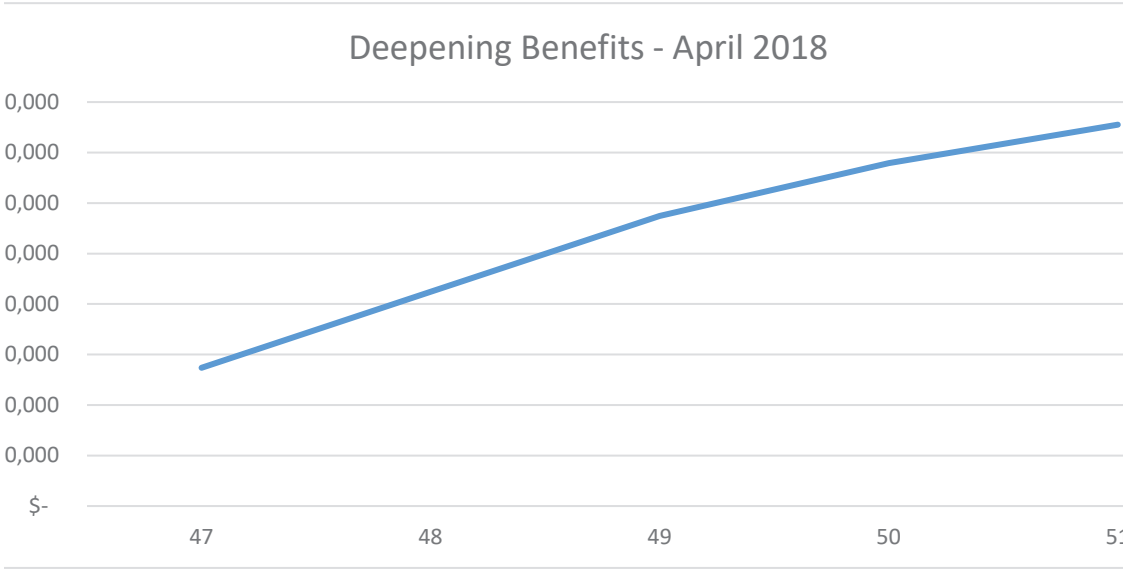
does not include wid

Alternative D

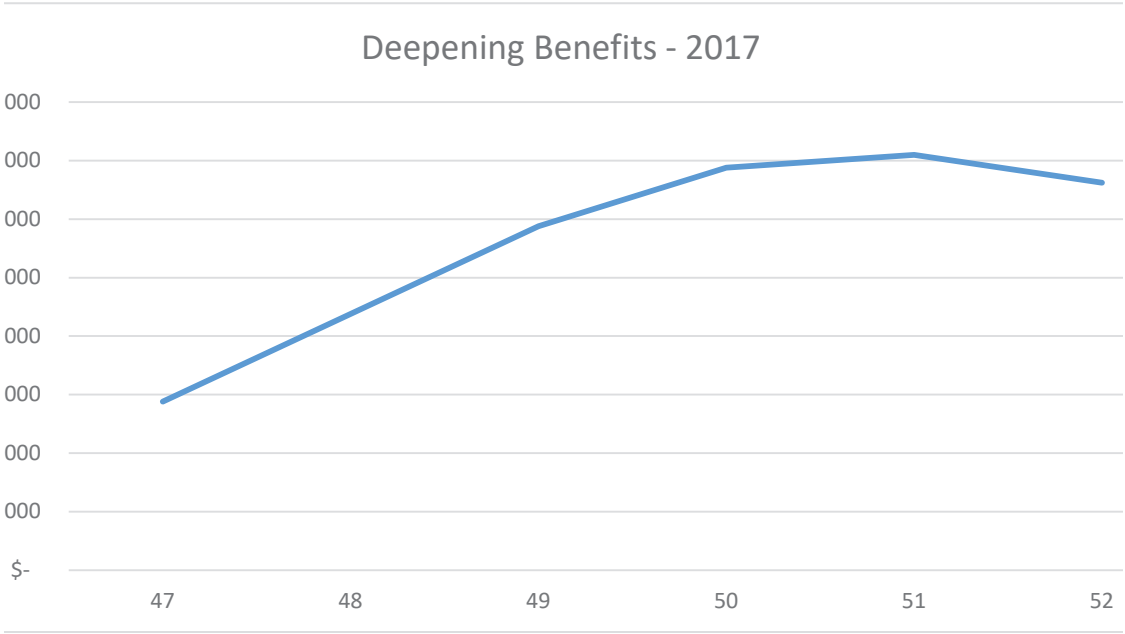
47
48
49
50
51

49	50	51
$ 42,465,000	$ 50,847,000	$ 59,229,000
$ 13,748,000	$ 16,880,000	$ 21,468,000
$ 28,717,000	$ 33,967,000	$ 37,761,000
3.1	3.0	2.8

500' widening @49'	500' widening @50'
$ 688,000	$ 688,000
$ 631,200	$ 721,800
$ 56,800	$ (33,800)
1.09	0.95

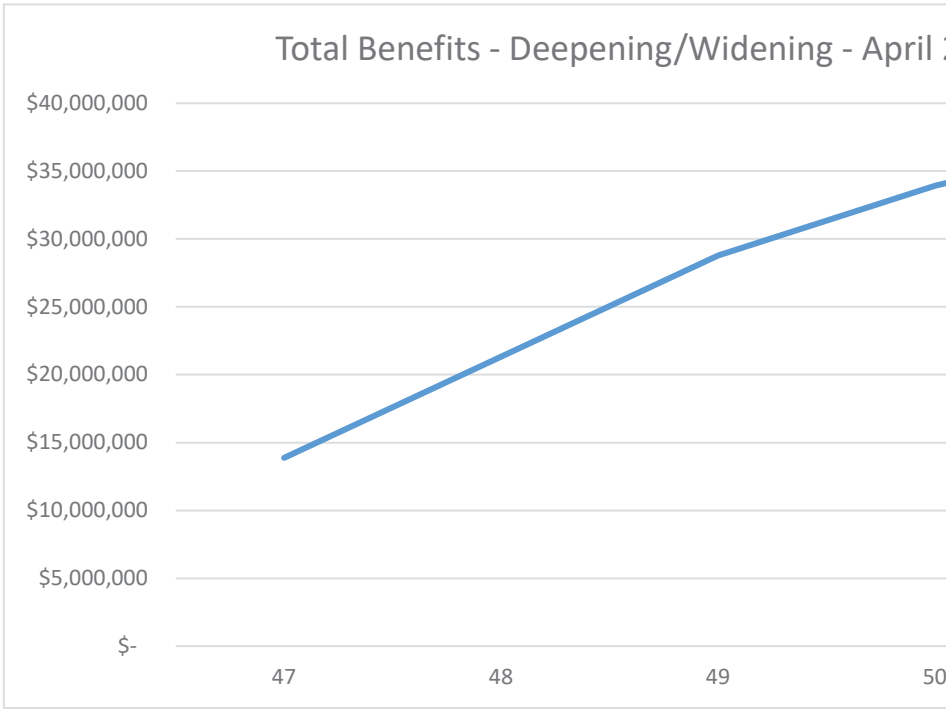


49’	50’	51’	52’
$ 43.2M	$ 51.4M	$ 57.2M	$ 60.5M
$ 13.8M	$ 17.0M	$ 21.7M	$27.40
$ 29.4M	$ 34.4M	$ 35.5M	$ 33.1M
3.13	3.02	2.64	2.21



lening benefits

Total Benefits - Deepening/Widening - April 2018	
$	13,875,200
$	21,331,300
$	28,773,800
$	33,933,200
$	37,761,000



1

From:
To: (b)(6)
Cc:
Subject: FW: Mobile Harbor Cost Share
Date: Tuesday, April 24, 2018 10:10:00 AM
Attachments: CostShare523 20 APR 2018.pdf

(b)(6) : Just making sure that you received the attached Cost Share update. We're still locked out right now.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 8:15 AM
To:
Cc: (b)(6)
Subject:

(b)(6): Good morning. Please see attached Mobile Harbor Cost Share.

(b)(6)

US ARMY CORPS OF ENGINEERS

CEFMS COST SHARE CONTROL RECORD CHANGE REQUEST

DATE: 20 APR 2018

CEFMS COST SHARE CONTROL NO: 523

PROJECT: Mobile Harbor

PPA%: FEDERAL 76 NON-FEDERAL 24

CURRENT SECTION 902 LIMIT (if applicable):

CHANGES TO COST SHARE CONTROL RECORD:

(Complete applicable areas)

	FROM	TO	
PROJECT EST END DATE	08 Nov 2016	04 Nov 2019	
TOTAL EST SHARED PROJECT COST	$7,800,000	$7,800,000	
FEDERAL AMOUNT	$5,930,000	$5,930,000	76%
SPONSOR CASH AMOUNT	$1,870,000	$1,870,000	24%
SPONSOR IN-KIND ESTIMATE			
SPONSOR LERRD ESTIMATE			
PROJECT MANAGER	David P. Newell		

REASON FOR CHANGE:

No changes

ATTACHMENTS:

DOCUMENTATION TO SUPPORT CHANGE:

- ❑ Letter or email to sponsor
- ❑ Letter or email from sponsor showing concurrence with change
- ❑ Amended Agreement
- ❑ Revised Project Management Plan (PMP), Jointly signed
- ❑ Composite Rate Worksheet, Jointly signed
- ❑ Project Cost Estimate, Jointly signed

APPROVAL SIGNATURES AND DATE:

PROJECT MANAGER _____ Date _____

CSCM _____ Date _____

From: (b)(6)
To:
Cc:
Subject: FW: Mobile Harbor GRR Placemat
Date: Tuesday, April 24, 2018 12:48:00 PM
Attachments: Mobile Harbor Placemat_pft6Mar.pptx
Mobile Harbor Handout ver6.pptx

(b)(6),
Per this morning's discussion. Do you have a placemat format preference? Attached are the two most recent examples.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, March 06, 2017 4:41 PM
To: DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>
Cc: (b)(6)
(b)(6)
Subject: FW: Mobile Harbor GRR Placemat

I made a couple of changes in the project description portion of the placemat.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Thursday, March 02, 2017 10:18 AM
To:
Cc: (b)(6)
Subject: Mobile Harbor GRR Placemat

(b)(6),

The PDT made a few changes.
* Moved Ship Sim to FY18 on chart (financial reasons).
* Switched the order of IPRs and Public Meetings. (Icons at bottom; SAD suggestion)
* Took out public meetings after ADM.
* Moved geotech eval to before TSP on chart

* Added dates to last two economics tasks (top right)
* Updated last two engineering tasks
* Moved sediment testing to FY18 (fall)

I have included COL DeLapp's first cut and the teams update.

Thanks,

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

The US Army Corps of Engineers is conducting a study to determine the feasibility of enlarging the size of the channel leading to and from port facilities located in Mobile Bay. The non-federal sponsor is the Alabama State Port Authority. In 1986, Congress authorized various modifications to Mobile Harbor including deepening and widening the majority of the channel to 55 feet deep and 550 feet wide. It is anticipated that the GRR will be a 4 year, $7.8M effort. Along with the GRR, Mobile District will prepare an integrated Supplemental Environmental Impact Statement (SEIS).

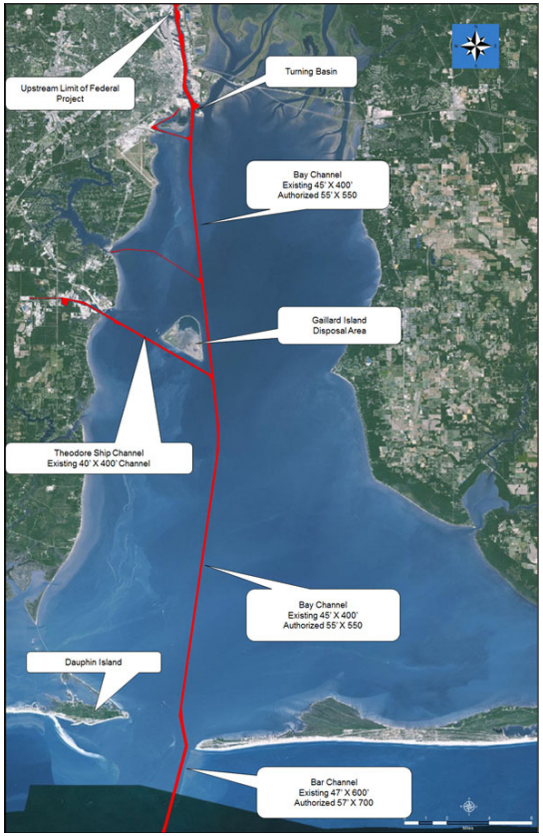
FOCUSED ARRAY OF ALTERNATIVES

- ❑ Depths from 47 to 53 feet (49 to 55 feet in Entrance Channel)
- ❑ Widths of 500 and 550 feet (Bay Channel)
- ❑ Bend easing (upper Bar Channel)
- ❑ Lengths of widening of 5, 10, and 15 miles

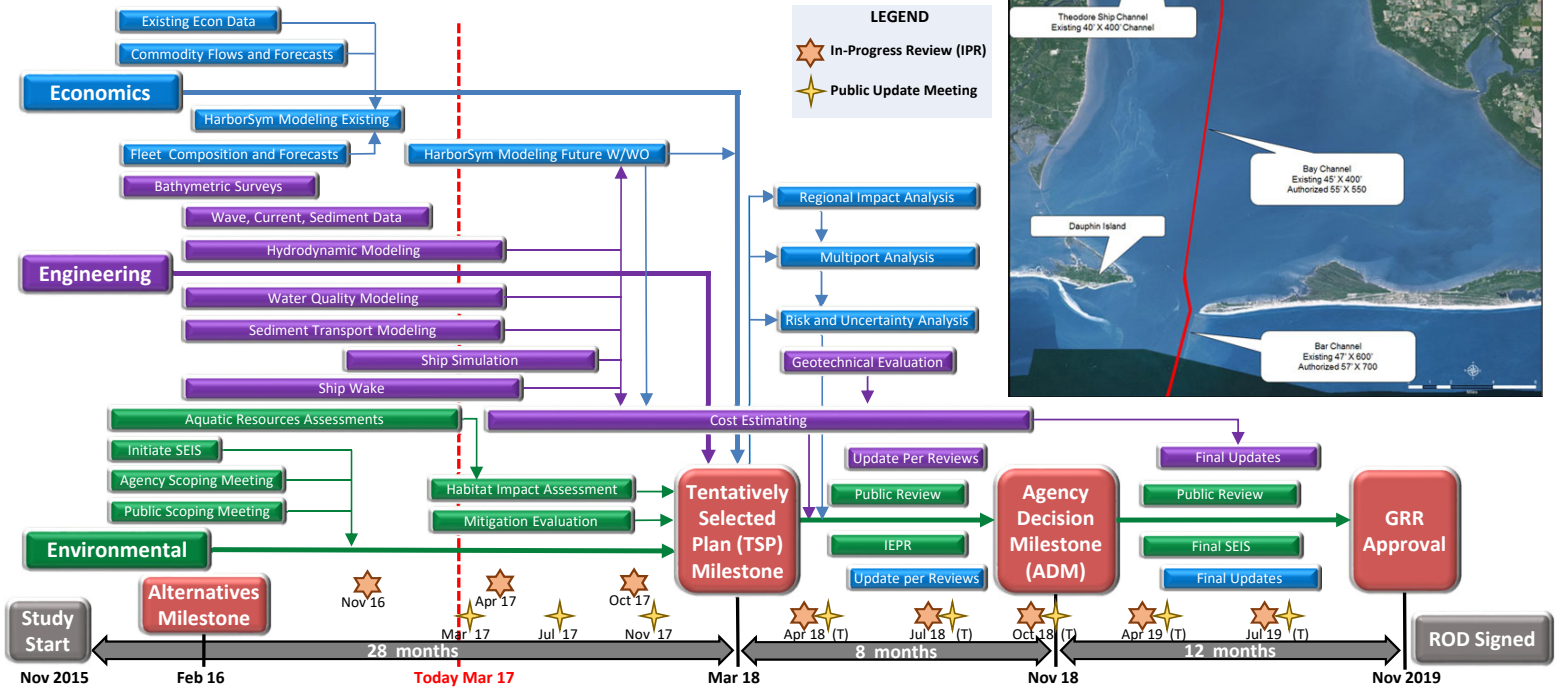
FUNDING STATUS (Federal)

	FY16	FY17	FY18	FY19	FY20	TOTAL
Scheduled	$1.1M	$2.1M	$1.7M	$684K	$253K	$5.9M
Requested	$2.1M	$1.2M	$1.7M	$830K	-	$5.9M
Appropriated	$2.1M	$1.2M	TBD	TBD	Assume Carry-in	
Carry-in		$948K				

MOBILE BAY AREA OF INTEREST



SCHEDULE & MAJOR MILESTONES



MAJOR TASK STATUS

ECONOMICS

- ☑ Identify the economic study area
- ☑ Gather economic and demographic data Commodity forecast complete
- ☑ Vessel fleet forecast lower harbor
- ❑ Vessel fleet forecast for up river terminals
- ☐ Complete HarborSym modeling runs

ENGINEERING

- ☑ Bathymetric surveys complete
- ☑ Aug 16 Ship simulation started
- ☐ Feb 17 Existing conditions model development 90% complete for hydrodynamics
- ☐ May 16 Deploy wave gauges - remove Mar 17
- ☐ Mar 17 Existing conditions model 50% complete for water quality
- ☐ Mar 17 Existing conditions model development 50% complete for sediment transport
- ☐ Apr 17 Ship Wake Study characterization of existing conditions 45% complete

ENVIRONMENTAL

- ☑ Notice of Intent (NOI) published in Federal Register
- ☑ May 16 and Jan 17 Agency BU sub-group meeting
- ☑ USFWS funded for FWCA Report
- ☑ Oct 16 Late summer aquatic resources data collection & field verifications completed
- ☑ Initial Screening BU options
- ☑ Initiate environmental justice, air quality, & noise
- ☐ Mar/Sep 16 Public and Agency scoping meetings – (ongoing)
- ☐ Spring 17 Fish and Benthic Sampling
- ☐ Summer 17 Sediment Testing
- ☐ Sep 17 Habitat impact assessments & mitigation evaluation
- ☐ Biological Assessments/Endangered Species Coordination

REAL ESTATE

- ☑ Review NOAA charts, permits, and documents to determine property and utility ownerships/location
- ☑ REMIS entries completed

US Army Corps of Engineers

U.S.ARMY

US Army Corps of Engineers®
Mobile District

MOBILE HARBOR, AL

History

The navigation channel dredging in Mobile Bay and Mobile River began in 1826 with the enactment of the River and Harbor Act of 1826. Since that time, there have been various modifications, to where currently, the majority of the bay channel is 45 feet deep and 400 feet wide. Improvements to the channel have been authorized by Congress as being in the National interest. Improvements were requested by area business interests and local governmental bodies. In 1922, the Alabama legislature authorized the construction of the Alabama State Docks.

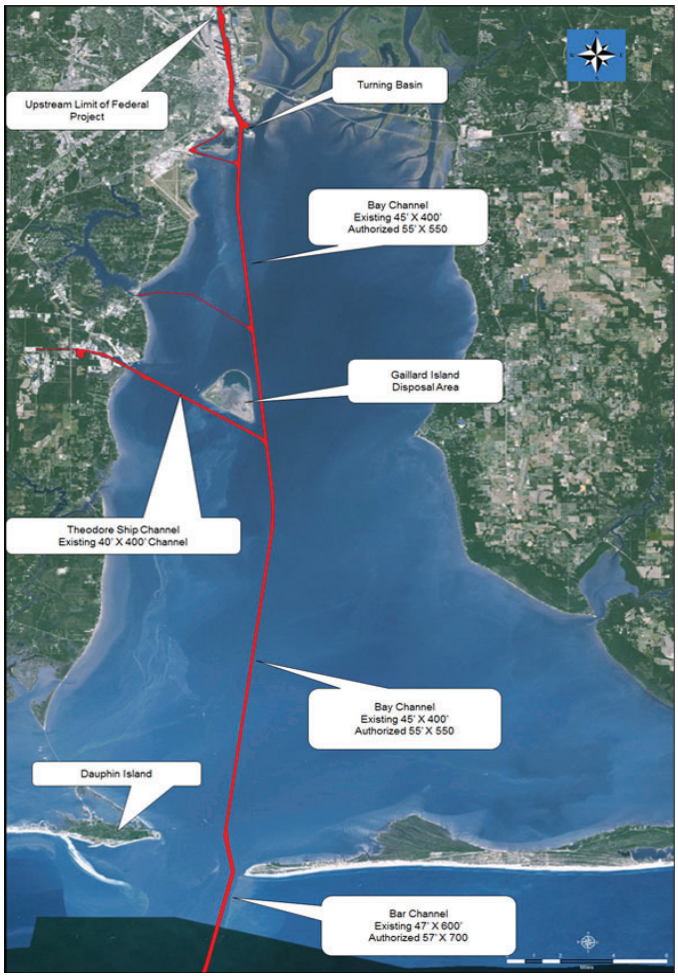
Source: Google Earth

Partnership

The Water Resource Development Act of 1986 resulted in two major items for Mobile Harbor:

1. The dimension of majority of the channel from south of the tunnels was authorized to 55 feet deep and 550 feet wide.
2. Cost sharing was required for Federal water resource projects.

Improvements to the harbor since 1986 have required a cost share sponsor (The State of Alabama / Alabama State Port Authority).



Maintenance

The current channel for Mobile Harbor consists of a 45 foot deep by 400 foot wide bay channel running from one mile south of the tunnels to the mouth of the bay and a 40 foot deep channel for the upper harbor to the Cochran-Africatown Bridge. Maintaining these channel dimensions is a significant task. Over the life of the project, the corps has removed:

120 million CY (estimated) for construction
About $100 million

Current Annual Quantities and Costs:
5.5 million CY for annual dredging
$15.5 million

US Army Corps of Engineers®
Mobile District

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

General

In June 2014, the Alabama State Port Authority (ASPA) submitted a request to the U.S. Army Corps of Engineers to consider increasing the depth and width of the Mobile Harbor Channel to dimensions authorized by the 1986 Water Resources Development Act (WRDA).

The authorized dimensions for the majority of the channel were set at 55 ft. deep and 550 ft. wide. The current dimensions of the majority of the channel are 45 ft. deep and 400 ft. wide.

The GRR study began in late 2015 and is a four-year, $7.8 million effort that is cost-shared with the ASPA. The results of the study will be documented in a GRR and released to the public.

Along with the GRR, an integrated Supplemental Environmental Impact Statement (SEIS) will be developed. The SEIS will define the current environmental conditions and compare them with the environmental effects of any proposed action and its alternatives. The SEIS will identify potential consequences and the mitigation needed to minimize adverse impacts.

Ships passing Middle Bay Lighthouse during data collection
Source: US Army Corps of Engineers

Improvements Being Considered

Depths: from 47 to 53 feet

(49 to 55 feet in Entrance Channel)

Widths: 500 and 550 feet (Bay Channel)

Bend easing: Upper Bar Channel

Lengths: Widening up to 5 miles

Need for Study

For this analysis, we have identified three problems specific to the requested navigation improvements.

1. Larger-size vessels experience transit delays due to existing width of channel.
2. Existing channel depths limit vessel-cargo capacity.
3. Existing traffic congestion has increased safety concerns.

Study Considerations

The study includes a significant amount of information gathering, data collection and modeling to help better understand the potential costs, benefits and environmental impacts of any proposed action. A number of models have been identified for use in this study to forecast future conditions and assist in the evaluation and comparison of alternatives. These models will be used for economic projections and assessment, engineering design and assessment, and environmental characterization and impact assessment.

From:
To: (b)(6)
Cc:
Subject: Mobile Harbor GRR - IEPR Page Counts
Date: Tuesday, April 24, 2018 9:54:00 AM

Team, For development of the IEPR Scope of Work, we need an approximate page count for the main report and each of the appendices. Please provide an approximate page count for the following:

Main Report (GRR and SEIS) - (everyone)
A Engineering ((b)(6))
B Geotechnical ((b)(6))
C Economics ((b)(6))
D Cost Engineering ((b)(6))
E Real Estate ((b)(6))
F Environmental ((b)(6))

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 9:29 PM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

(b)(6),

If you look on the "N" drive in the Mobile Harbor folder you'll see a subfolder titled Appendices. In that folder you will find the initial Engineering Appendix plus placeholders for Economics, Environmental, and Real Estate. Not sure if we need anything additional but Charleston had the following structure.

A Engineering
B Geotechnical
C Economics
D Cost Engineering
E Real Estate

Not sure if we want to follow this or not or even the hierarchy. Part of me thinks that the geotec and cost could be sections in the engineering appendix. Environmental was a separate volume for the Charleston study starting with the letter "F".

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 10:18 AM

To: (b)(6)
Subject: FW: Mobile Harbor GRR - IEPR

(b)(6): Do you know what Appendices we'll have in the report so that I can ask those folks approximately how many pages they will have?

I checked the main report and they were not shown yet.

From: (b)(6)
Sent: Tuesday, April 17, 2018 8:32 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Hi (b)(6),

I'm working on the Mobile Harbor IEPR docs and need your help on some items:

1. I need a page count of all the report docs so the OEO knows how much they'll be reviewing. Can you please fill out the table below (in html) and send back to me? Perfect accuracy isn't necessary, but I do suggest rounding up if you're not sure of the exact page count for a particular report/appendix.

Mobile Harbor GRR

June 12, 2018

Approximate Number of Pages

Draft Integrated GRR and SEIS

June 2018

300

Appendix A: Economics

June 2018

100

Appendix B: Real Estate

June 2018

50

Appendix C1: Hydrology & Hydraulics

June 2018

80

Appendix C2: Civil Design

June 2018

60

Appendix C3: Cost Engineering

June 2018

100

Appendix C4: Structural Engineering

June 2018

50

Appendix D: Environmental and Cultural Resources

June 2018

100

Public Comments

June 2018

50

Risk Register

June 2018

40

Total

930

2. What are the start/end dates for concurrent review? Also, what is the scheduled date of the ADM?

3. Attached is a draft Review Charge. We provide this to the Panel to help guide their review of the documents and to help ensure they're aware of unique situations or conditions of the study area, design, formulation, etc. The first 13 questions are standard so they won't change. The rest are study-specific but I don't have the background to develop them. Please take a stab at adding some additional questions to the Review Charge to help define its scope

and send back to me. Please keep in mind questions for the required disciplines (planning, econ, env, H&H, and geotech) but limit questions to 30 or so max. Once I have that I can engage others as needed in case something needs to be added.

That's all for now. Please let me know if you have any questions,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 16, 2018 10:59 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Great, thanks, (b)(6) !

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 9:19 AM

To: (b)(6)

Cc: (b)(6)

(b)(6)

Subject: RE: Mobile Harbor GRR - IEPR

Thanks (b)(6) ! With the Review Plan, Report Summary, and initial funds I believe I have everything I need to develop the PWS and IGE. I will need some help from you on the Charge, but we can get to that a little later. My goal is to have all docs ready to send to IWR in the next 10 days or so to give us time for their processing and contracting steps.

Once I have the IGE I'll need you to set up two MIPRs: one for the Panel contract cost and one for IWR admin fees. That will come shortly as well so just giving you a head's up.

Please let me know if you have any questions,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 8:05 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: Mobile Harbor GRR - IEPR

(b)(6) ,

Let me know what you need from us in order to get the IEPR for Mobile Harbor started. The anticipated start date is June 12, 2018.

(b)(6)

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:53 AM

To: (b)(6)
(b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

Thanks, (b)(6)!

(b)(6), Welcome to the team...we'll get the funds set up shortly.

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:46 AM

To: (b)(6)

Cc:

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

(b)(6),

(b)(6) (MVN) will serve as the ATR Lead for subject study (cc'd on this email). Following is his CEFMS information. I believe he is available to call into the TSP meeting next week; I will forward him the invite. For ATR Lead of Draft Report review, he will receive $4K (then $4K again for final ATR). His participation in the TSP and any other meetings (ADM, other?) will be at additional cost. Accordingly, would suggest going ahead and funding his efforts as ATR lead plus participation in next week's meeting (1/2 day's funding for the TSP milestone meeting plus getting up to speed on read aheads) or $4,500 total at this time. Please let me know if you have any questions or need additional information at this time. Thanks! (b)(6)

DISCIPLINE

LAST NAME

FIRST NAME

PHONE

Email

Division

CEFMS ORG CODE

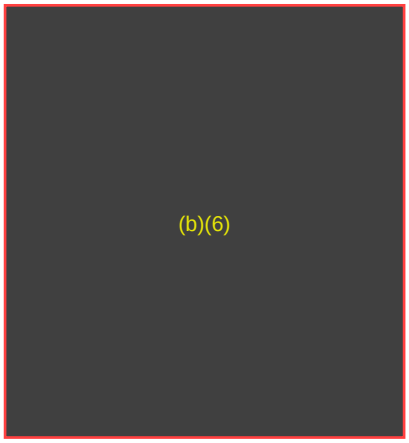
TECH POC

TECH PHONE

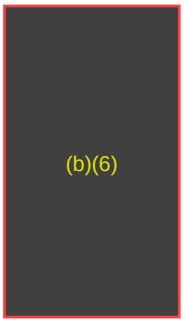
FINANCIAL POC

FINANCIAL PHONE

ATR Lead



CEMVN



(b)(6)

-----Original Message-----

From (b)(6)

Sent: Monday, March 5, 2018 7:45 AM

To:

Cc: (b)(6)

Subject: FW: Mobile Harbor GRR

(b)(6) : Please create labor numbers specifically for (b)(6) as follows:

Mobile Harbor GRR ATR: $4,000

Mobile Harbor GRR IEPR: $5,000

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, February 26, 2018 8:36 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

I tried to summarize below. Please let me know if you have any questions.

TSP. Since much time has evolved since ATR lead activity occurred, I will need to replace the prior lead. At one point it was (b)(6) He's moved to a MSC position. Accordingly, that effort will begin as soon as funding is provided (see funding amount below...included with Draft Report ATR funding requirements).

Draft Report ATR. ATR of the draft report will occur after DQC is complete (assuming ATR start date of 12 June per below). A complete copy of the DQC comment response report and report revisions resulting from DQC will be required/provided to the ATR team prior to initiation of ATR. Typically I recommend that PDTs assume 45 days for ATR of the draft report (from start to completion - completion is when the ATR report and certification are sent from me to the PDT leads). Typically, we estimate $5K/reviewer for the Draft report ATR + $4,000 for the ATR lead + $4,000 for the DDNPCX Review Management Organization (RMO) (i.e., for me to form teams, coordinate scope, etc.). FYSA, ATR lead participation in milestone meetings, etc. is at an additional cost. After I identify the ATR lead, I'll have that person coordinate with you to provide their funding requirements for that meeting.

IEPR. Panel review would begin at same time as vertical/atr/public review of the draft report. Contract cost is running between $40-$70K, depending upon project/scope (the contract cost is 100% Federal cost and doesn't count against $3 million 3x3). DDNPCX RMO total costs average $22-27K, COR $4K, and IWR admin fee 6% of contract value (these costs are cost shared). Initial efforts for me to begin work on the scope, IGE, etc. is $5K. Once we complete the scoping phase and the contract is awarded, I will provide my detailed cost estimate for my efforts during the execution phase of the contract ($17-22K).

When funding is provided for DDNPCX RMO (for me), it is requested that separate labor numbers be provided for

my ATR and IEPR activities. The line item on each charge labor code should identify the project name and the RMO efforts to be covered by those labor funds (e.g., Mobile Harbor RMO Draft Report ATR). By doing so, it enables the DDNPCX to track funding and project reporting metrics. Please go ahead and set up funds for me to begin ATR and IEPR activities ($4K and $5K, respectively).

CEFMS ORG CODE: [redacted]

Amount: dependent upon activity (as noted above) Financial POC: [redacted] (b)(6) Technical POC: [redacted] (b)(6) Line item description: (as noted above)

Please send me a copy of the SAD approved Review Plan for my use in developing scoping documents/identifying ATR team. Please let me know if you have any questions.

Thanks,

[redacted] (b)(6)

-----Original Message-----

From: [redacted] (b)(6)

Sent: Wednesday, February 21, 2018 10:35 AM

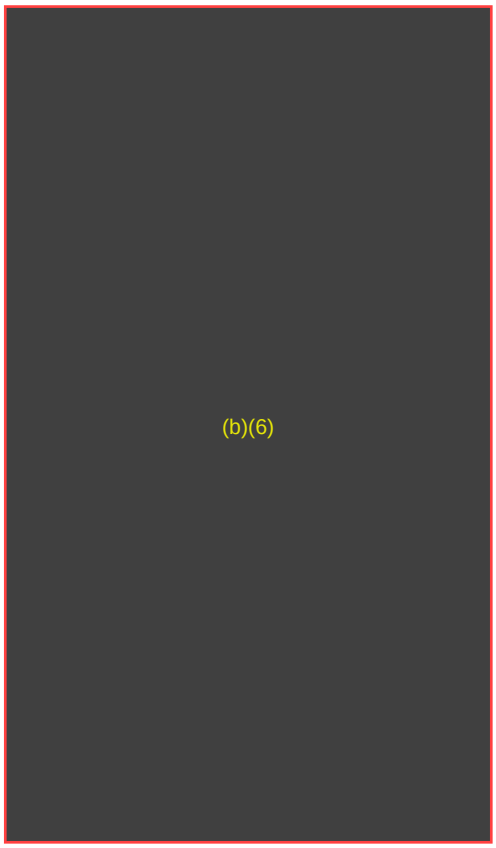
To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6),

The TSP for Mobile Harbor is coming up March 28. Do we need to get ATR or IEPR teams started yet? We are scheduled for Public Release and ATR Review June 12.



-----Original Message-----

From: (b)(6)

Sent: Wednesday, October 11, 2017 7:11 AM

To: (b)(6)

Subject: RE: Mobile Harbor GRR

I am. I'd suggest getting back with me after the first of the year about both. We won't need to start the contracting process for IEPR until February/March. Likewise, for the ATR team, I probably won't start lining things up until Spring as workload tends to change. Lastly, when is your TSP Milestone Meeting planned? I assume you'll want the ATR team lead available for it. I don't recall off hand who that was but will ensure they're available once the date is confirmed.

Thanks for the heads up!

(b)(6)

DDNPCX Review Manager

(b)(6)

-----Original Message-----

From: (b)(6)

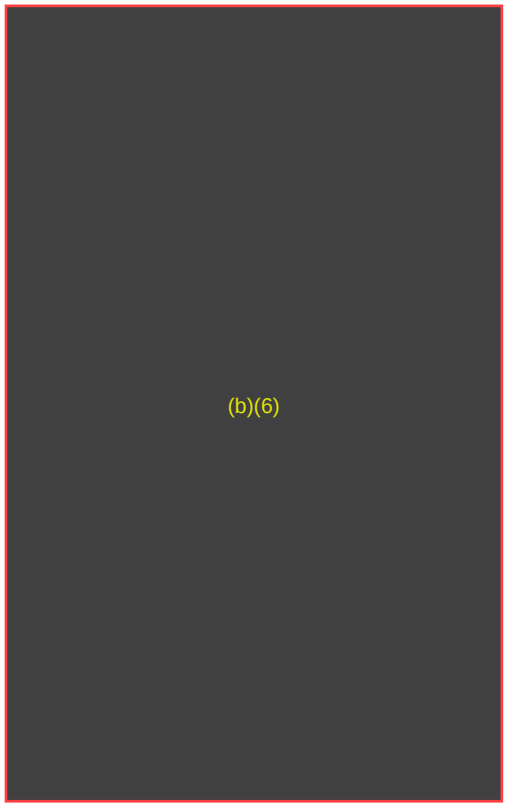
Sent: Tuesday, October 10, 2017 2:43 PM

To: (b)(6)

Subject: Mobile Harbor GRR

(b)(6),

We are planning to send out the Mobile Harbor GRR for ATR and IEPR Review in July 2018. Wanted to make sure that we have the people lined up and the contracts in place well in advance. Are you the right person to talk to about this?


(b)(6)

From: (b)(6)
To:
Cc:
Subject: RE:
Date: Tuesday, April 24, 2018 1:10:00 PM

Thank you!

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 11:44 AM
To:
Cc: (b)(6)
Subject: FW:

(b)(6),
Your signed copy.
I got caught up Friday in completing sample to HQ.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Friday, April 20, 2018 8:15 AM
To:
Cc: (b)(6)
Subject:

(b)(6): Good morning. Please see attached Mobile Harbor Cost Share.

(b)(6)

From: (b)(6)
To:
Subject: RE: Mobile Harbor GRR - IEPR Page Counts
Date: Tuesday, April 24, 2018 11:03:00 AM

Thanks...

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 11:01 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR Page Counts

30 - 35 pgs

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 9:54 AM
To: (b)(6)
(b)(6)
Cc: (b)(6)
Subject: Mobile Harbor GRR - IEPR Page Counts

Team, For development of the IEPR Scope of Work, we need an approximate page count for the main report and each of the appendices. Please provide an approximate page count for the following:

Main Report (GRR and SEIS) - (everyone)
A Engineering (b)(6)
B Geotechnical (b)(6)
C Economics (b)(6)
D Cost Engineering (b)(6)
E Real Estate (b)(6)
F Environmenta (b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 9:29 PM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

(b)(6),

If you look on the "N" drive in the Mobile Harbor folder you'll see a subfolder titled Appendices. In that folder you will find the initial Engineering Appendix plus placeholders for Economics, Environmental, and Real Estate. Not sure if we need anything additional but Charleston had the following structure.

A Engineering
B Geotechnical
C Economics
D Cost Engineering

E Real Estate

Not sure if we want to follow this or not or even the hierarchy. Part of me thinks that the geotec and cost could be sections in the engineering appendix. Environmental was a separate volume for the Charleston study starting with the letter "F".

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 10:18 AM
To: (b)(6)
Subject: FW: Mobile Harbor GRR - IEPR

(b)(6): Do you know what Appendices we'll have in the report so that I can ask those folks approximately how many pages they will have?

I checked the main report and they were not shown yet.

From: (b)(6)
Sent: Tuesday, April 17, 2018 8:32 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Hi (b)(6),

I'm working on the Mobile Harbor IEPR docs and need your help on some items:

1. I need a page count of all the report docs so the OEO knows how much they'll be reviewing. Can you please fill out the table below (in html) and send back to me? Perfect accuracy isn't necessary, but I do suggest rounding up if you're not sure of the exact page count for a particular report/appendix.

Mobile Harbor GRR

June 12, 2018

Approximate Number of Pages

Draft Integrated GRR and SEIS

June 2018

300

Appendix A: Economics

June 2018

100

Appendix B: Real Estate

June 2018

50

Appendix C1: Hydrology & Hydraulics

June 2018

80

Appendix C2: Civil Design

June 2018

60

Appendix C3: Cost Engineering

June 2018

100

Appendix C4: Structural Engineering

June 2018

50

Appendix D: Environmental and Cultural Resources

June 2018

100

Public Comments

June 2018

50

Risk Register

June 2018

40

Total

930

2. What are the start/end dates for concurrent review? Also, what is the scheduled date of the ADM?

3. Attached is a draft Review Charge. We provide this to the Panel to help guide their review of the documents and to help ensure they're aware of unique situations or conditions of the study area, design, formulation, etc. The first 13 questions are standard so they won't change. The rest are study-specific but I don't have the background to develop them. Please take a stab at adding some additional questions to the Review Charge to help define its scope and send back to me. Please keep in mind questions for the required disciplines (planning, econ, env, H&H, and geotech) but limit questions to 30 or so max. Once I have that I can engage others as needed in case something needs to be added.

That's all for now. Please let me know if you have any questions,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 16, 2018 10:59 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Great, thanks, (b)(6)!

(b)(6)

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 9:19 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR - IEPR

Thanks (b)(6)! With the Review Plan, Report Summary, and initial funds I believe I have everything I need to develop the PWS and IGE. I will need some help from you on the Charge, but we can get to that a little later. My goal is to have all docs ready to send to IWR in the next 10 days or so to give us time for their processing and contracting steps.

Once I have the IGE I'll need you to set up two MIPRs: one for the Panel contract cost and one for IWR admin fees. That will come shortly as well so just giving you a head's up.

Please let me know if you have any questions,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 8:05 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: Mobile Harbor GRR - IEPR

(b)(6),

Let me know what you need from us in order to get the IEPR for Mobile Harbor started. The anticipated start date is June 12, 2018.

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:53 AM

To: (b)(6)
(b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

Thanks, (b)(6)!

(b)(6), Welcome to the team...we'll get the funds set up shortly.

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:46 AM

To: (b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

(b)(6) ,

(b)(6) (MVN) will serve as the ATR Lead for subject study (cc'd on this email). Following is his CEFMS information. I believe he is available to call into the TSP meeting next week; I will forward him the invite. For ATR Lead of Draft Report review, he will receive $4K (then $4K again for final ATR). His participation in the TSP and any other meetings (ADM, other?) will be at additional cost. Accordingly, would suggest going ahead and funding his efforts as ATR lead plus participation in next week's meeting (1/2 day's funding for the TSP milestone meeting plus getting up to speed on read aheads) or $4,500 total at this time. Please let me know if you have any questions or need additional information at this time. Thanks! (b)(6)

DISCIPLINE

LAST NAME

FIRST NAME

PHONE

Email

Division

CEFMS ORG CODE

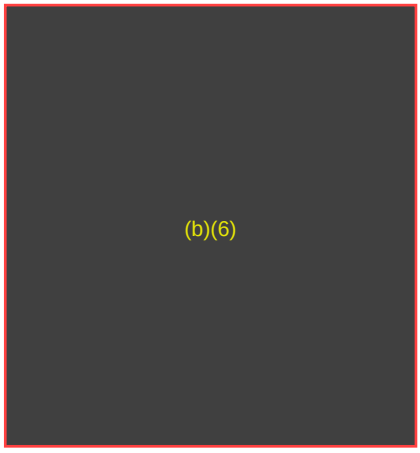
TECH POC

TECH PHONE

FINANCIAL POC

FINANCIAL PHONE

ATR Lead



CEMVN

[redacted]

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, March 5, 2018 7:45 AM

To:

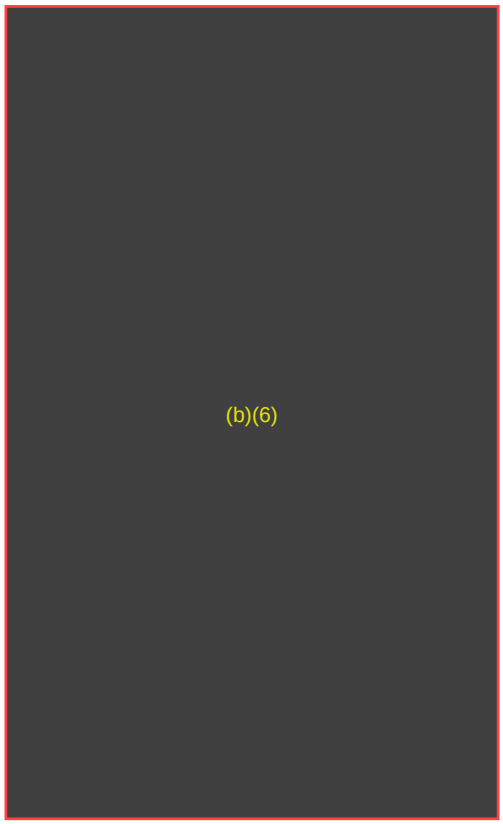
Cc: (b)(6)

Subject: FW: Mobile Harbor GRR

(b)(6) Please create labor numbers specifically for (b)(6) as follows:

Mobile Harbor GRR ATR: $4,000

Mobile Harbor GRR IEPR: $5,000



-----Original Message-----

From: (b)(6)

Sent: Monday, February 26, 2018 8:36 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

I tried to summarize below. Please let me know if you have any questions.

TSP. Since much time has evolved since ATR lead activity occurred, I will need to replace the prior lead. At one point it was (b)(6) He's moved to a MSC position. Accordingly, that effort will begin as soon as funding is provided (see funding amount below...included with Draft Report ATR funding requirements).

Draft Report ATR. ATR of the draft report will occur after DQC is complete (assuming ATR start date of 12 June per below). A complete copy of the DQC comment response report and report revisions resulting from DQC will be required/provided to the ATR team prior to initiation of ATR. Typically I recommend that PDTs assume 45 days for ATR of the draft report (from start to completion - completion is when the ATR report and certification are sent from me to the PDT leads). Typically, we estimate $5K/reviewer for the Draft report ATR + $4,000 for the ATR lead + $4,000 for the DDNPCX Review Management Organization (RMO) (i.e., for me to form teams, coordinate scope, etc.). FYSA, ATR lead participation in milestone meetings, etc. is at an additional cost. After I identify the ATR lead, I'll have that person coordinate with you to provide their funding requirements for that meeting.

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CEFMS ORG CODE: [redacted]

Amount: dependent upon activity (as noted above) Financial POC: [redacted] (b)(6) Technical POC: [redacted] (b)(6) Line item description: (as noted above)

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Thanks,

(b)(6)

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To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6),

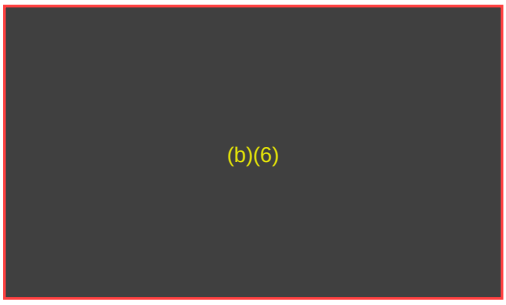
The TSP for Mobile Harbor is coming up March 28. Do we need to get ATR or IEPR teams started yet? We are scheduled for Public Release and ATR Review June 12.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602



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From: (b)(6)

Sent: Wednesday, October 11, 2017 7:11 AM

To: (b)(6)

Subject: RE: Mobile Harbor GRR

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(b)(6)

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(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

(b)(6)

From: (b)(6)
To:
Subject: RE: Mobile Harbor GRR - IEPR Page Counts
Date: Tuesday, April 24, 2018 10:34:00 AM

Okay.

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 10:06 AM
To: (b)(6)
(b)(6)
Cc: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR Page Counts

(b)(6),

There will only be one engineering appendix, not separate ones for geotechnical and cost. I'll provide you a page count for the entire appendix after I coordinate with my team today.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 9:54 AM
To: (b)(6)
(b)(6)
Cc: (b)(6)
Subject: Mobile Harbor GRR - IEPR Page Counts

Team, For development of the IEPR Scope of Work, we need an approximate page count for the main report and each of the appendices. Please provide an approximate page count for the following:

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C Economics (b)(6)
D Cost Engineering (b)(6)
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F Environmental (b)(6)

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From: (b)(6)
Sent: Monday, April 23, 2018 9:29 PM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

(b)(6)

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(b)(6)

(b)(6)

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June 2018

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June 2018

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Appendix C1: Hydrology & Hydraulics

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Appendix C2: Civil Design

June 2018

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Appendix C3: Cost Engineering

June 2018

100

Appendix C4: Structural Engineering

June 2018

50

Appendix D: Environmental and Cultural Resources

June 2018

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Public Comments

June 2018

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Risk Register

June 2018

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Total

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2. What are the start/end dates for concurrent review? Also, what is the scheduled date of the ADM?

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(b)(6)

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To: (b)(6)
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Sent: Monday, April 16, 2018 9:19 AM

To: (b)(6)

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(b)(6)

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(b)(6)

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Sent: Thursday, March 22, 2018 8:53 AM

To: (b)(6)
(b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

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From: (b)(6)

Sent: Thursday, March 22, 2018 8:46 AM

To: (b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

(b)(6)

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ATR Lead of Draft Report review, he will receive $4K (then $4K again for final ATR). His participation in the TSP and any other meetings (ADM, other?) will be at additional cost. Accordingly, would suggest going ahead and funding his efforts as ATR lead plus participation in next week's meeting (1/2 day's funding for the TSP milestone meeting plus getting up to speed on read aheads) or $4,500 total at this time. Please let me know if you have any questions or need additional information at this time. Thanks! (b)(6)

DISCIPLINE

LAST NAME

FIRST NAME

PHONE

Email

Division

CEFMS ORG CODE

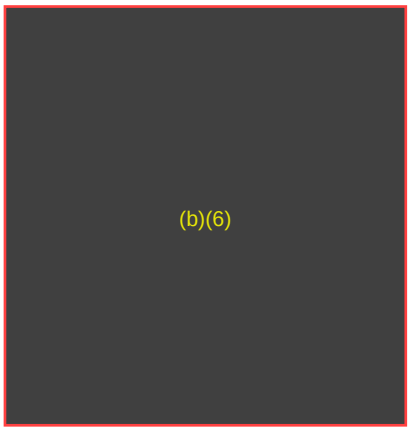
TECH POC

TECH PHONE

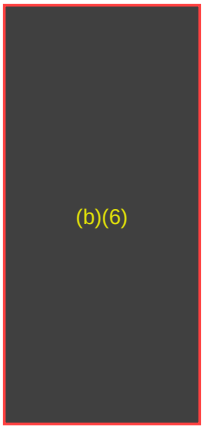
FINANCIAL POC

FINANCIAL PHONE

ATR Lead



CEMVN



-----Original Message-----

From: (b)(6)

Sent: Monday, March 5, 2018 7:45 AM

To: (b)(6)

Cc:

Subject: FW: Mobile Harbor GRR

(b)(6) : Please create labor numbers specifically for (b)(6) as follows:

Mobile Harbor GRR ATR: $4,000

Mobile Harbor GRR IEPR: $5,000

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

(b)(6)

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From: (b)(6)

Sent: Monday, February 26, 2018 8:36 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

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TSP. Since much time has evolved since ATR lead activity occurred, I will need to replace the prior lead. At one

point it was (b)(6). He's moved to a MSC position. Accordingly, that effort will begin as soon as funding is provided (see funding amount below...included with Draft Report ATR funding requirements).

Draft Report ATR. ATR of the draft report will occur after DQC is complete (assuming ATR start date of 12 June per below). A complete copy of the DQC comment response report and report revisions resulting from DQC will be required/provided to the ATR team prior to initiation of ATR. Typically I recommend that PDTs assume 45 days for ATR of the draft report (from start to completion - completion is when the ATR report and certification are sent from me to the PDT leads). Typically, we estimate $5K/reviewer for the Draft report ATR + $4,000 for the ATR lead + $4,000 for the DDNPCX Review Management Organization (RMO) (i.e., for me to form teams, coordinate scope, etc.). FYSA, ATR lead participation in milestone meetings, etc. is at an additional cost. After I identify the ATR lead, I'll have that person coordinate with you to provide their funding requirements for that meeting.

IEPR. Panel review would begin at same time as vertical/atr/public review of the draft report. Contract cost is running between $40-$70K, depending upon project/scope (the contract cost is 100% Federal cost and doesn't count against $3 million 3x3). DDNPCX RMO total costs average $22-27K, COR $4K, and IWR admin fee 6% of contract value (these costs are cost shared). Initial efforts for me to begin work on the scope, IGE, etc. is $5K. Once we complete the scoping phase and the contract is awarded, I will provide my detailed cost estimate for my efforts during the execution phase of the contract ($17-22K).

When funding is provided for DDNPCX RMO (for me), it is requested that separate labor numbers be provided for my ATR and IEPR activities. The line item on each charge labor code should identify the project name and the RMO efforts to be covered by those labor funds (e.g., Mobile Harbor RMO Draft Report ATR). By doing so, it enables the DDNPCX to track funding and project reporting metrics. Please go ahead and set up funds for me to begin ATR and IEPR activities ($4K and $5K, respectively).

CEFMS ORG CODE:

Amount: dependent upon activity (as noted above) Financial POC: (b)(6) Technical POC: (b)(6) Line item description: (as noted above)

Please send me a copy of the SAD approved Review Plan for my use in developing scoping documents/identifying ATR team. Please let me know if you have any questions.

Thanks,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, February 21, 2018 10:35 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

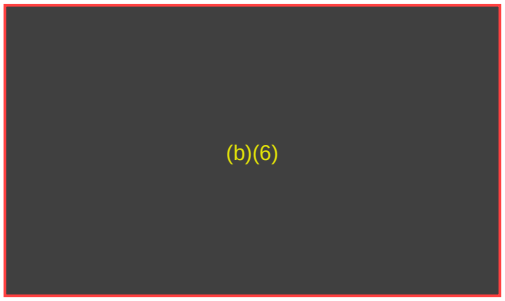
The TSP for Mobile Harbor is coming up March 28. Do we need to get ATR or IEPR teams started yet? We are scheduled for Public Release and ATR Review June 12.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602



-----Original Message-----

From: (b)(6)

Sent: Wednesday, October 11, 2017 7:11 AM

To: (b)(6)

Subject: RE: Mobile Harbor GRR

I am. I'd suggest getting back with me after the first of the year about both. We won't need to start the contracting process for IEPR until February/March. Likewise, for the ATR team, I probably won't start lining things up until Spring as workload tends to change. Lastly, when is your TSP Milestone Meeting planned? I assume you'll want the ATR team lead available for it. I don't recall off hand who that was but will ensure they're available once the date is confirmed.

Thanks for the heads up!

(b)(6)

DDNPCX Review Manager

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, October 10, 2017 2:43 PM

To: (b)(6)

Subject: Mobile Harbor GRR

(b)(6),

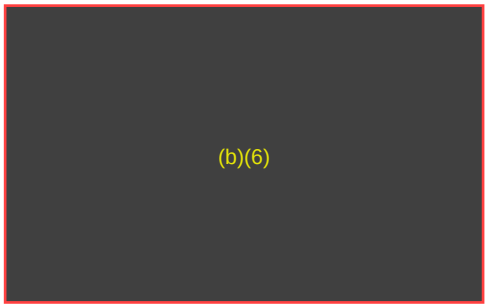
We are planning to send out the Mobile Harbor GRR for ATR and IEPR Review in July 2018. Wanted to make sure that we have the people lined up and the contracts in place well in advance. Are you the right person to talk to about this?

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602


(b)(6)

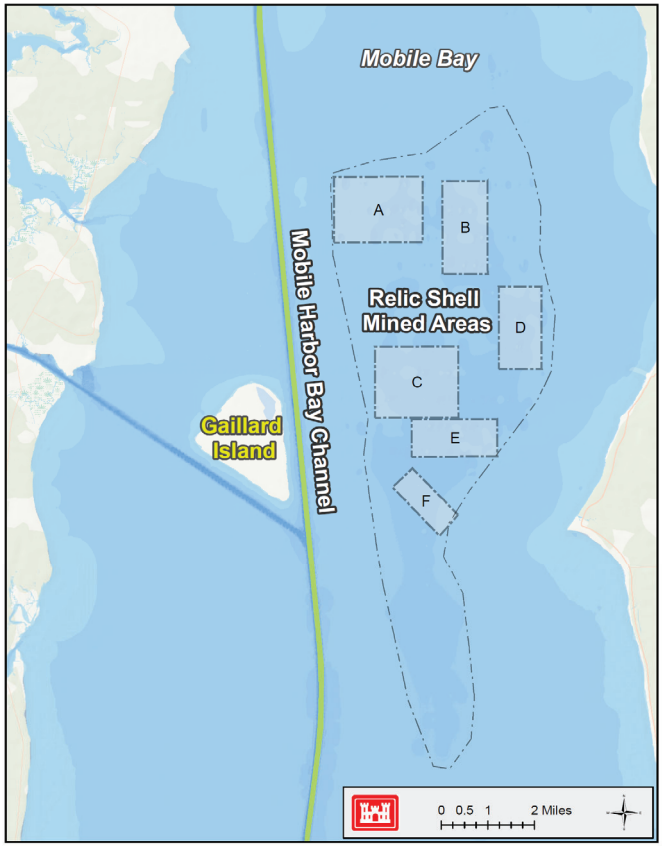
From:	(b)(6)
To:	
Cc:	
Subject:	Dauphin Island.pptx
Date:	Wednesday, April 25, 2018 1:45:00 PM
Attachments:	Dauphin Island.pptx

Added additional slide...

MOBILE HARBOR GRR
DREDGED MATERIAL PLACEMENT

Proposed Placement:

- ❑ Formerly mined relic shell area
- ❑ Sand Island Beneficial Use Area (SIBUA)
- ❑ Pelican/Sand Island Complex
- ❑ ODMDS



US Army Corps of Engineers

U.S.ARMY

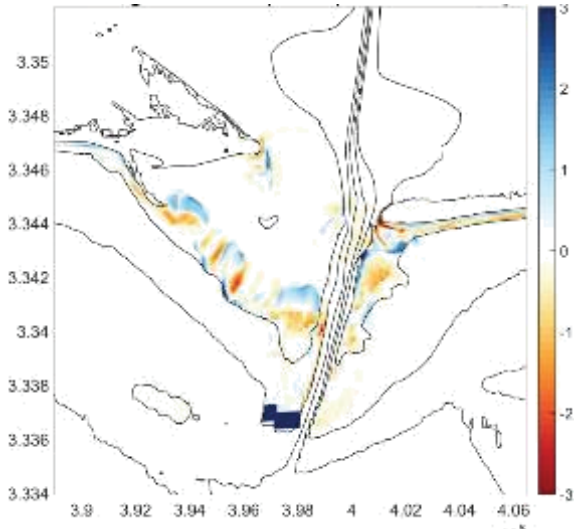
MOBILE HARBOR
SEDIMENT TRANSPORT MODELING

Approach: Conduct estuarine (fine-grained) and coastal (coarse-grained) sediment transport modeling to evaluate possible effects of widening and deepening the channel on sediment transport in Mobile Bay and on the ebb-tidal shoal/nearshore coastal areas.

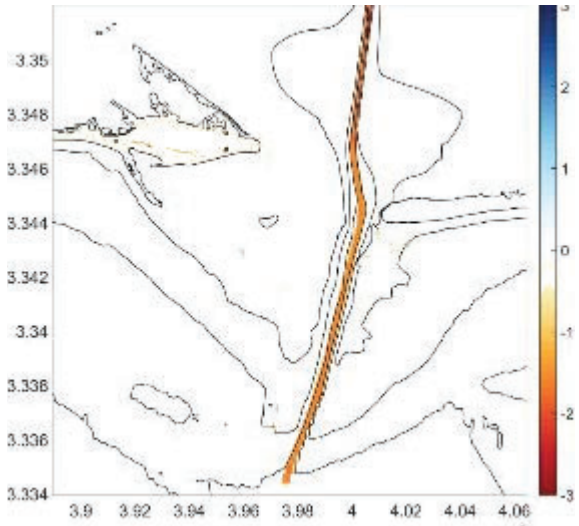
Simulation Period: Estuarine (January 2010 – December 2010)
Coastal (10-yr simulation derived from data spanning from 1998 – 2016)

Simulated Conditions: Existing and with project conditions for no sea level rise (SLR) and 0.5 m SLR scenarios

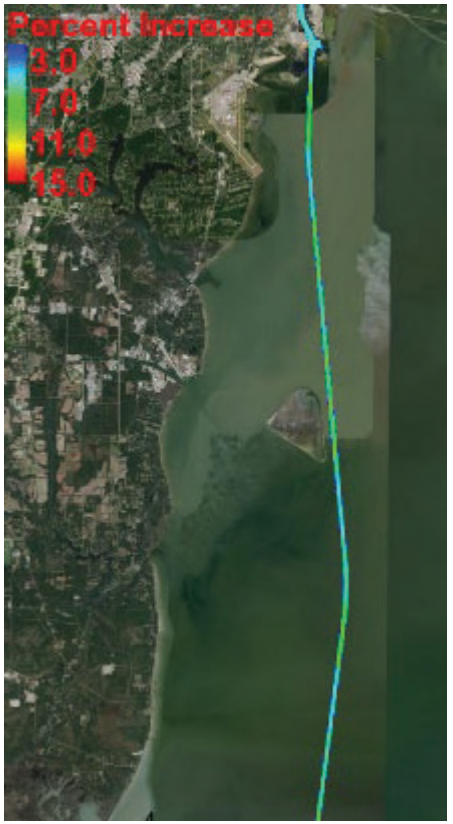
Results: Minimal bed level changes expected between the existing and with project conditions in the bay and on ebb-tidal shoal. Shoaling rates are expected to increase between 5 – 15%.



With Project Condition 10 Year Simulation
Bed Level Change (+/- Erosion/Deposition, m)



With Project – Existing Condition
Bed Level Change (+/- Erosion/Deposition, m)



With Project Simulation
Percent Increase in Channel Shoaling

US Army Corps of Engineers

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MOBILE HARBOR

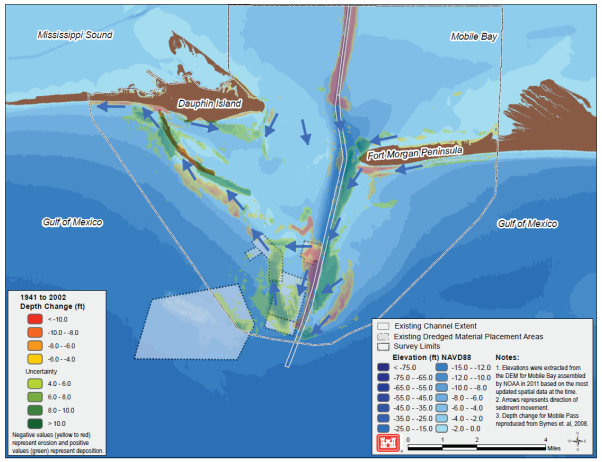
FUTURE MAINTENANCE MATERIAL PLACEMENT

Approach: Compare short and long-term changes in bathymetry to quantify sediment transport rates and identify transport pathways along the ebb-tidal shoal to determine if adequate disposal capacity exists for future maintenance material placement in the Sand Island Beneficial Use Area (SIBUA).

Analysis Period: 1941 – 2015

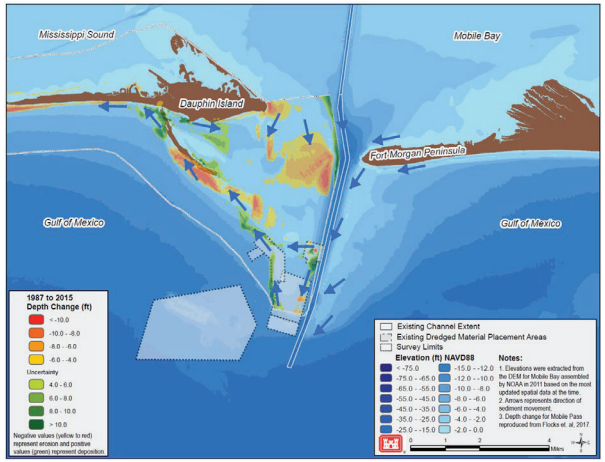
Results: Consistent sediment transport pathways are observed over the short and long-term periods. Material placed in SIBUA is in the active transport system; however, since placement in SIBUA was initiated in 1999, material has left the site at a lower rate than it has been placed in the site resulting in a need for expansion in the north/northwest direction to accommodate future needs.

Mobile Pass Bed Level Change 1941 to 2002



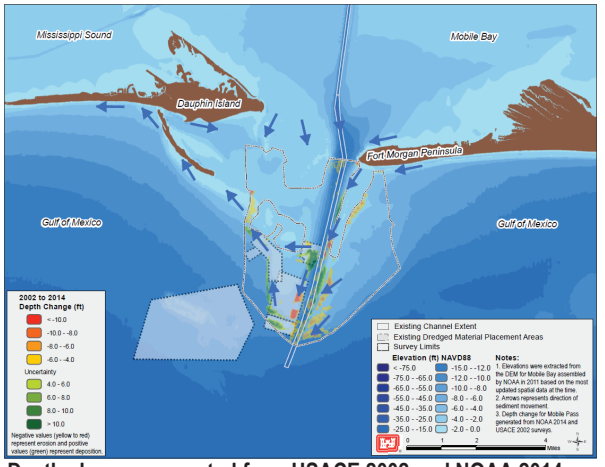
Depth change reproduced from Byrnes et. al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama"

Mobile Pass Bed Level Change 1987 to 2015



Depth change reproduced Flocks, et. al, 2017 "Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015" Open-File Report 2017–1112.

Mobile Pass Bed Level Change 2002 to 2014



Depth change generated from USACE 2002 and NOAA 2014 surveys.

US Army Corps of Engineers

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From:	(b)(6)
To:	
Cc:	
Subject:	Mobile Harbor Placemat_30 Apr 2018v3.pptx
Date:	Wednesday, April 25, 2018 4:51:00 PM
Attachments:	Mobile Harbor Placemat_30 Apr 2018v3.pptx

Latest placemat attached...

(b)(6)

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

The US Army Corps of Engineers is studying the feasibility of enlarging the size of the channel leading to and from port facilities located in Mobile Bay. The non-federal sponsor is the Alabama State Port Authority. In 1986, Congress authorized various modifications to Mobile Harbor including deepening and widening the majority of the channel to 55 feet deep and 550 feet wide. The GRR will be a 4 year, $7.8M effort. Along with the GRR, Mobile District is preparing an integrated Supplemental Environmental Impact Statement (SEIS).

TENTATIVELY SELECTED PLAN

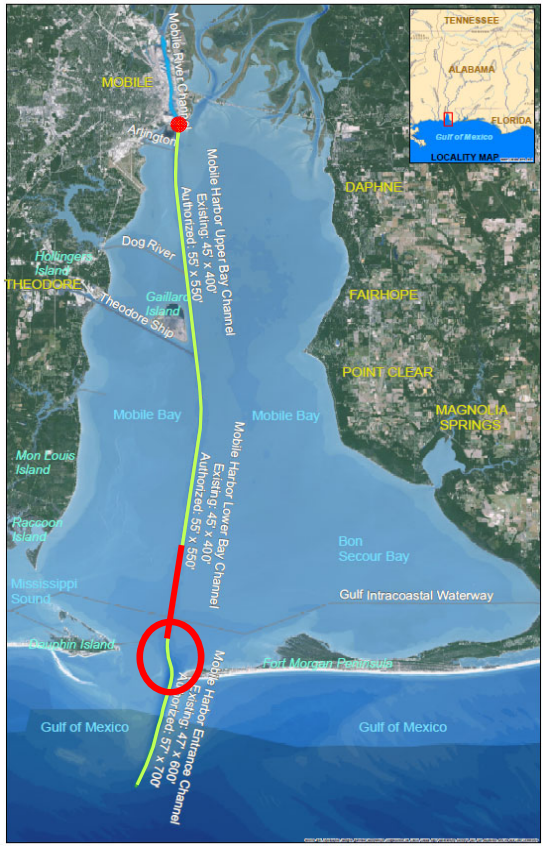
- ❑ Channel Deepening: 49 feet*
- ❑ Channel Widening: 3 mi. long, 100 ft wide*
- ❑ Turning Basin Modification
- ❑ Bar Channel Bend Easing

* Environmental impact analysis is based on a 50 foot depth and 100 foot widener for a distance of 5 miles

Proposed Placement Locations

- ❑ Formerly mined relic shell area
- ❑ Sand Island Beneficial Use Area (SIBUA)
- ❑ Pelican/Sand Island Complex
- ❑ Ocean Dredged Material Disposal Site (ODMDS)

MOBILE BAY AREA OF INTEREST



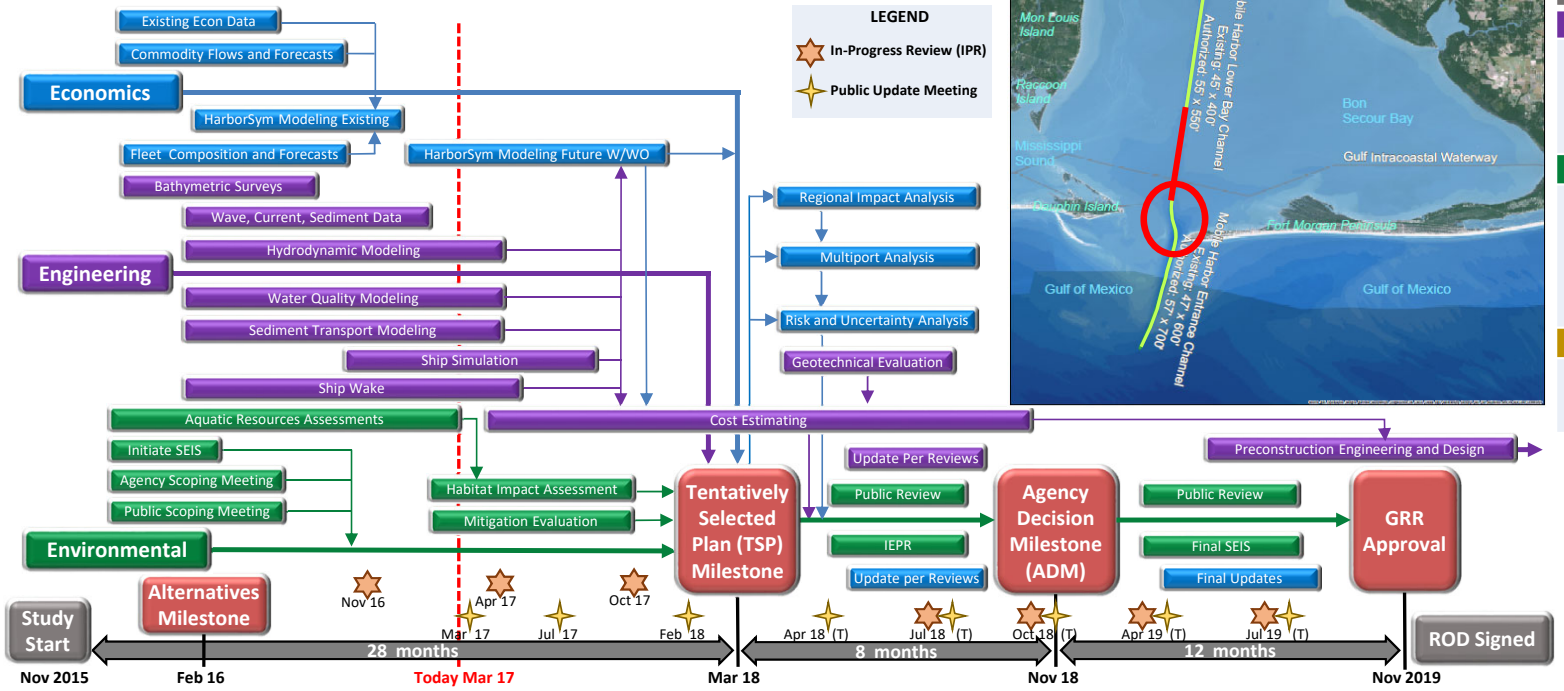
COST AND BENEFIT SUMMARY

	47'	48'	49'	50'	51'
Total Project Cost	$199M	$276M	$351M	$430M	$548M
Net Benefits	$13.9M	$21.3M	$28.8M	$33.9M	$37.8M
BCR	2.7	2.9	3.0	2.9	2.8

FUNDING STATUS (Federal)

	FY16	FY17	FY18	FY19	FY20	TOTAL
Scheduled	$1.1M	$2.1M	$1.7M	$684K	$253K	$5.9M
Requested	$2.1M	$1.2M	$1.7M	$830K	-	$5.9M
Appropriated	$2.1M	$1.2M	TBD	TBD	Assume Carry-in	
Carry-in		$948K				

SCHEDULE & MAJOR MILESTONES



ENVIRONMENTAL CONSIDERATIONS

COASTAL PROCESSES

- ❑ Hydrodynamic and Water Quality
- ❑ Coastal Sediment Transport
- ❑ Estuarine (In-bay) Sediment Transport
- ❑ Ship Wake Effects

AQUATIC RESOURCE ASSESMENTS

- ❑ Fish
- ❑ Oysters
- ❑ Submerged Aquatic Vegetation
- ❑ Wetlands
- ❑ Benthics

OTHER

- ❑ Cultural Resources
- ❑ Environmental Justice
- ❑ Air/Noise Pollution

US Army Corps of Engineers

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From: (b)(6)
To:
Subject: RE: Dauphin Island USGS
Date: Wednesday, April 25, 2018 1:28:00 PM
Attachments: Dauphin Island.pptx

(b)(6): Attached two slides from the TSP Meeting show the analysis on Dauphin Island. I added the general location of the SIBUA Northwest Extension to the first slide.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 12:31 PM
To:
Cc: (b)(6)
Subject: FW: Dauphin Island USGS

(b)(6) - I'll come down to discuss after lunch. Thanks.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 12:15 PM
To:
Cc: (b)(6)
(b)(6)
Subject: Dauphin Island USGS

(b)(6)

(b)(6) would like a simple graphic of the USGS analysis on Dauphin Island - do you have anything easily available you could provide?

Thanks

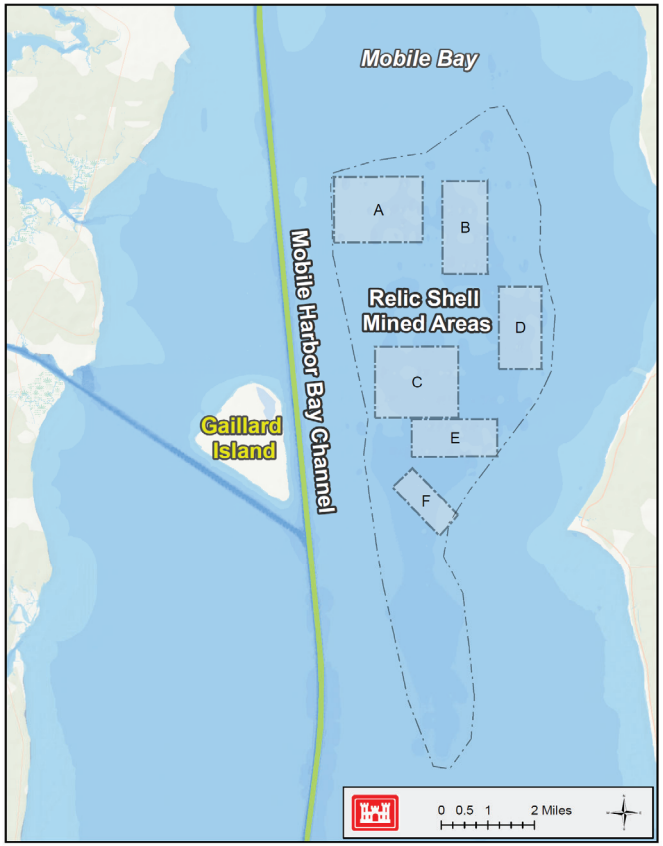
(b)(6)

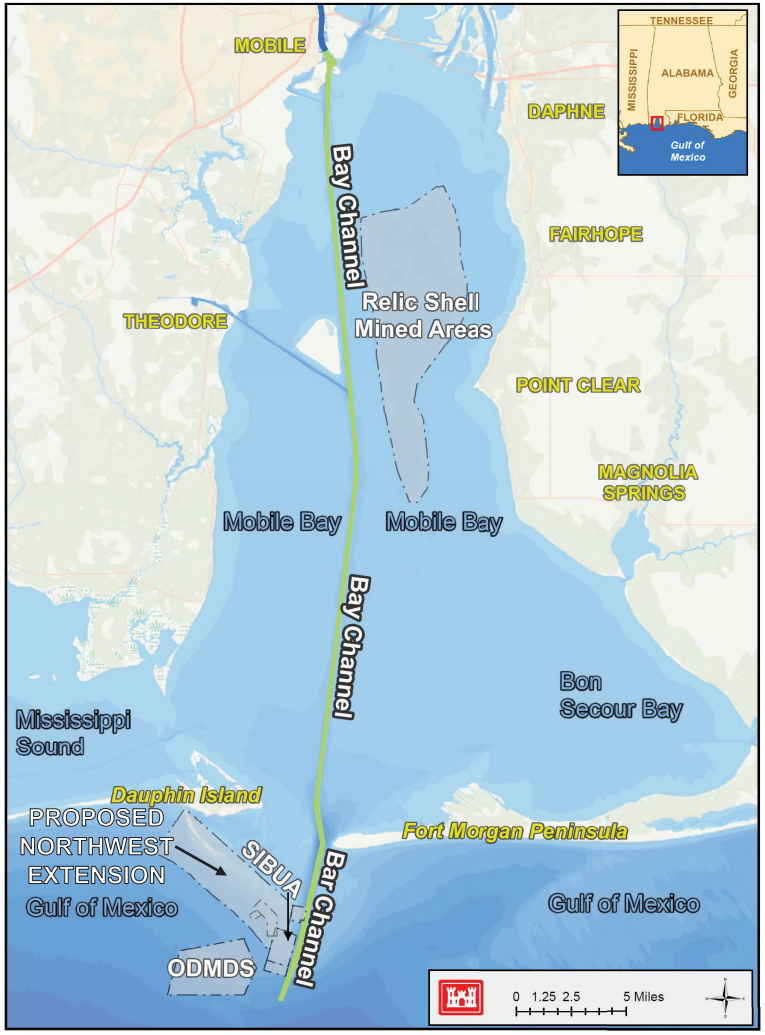
Sent from my BlackBerry 10 smartphone.

MOBILE HARBOR GRR
DREDGED MATERIAL PLACEMENT

Proposed Placement:

- ❑ Formerly mined relic shell area
- ❑ Sand Island Beneficial Use Area (SIBUA)
- ❑ Pelican/Sand Island Complex
- ❑ ODMDS





US Army Corps of Engineers

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MOBILE HARBOR

FUTURE MAINTENANCE MATERIAL PLACEMENT

Approach: Compare short and long-term changes in bathymetry to quantify sediment transport rates and identify transport pathways along the ebb-tidal shoal to determine if adequate disposal capacity exists for future maintenance material placement in the Sand Island Beneficial Use Area (SIBUA).

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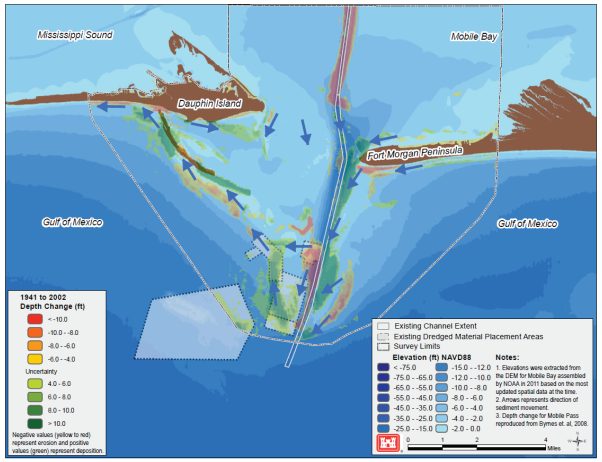
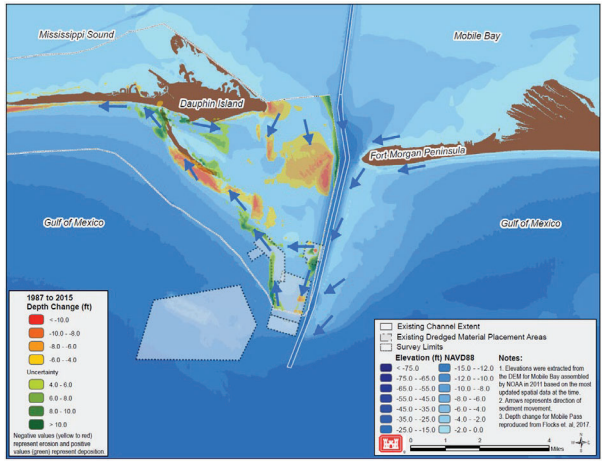
Mobile Pass Bed Level Change 1941 to 2002



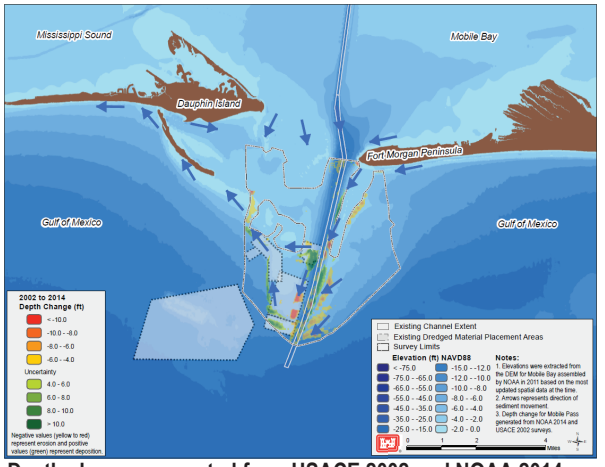
Depth change reproduced from Byrnes et. al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama"

Mobile Pass Bed Level Change 1987 to 2015



Depth change reproduced Flocks, et. al, 2017 "Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015" Open-File Report 2017–1112.

Mobile Pass Bed Level Change 2002 to 2014



Depth change generated from USACE 2002 and NOAA 2014 surveys.

US Army Corps of Engineers

U.S.ARMY

From: (b)(6)
To:
Subject: RE: Mobile Harbor GRR - IEPR Page Counts
Date: Wednesday, April 25, 2018 3:44:00 PM

Thanks.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 3:26 PM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR Page Counts

(b)(6) ,

I'm going to say the EN appendix (main portion) will be around 75 pages but there will be several attachments (see below for my best guess at lengths).

ERDC Modeling Report - 100 pages
USGS Modeling Report - 30 pages
Ship Simluation Report - 90 pages
Vessel Generated Wave Energy Assessment - 85 pages
Data Collection Report - 30 pages
Boring Logs - 300 pages

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 1:09 PM
To: (b)(6)
(b)(6)
Subject: RE: Mobile Harbor GRR - IEPR Page Counts

Does this mean the economic appendix has been bumped up to B?

-----Original Message-----
From: (b)(6)

Sent: Tuesday, April 24, 2018 10:06 AM
To: (b)(6)
(b)(6)
Cc: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR Page Counts

(b)(6)

There will only be one engineering appendix, not separate ones for geotechnical and cost. I'll provide you a page count for the entire appendix after I coordinate with my team today.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Tuesday, April 24, 2018 9:54 AM
To: (b)(6)
(b)(6)
Cc: (b)(6)
Subject: Mobile Harbor GRR - IEPR Page Counts

Team, For development of the IEPR Scope of Work, we need an approximate page count for the main report and each of the appendices. Please provide an approximate page count for the following:

Main Report (GRR and SEIS) - (everyone)
A Engineering (b)(6)
B Geotechnical (b)(6)
C Economics (b)(6)
D Cost Engineering (b)(6)
E Real Estate (b)(6)
F Environmental (b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 9:29 PM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

(b)(6),

If you look on the "N" drive in the Mobile Harbor folder you'll see a subfolder titled Appendices. In that folder you will find the initial Engineering Appendix plus placeholders for Economics, Environmental, and Real Estate. Not sure if we need anything additional but Charleston had the following structure.

A Engineering
B Geotechnical
C Economics
D Cost Engineering
E Real Estate

Not sure if we want to follow this or not or even the hierarchy. Part of me thinks that the geotec and cost could be sections in the engineering appendix. Environmental was a separate volume for the Charleston study starting with the letter "F".

-----Original Message-----
From: (b)(6)
Sent: Monday, April 23, 2018 10:18 AM
To: (b)(6)
Subject: FW: Mobile Harbor GRR - IEPR

(b)(6): Do you know what Appendices we'll have in the report so that I can ask those folks approximately how many pages they will have?

I checked the main report and they were not shown yet.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

From: (b)(6)
Sent: Tuesday, April 17, 2018 8:32 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Hi (b)(6),

I'm working on the Mobile Harbor IEPR docs and need your help on some items:

1. I need a page count of all the report docs so the OEO knows how much they'll be reviewing. Can you please fill out the table below (in html) and send back to me? Perfect accuracy isn't necessary, but I do suggest rounding up if you're not sure of the exact page count for a particular report/appendix.

Mobile Harbor GRR

June 12, 2018

Approximate Number of Pages

Draft Integrated GRR and SEIS

June 2018

300

Appendix A: Economics

June 2018

100

Appendix B: Real Estate

June 2018

50

Appendix C1: Hydrology & Hydraulics

June 2018

80

Appendix C2: Civil Design

June 2018

60

Appendix C3: Cost Engineering

June 2018

100

Appendix C4: Structural Engineering

June 2018

50

Appendix D: Environmental and Cultural Resources

June 2018

100

Public Comments

June 2018

50

Risk Register

June 2018

40

Total

930

2. What are the start/end dates for concurrent review? Also, what is the scheduled date of the ADM?

3. Attached is a draft Review Charge. We provide this to the Panel to help guide their review of the documents and to help ensure they're aware of unique situations or conditions of the study area, design, formulation, etc. The first 13 questions are standard so they won't change. The rest are study-specific but I don't have the background to develop them. Please take a stab at adding some additional questions to the Review Charge to help define its scope and send back to me. Please keep in mind questions for the required disciplines (planning, econ, env, H&H, and geotech) but limit questions to 30 or so max. Once I have that I can engage others as needed in case something needs to be added.

That's all for now. Please let me know if you have any questions,

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 16, 2018 10:59 AM
To: (b)(6)
Subject: RE: Mobile Harbor GRR - IEPR

Great, thanks, (b)(6) !

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 9:19 AM

To: (b)(6)

Cc: (b)(6)

(b)(6)

Subject: RE: Mobile Harbor GRR - IEPR

Thanks (b)(6)! With the Review Plan, Report Summary, and initial funds I believe I have everything I need to develop the PWS and IGE. I will need some help from you on the Charge, but we can get to that a little later. My goal is to have all docs ready to send to IWR in the next 10 days or so to give us time for their processing and contracting steps.

Once I have the IGE I'll need you to set up two MIPRs: one for the Panel contract cost and one for IWR admin fees. That will come shortly as well so just giving you a head's up.

Please let me know if you have any questions,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, April 16, 2018 8:05 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: Mobile Harbor GRR - IEPR

(b)(6),

Let me know what you need from us in order to get the IEPR for Mobile Harbor started. The anticipated start date is June 12, 2018.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:53 AM

To: (b)(6)
(b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

Thanks, (b)(6)!

(b)(6), Welcome to the team...we'll get the funds set up shortly.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Thursday, March 22, 2018 8:46 AM

To: (b)(6)

Cc: (b)(6)

Subject: RE: Mobile Harbor GRR - PLS VIEW IN HTML FORMAT

(b)(6)

(b)(6) (MVN) will serve as the ATR Lead for subject study (cc'd on this email). Following is his CEFMS information. I believe he is available to call into the TSP meeting next week; I will forward him the invite. For ATR Lead of Draft Report review, he will receive $4K (then $4K again for final ATR). His participation in the TSP and any other meetings (ADM, other?) will be at additional cost. Accordingly, would suggest going ahead and funding his efforts as ATR lead plus participation in next week's meeting (1/2 day's funding for the TSP milestone meeting plus getting up to speed on read aheads) or $4,500 total at this time. Please let me know if you have any questions or need additional information at this time. Thanks! (b)(6)

DISCIPLINE

LAST NAME

FIRST NAME

PHONE

Email

Division

CEFMS ORG CODE

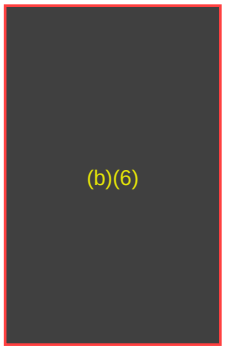
TECH POC

TECH PHONE

FINANCIAL POC

FINANCIAL PHONE

ATR Lead



(b)(6)

CEMVN

(b)(6)

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, March 5, 2018 7:45 AM

To:

Cc: (b)(6)

Subject: FW: Mobile Harbor GRR

(b)(6): Please create labor numbers specifically for (b)(6) as follows:

Mobile Harbor GRR ATR: $4,000

Mobile Harbor GRR IEPR: $5,000

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

-----Original Message-----

From: (b)(6)

Sent: Monday, February 26, 2018 8:36 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6)

I tried to summarize below. Please let me know if you have any questions.

TSP. Since much time has evolved since ATR lead activity occurred, I will need to replace the prior lead. At one point it was (b)(6) He's moved to a MSC position. Accordingly, that effort will begin as soon as funding is provided (see funding amount below...included with Draft Report ATR funding requirements).

Draft Report ATR. ATR of the draft report will occur after DQC is complete (assuming ATR start date of 12 June per below). A complete copy of the DQC comment response report and report revisions resulting from DQC will be required/provided to the ATR team prior to initiation of ATR. Typically I recommend that PDTs assume 45 days for ATR of the draft report (from start to completion - completion is when the ATR report and certification are sent

from me to the PDT leads). Typically, we estimate $5K/reviewer for the Draft report ATR + $4,000 for the ATR lead + $4,000 for the DDNPCX Review Management Organization (RMO) (i.e., for me to form teams, coordinate scope, etc.). FYSA, ATR lead participation in milestone meetings, etc. is at an additional cost. After I identify the ATR lead, I'll have that person coordinate with you to provide their funding requirements for that meeting.

IEPR. Panel review would begin at same time as vertical/atr/public review of the draft report. Contract cost is running between $40-$70K, depending upon project/scope (the contract cost is 100% Federal cost and doesn't count against $3 million 3x3). DDNPCX RMO total costs average $22-27K, COR $4K, and IWR admin fee 6% of contract value (these costs are cost shared). Initial efforts for me to begin work on the scope, IGE, etc. is $5K. Once we complete the scoping phase and the contract is awarded, I will provide my detailed cost estimate for my efforts during the execution phase of the contract ($17-22K).

When funding is provided for DDNPCX RMO (for me), it is requested that separate labor numbers be provided for my ATR and IEPR activities. The line item on each charge labor code should identify the project name and the RMO efforts to be covered by those labor funds (e.g., Mobile Harbor RMO Draft Report ATR). By doing so, it enables the DDNPCX to track funding and project reporting metrics. Please go ahead and set up funds for me to begin ATR and IEPR activities ($4K and $5K, respectively).

CEFMS ORG CODE [redacted]

Amount: dependent upon activity (as noted above) Financial POC: [redacted] (b)(6) Technical POC: [redacted] (b)(6) Line item description: (as noted above)

Please send me a copy of the SAD approved Review Plan for my use in developing scoping documents/identifying ATR team. Please let me know if you have any questions.

Thanks,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, February 21, 2018 10:35 AM

To: (b)(6)

Cc: (b)(6)
(b)(6)

Subject: RE: Mobile Harbor GRR

(b)(6),

The TSP for Mobile Harbor is coming up March 28. Do we need to get ATR or IEPR teams started yet? We are scheduled for Public Release and ATR Review June 12.

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602

-----Original Message-----

From: (b)(6)

Sent: Wednesday, October 11, 2017 7:11 AM

To: (b)(6)

Subject: RE: Mobile Harbor GRR

I am. I'd suggest getting back with me after the first of the year about both. We won't need to start the contracting process for IEPR until February/March. Likewise, for the ATR team, I probably won't start lining things up until Spring as workload tends to change. Lastly, when is your TSP Milestone Meeting planned? I assume you'll want the ATR team lead available for it. I don't recall off hand who that was but will ensure they're available once the date is confirmed.

Thanks for the heads up!

(b)(6)

DDNPCX Review Manager

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, October 10, 2017 2:43 PM

To: (b)(6)

Subject: Mobile Harbor GRR

(b)(6),

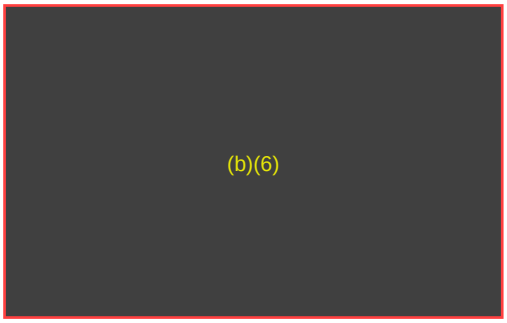
We are planning to send out the Mobile Harbor GRR for ATR and IEPR Review in July 2018. Wanted to make sure that we have the people lined up and the contracts in place well in advance. Are you the right person to talk to about this?

(b)(6)

U.S. Army Corps of Engineers

109 St. Joseph St.

Mobile, AL 36602



From: (b)(6)
To:
Cc:
Subject: ASA Briefing - Mobile Harbor GRR
Date: Thursday, April 26, 2018 10:03:00 AM
Attachments: Hogeboom Briefing 17 Apr 2018.pptx

Attached are the slides used for the COL. Hogeboom update. Please let me know if you would like to make changes.

(b)(6)

MOBILE HARBOR GRR

With Integrated Supplemental Environmental Impact Statement

Update Briefing For
COL C. Patrick Hogeboom IV
Deputy Commander SAD
17 April 2018

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

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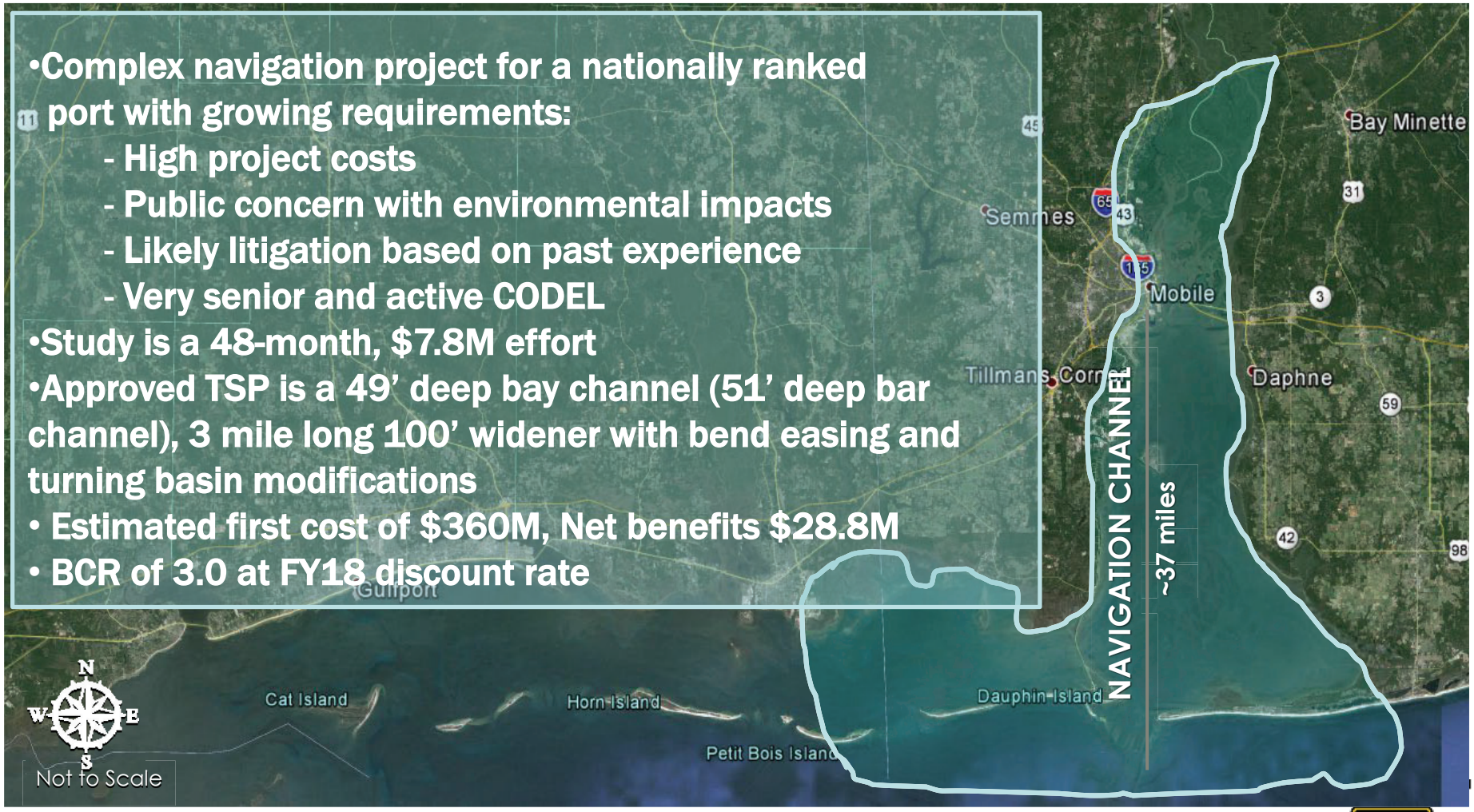
U.S.ARMY

MOBILE HARBOR GRR
BOTTOM LINE UP FRONT



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MOBILE HARBOR GRR
BACKGROUND

"Modernizing the Port of Mobile is necessary because 2/3rds of the Port of Mobile's vessel traffic today is restricted or delayed directly impacting shipper costs and competitiveness."

- James K. Lyons, ASPA Director

Full Service Seaport
- ✓ 10th Largest in the U.S.
- ✓ 58M+ Tons of Cargo Handled Port-wide

Growth Steadily Climbs
- ✓ Record 2017 20% Container Growth
- ✓ Ranked #2 Steel Port in U.S.
- ✓ Ocean Carriers continue to add service

Strong Exporter of U.S Materials and Goods

Contributes Significantly to the Economy
- ✓ 153,000+ Jobs
- ✓ $25.1B in economic value

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MOBILE HARBOR GRR
AGENCY COORDINATION

- Charrette Jan 28-29, 2015
- Cooperating Agency Meetings Dec 2015, Mar 2016, Sep 2016, Feb 2017, Sep 2017, and Feb 2018
- Beneficial Use Meetings May 2016 and Jan 2018

GENERAL NATURE OF AGENCY CONCERNS

- **Effects on Physical Parameters**
  - Water circulation
  - Salinity
  - Dissolved Oxygen
  - Sedimentation
  - Shoreline Erosion
  - Storm Surge
- **Beneficial Use Opportunities**
- **Accurately Capturing Baseline Conditions**
- **Natural Resources**
  - Fisheries
  - Essential Fish Habitat
  - Submerged Aquatic Vegetation
  - Oysters
  - Marshes and Wetlands
  - Protected Species
  - Benthic Communities
  - Shoreline Erosion
- **Cultural Resources**

FEDERAL AND STATE COOPERATING AGENCIES

- Alabama Department of Environmental Management
- Alabama Department of Conservation and Natural Resources
- Alabama State Historic Preservation Office
- Alabama Department of Transportation
- Geological Survey of Alabama
- U.S. Fish and Wildlife Service
- NOAA National Marine Fisheries Service
- Environmental Protection Agency
- U.S. Geological Survey
- Federal Emergency Management Agency
- Mobile Bay National Estuary Program

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MOBILE HARBOR GRR
PUBLIC ENGAGEMENT

- Public scoping meeting Jan 2016
- Public Meetings Mar 2017, Sep 2017, and Feb 2018
- Focus Group Meetings with Seafood Interests, Environmental NGOs, Dauphin Island Interests, and Environmental Justice Communities
- Bi-weekly Updates, Quarterly Newsletters, Social Media, Listserv

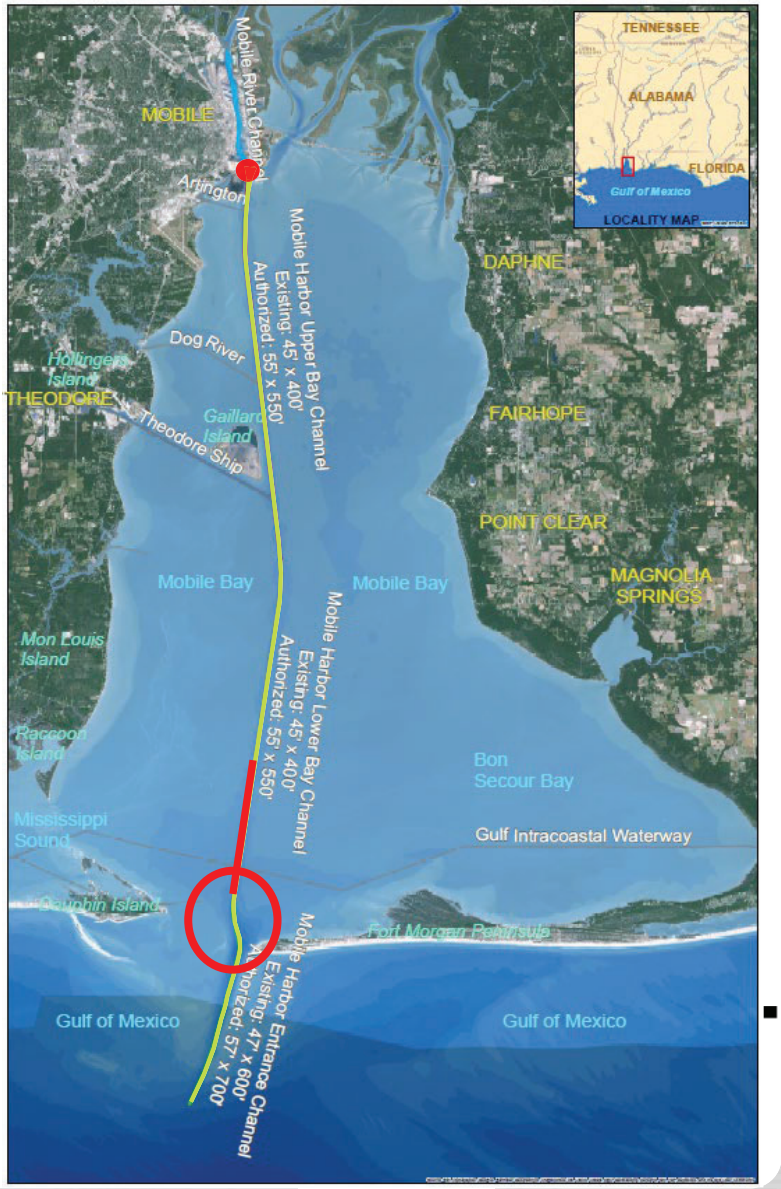
GENERAL NATURE OF PUBLIC COMMENTS

- Erosion impacts to Dauphin Island
- Placing material on eroding shorelines
- Interruption of coastal processes
- Reestablishment of sand transport to Dauphin Island
- Beneficial use of dredged material
- Impacts to wildlife
- Impact to oysters and other commercial fisheries
- Impacts to recreational fishing
- Creating unwanted islands
- Climate change
- Impacts to cultural resources
- Support for project

MOBILE HARBOR GRR
TENTATIVELY SELECTED PLAN

- ❑ Channel Deepening: 49 feet*
- ❑ Channel Widening: 3 mi. long, 100 ft wide*
- ❑ Turning Basin Modification
- ❑ Bar Channel Bend Easing

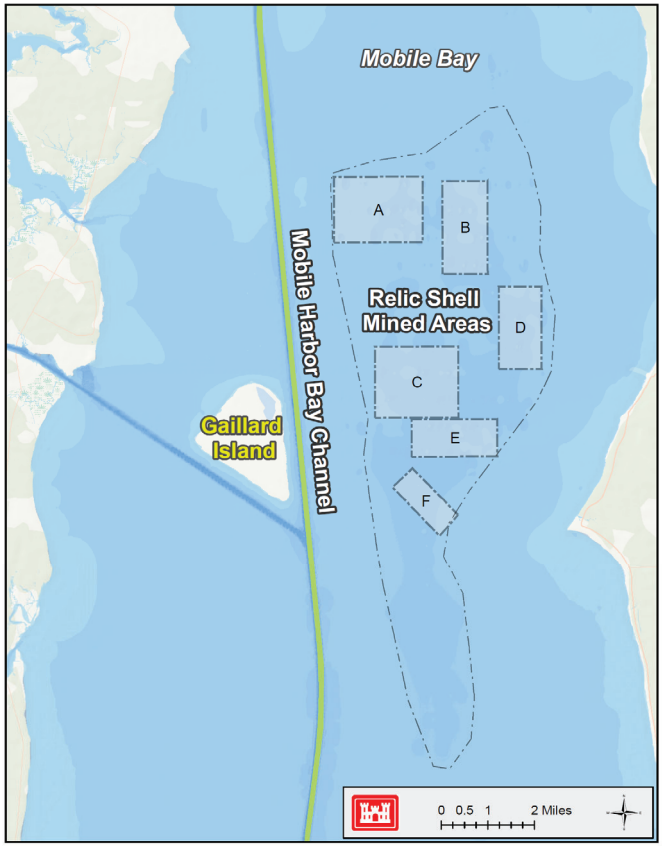
* Environmental impact analysis is based on a 50 foot depth and 100 foot widener for a distance of 5 miles

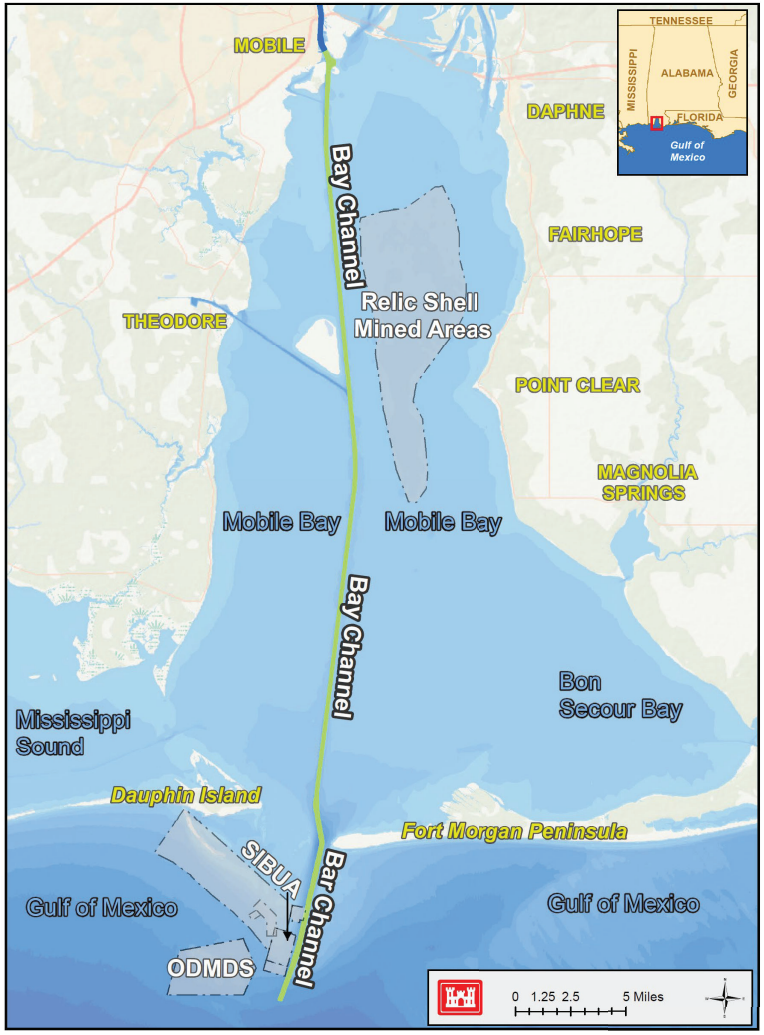


MOBILE HARBOR GRR
DREDGED MATERIAL PLACEMENT

Proposed Placement:

- ❑ Formerly mined relic shell area
- ❑ Sand Island Beneficial Use Area (SIBUA)
- ❑ Pelican/Sand Island Complex
- ❑ ODMDS





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MOBILE HARBOR

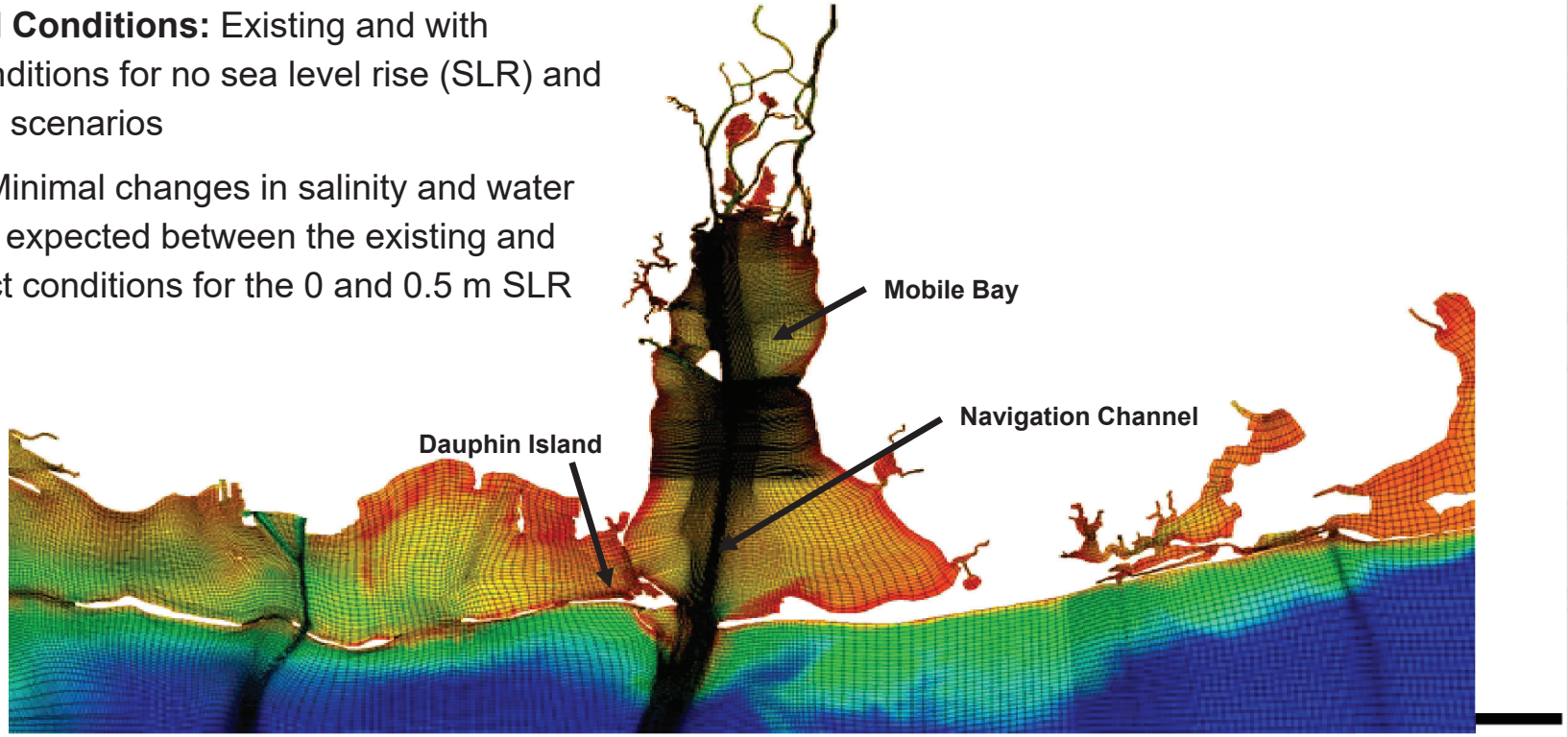
HYDRODYNAMIC & WATER QUALITY MODELING

Approach: Conduct hydrodynamic and water quality modeling to (1) characterize the physical conditions and processes of the study area and (2) determine the relative changes due to widening and deepening the channel (i.e., 5' deeper for the entire channel with a 100' wide x 5 mile long widener in the southern Bay).

Simulation Period: January 2010 – December 2010

Simulated Conditions: Existing and with project conditions for no sea level rise (SLR) and 0.5 m SLR scenarios

Results: Minimal changes in salinity and water quality are expected between the existing and with project conditions for the 0 and 0.5 m SLR cases.



Model Extents

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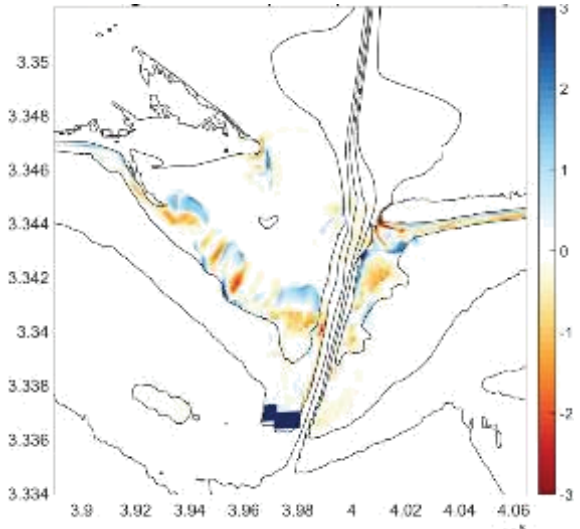
MOBILE HARBOR
SEDIMENT TRANSPORT MODELING

Approach: Conduct estuarine (fine-grained) and coastal (coarse-grained) sediment transport modeling to evaluate possible effects of widening and deepening the channel on sediment transport in Mobile Bay and on the ebb-tidal shoal/nearshore coastal areas.

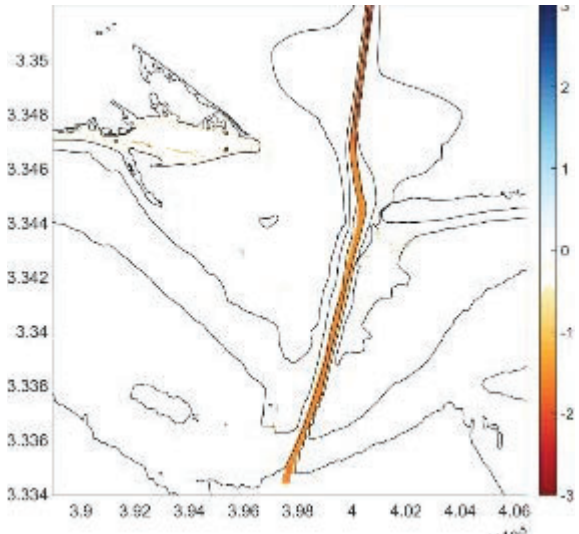
Simulation Period: Estuarine (January 2010 – December 2010)
Coastal (10-yr simulation derived from data spanning from 1998 – 2016)

Simulated Conditions: Existing and with project conditions for no sea level rise (SLR) and 0.5 m SLR scenarios

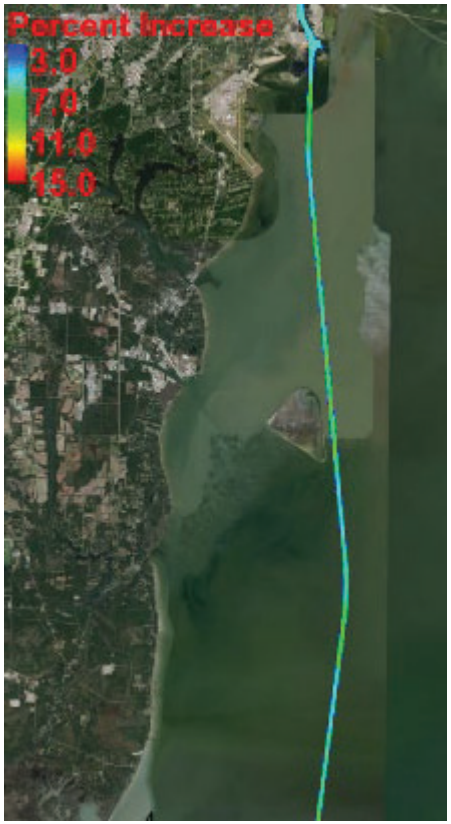
Results: Minimal bed level changes expected between the existing and with project conditions in the bay and on ebb-tidal shoal. Shoaling rates are expected to increase between 5 – 15%.



With Project Condition 10 Year Simulation
Bed Level Change (+/- Erosion/Deposition, m)



With Project – Existing Condition
Bed Level Change (+/- Erosion/Deposition, m)



With Project Simulation
Percent Increase in Channel Shoaling

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MOBILE HARBOR

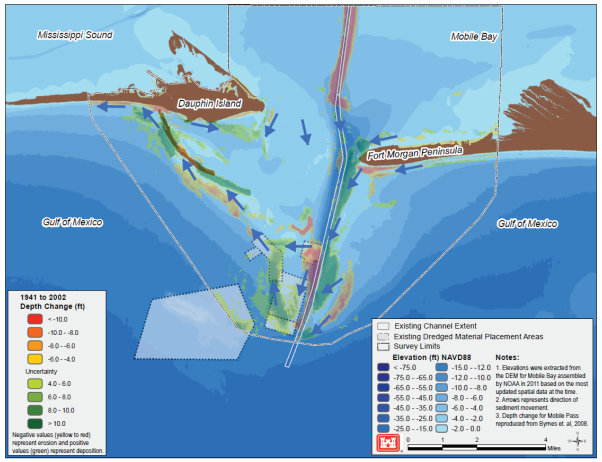
FUTURE MAINTENANCE MATERIAL PLACEMENT

Approach: Compare short and long-term changes in bathymetry to quantify sediment transport rates and identify transport pathways along the ebb-tidal shoal to determine if adequate disposal capacity exists for future maintenance material placement in the Sand Island Beneficial Use Area (SIBUA).

Analysis Period: 1941 – 2015

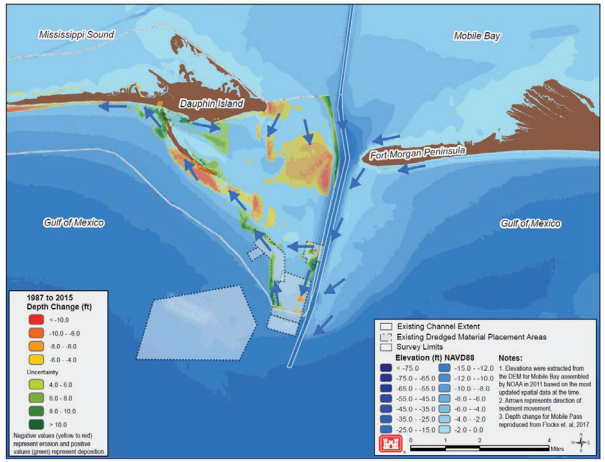
Results: Consistent sediment transport pathways are observed over the short and long-term periods. Material placed in SIBUA is in the active transport system; however, since placement in SIBUA was initiated in 1999, material has left the site at a lower rate than it has been placed in the site resulting in a need for expansion in the north/northwest direction to accommodate future needs.

Mobile Pass Bed Level Change 1941 to 2002



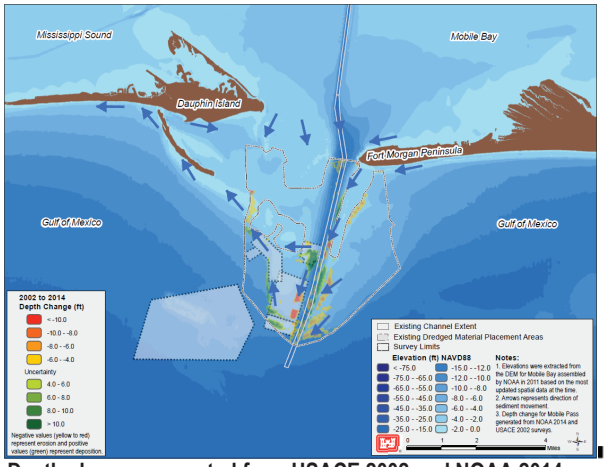
Depth change reproduced from Byrnes et. al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama"

Mobile Pass Bed Level Change 1987 to 2015



Depth change reproduced Flocks, et. al, 2017 "Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015" Open-File Report 2017–1112.

Mobile Pass Bed Level Change 2002 to 2014



Depth change generated from USACE 2002 and NOAA 2014 surveys.

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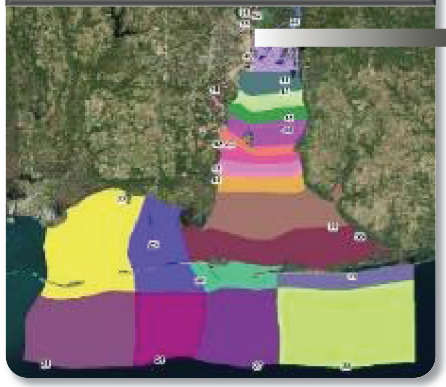
MOBILE HARBOR GRR
AQUATIC RESOURCES ASSESSMENT

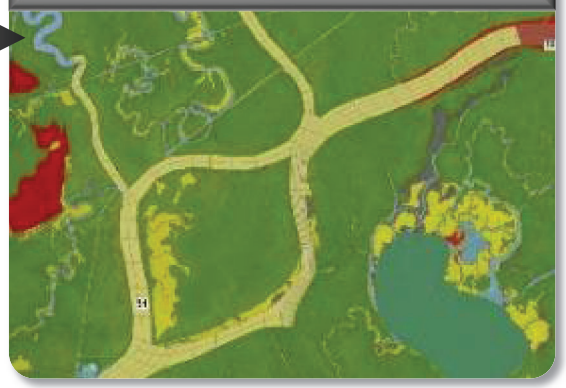
Overview

- Assessing potential impacts to wetlands, submerged aquatic vegetation, benthic invertebrates, oysters, fish
- Model outputs predicting changes in water quality (salinity, dissolved oxygen) comparing existing and post-project conditions
- Sea level rise scenario - 0.5 meter intermediate projection per USACE guidance at Dauphin Island

Model grid consists of 30 blocks & 48,000 cells

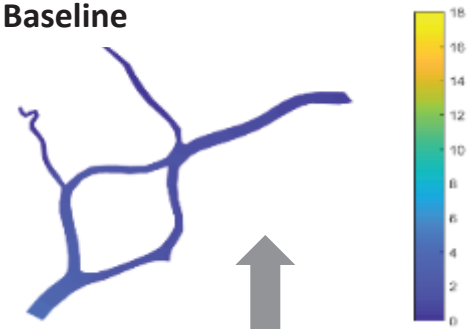


Model Block 54



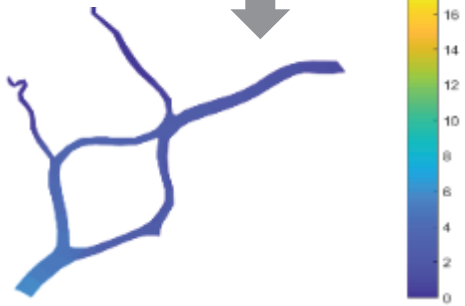
Mean Salinity - July 2010

Baseline



No Measurable Change

With Project



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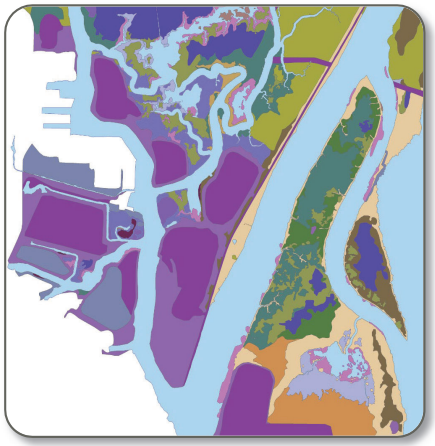
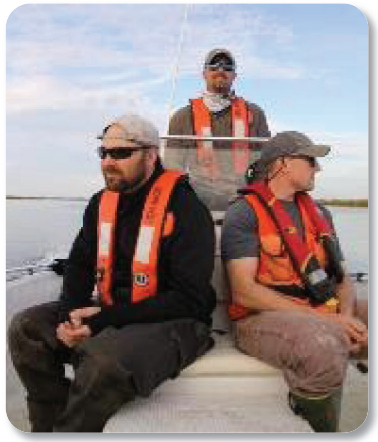
MOBILE HARBOR GRR
AQUATIC RESOURCES ASSESSMENT SUMMARY

- **No major impacts (i.e., loss of resources) anticipated for:**
  - ✓ **Wetlands**
  - ✓ **SAV**
  - ✓ **Oysters**
  - ✓ **Benthic Invertebrates**
  - ✓ **Fish**
- Project impacts remain negligible under 0.5 meter sea level rise scenario





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MOBILE HARBOR GRR
KEY RISKS/UNCERTAINTIES

Task	Risk Description	Risk Rating	Task	Risk Description	Risk Rating
Cultural Resource Surveys	(b)(5)		*Ship Simulations*	(b)(5)	
Sediment Testing			*Pipeline Crossings*		
Geotechnical data			*Vessel Generated Wave Energy (i.e., Ship Wake) Assessment*		
Disposal Capacity			*Public Acceptance*		

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MOBILE HARBOR GRR
WHAT'S NEXT

- DQC of DRAFT Report (May 2018)
- Vertical Team Teleconference for approval to release Draft Report (Jun 2018)
- Release Draft Report with NEPA for Public, Technical, Policy, and Legal Review (Jun 2018)
- Public Meeting on Draft Report (Jul 2018)
- Agency Decision Milestone (Nov 2018)

MOBILE HARBOR GRR

QUESTIONS?

US Army Corps of Engineers ®

U.S.ARMY

From:
To: (b)(6)
Cc:
Subject: Cost share for LPP on Mobile Harbor
Date: Thursday, April 26, 2018 1:05:00 PM

Draft...

(b)(6): We spoke to the sponsor for the Mobile Harbor GRR, and they may (b)(5)

(b)(5)

(b)(6)

From: (b)(6)
Date: April 25, 2018 at 8:08:33 PM EDT
To: Holland, Diana M BG USARMY CESAD (US) <Diana.M.Holland2@usace.army.mil>, (b)(6) (b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>, (b)(6) (b)(6)
Cc: (b)(6)
(b)(6)
Subject: Meeting with SEN Shelby

Ma'am/Gentlemen: Wanted to write a quick note to summarize the meeting with SEN Shelby today. First of all, a

very positive engagement - he had several staff in the meeting with him.

In general, he is very satisfied with the Corps' work on Mobile Harbor and is interested, in his role as Chairman, to assist the Corps with the funding/flexibility it needs.

Several specifics:

He does feel that the Corps needs to be more efficient and need to be able to provide more certainty (directly related to funding). The one specific issue that came up was the TSP at 49 feet. Bottom line, he believes that the plan needs to be 50 feet. We discussed the 49 feet + the widening and costs associated with both. Explained it had to do with total cost of project. He is still very interested in 50 feet and plans to discuss this with the port. We did explain that we had been working very closely with the port and also that any documentation we are currently producing would not preclude going to 50 feet at some point now or in the future. It is my impression that he is going to push for 50 feet now. I fully expect this to come up during your meeting on Monday.

He also plans to make sure that all in attendance on Monday understand the importance of continuing to move forward as quickly as possible - including Secretary James.

No due outs from the meeting - thanks so much for the very thorough discussion and info paper. NOT RELATED

NOT RELATED

v/r, Jen

(b)(6)

From:	(b)(6)
To:	
Subject:	Emailing: ASPA_USACE_Charrette.pdf
Date:	Thursday, April 26, 2018 1:50:00 PM
Attachments:	ASPA_USACE_Charrette.pdf

Your message is ready to be sent with the following file or link attachments:

ASPA_USACE_Charrette.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Alabama State Port Authority

Proposed Widening & Deepening of the Mobile Ship Channel - Economic, Safety, & Environmental Considerations

January 28 - 29, 2015
USACE Planning Charrette
www.asdd.com

Megatrends

Megatrend: macroeconomic forces that impact long-range economic, technological, and societal change

- Population Growth in the Southeast Urban Areas Will Double by 2060 (USGS - July 2014)
- Year to Year E-Commerce Sales Growth Outlook is 14% and M-Commerce Sales Growth Outlook is 23% Generating Demand for Logistics and Supply Chain Management Investments in Port-Centric Areas (Goldman Sachs Research – 2014)
- Long-range Global Demand for Steel (World Bank – July 2014) and Met Coal (EIA – May 2014) Will Moderately Increase– Port of Mobile is the 2nd Largest Met Coal Port and 2nd Largest Steel Port in the Nation
- US Manufacturing Growth is Up (The Manufacturers Alliance for Productivity and Innovation Sept. 2014): Driving Forces: Aviation/Aerospace, Automotive, Medical Equipment, Electronics - Most Ship via the Container – Port of Mobile Serves These Markets
- Long-range Demand for US Agricultural Products (USDA – Feb 2014) – Port of Mobile Serves US Poultry Exports
- Ocean Carriers' Long-range Focus is on Larger Ships, Terminal Technology and Berth Productivity (Economies of Scale and Increased Efficiency) (Journal of Commerce/PIERS: Port Productivity, July, 2014)

Port of Mobile

- **Excellent Transportation Infrastructure**
  - ✓ Connectivity to 2 Interstates & 4 US Highways / 5 Class 1 Railroads and 4-day Rail Ferry Serving Mexico / Air Cargo (FedEx & UPS) / Inland & Intracoastal Waterways
- **Full Service Seaport – 12th Largest in the U.S.***
  - ✓ 55+ Million Tons Annually Port Wide 2012*. ASPA Terminals Represented 25 Million Tons That Year
- **ASPA Growth Steadily Climbs - Records Set in 2014**
  - ✓ 29.1 Million Tons and $162.3 Million in Revenue
- **Strong Export Market**
- **Sustained Growth in Steel, Coal, Petroleum, Poultry and Containerized Cargoes**

* USACE Waterborne Commerce Statistics

Economic Impact

Economic Value of Marine Cargo & Vessel Activity

Alabama State Port Authority Terminals*

- ✓ 127,591 Jobs (direct and indirect jobs)
- ✓ $506+ million in direct and indirect tax impact
- ✓ Total Economic Value $18.7 Billion

Private Petroleum / Petroleum Products Terminals **

- ✓ 5,220 Jobs (direct and indirect jobs)
- ✓ $5.3 million in direct and indirect tax impact
- ✓ Total Economic Value $687 Million
- ✓ Supports 4 Refineries and 10% of the Nation's Petroleum Supply

* Martin Associates - October 2012
** Auburn University - September 2014


Lower Harbor – 45 ft. Draft
Serves Only the Public Terminals
Cape/Post-Panamax Ships
ASPA McDuffie Coal Terminal
ASPA Intermodal
Container Terminal /ICTF / Logistics
ASPA Pinto Steel Terminal
Upper Harbor – 40 ft. Draft
Serving Public & Private Terminals
Panamax Ships
Metals / Forest Products / Petroleum
Frozen Poultry / Grain / Coal
5 National Railroads
3 Short Line Railroads
Interstates / I-65 & I-10
Inland Waterways Via
Tennessee-Tombigbee

ASPA Capital Investments

Container Terminal* (Phase I)	$ 300,000,000
Pinto Terminal	110,000,000
McDuffie Expansions *	120,000,000
ICTF/Bridge* (Phase I)	36,000,000
Pier D Steel Warehouse *	36,000,000
Mobile Harbor Turning Basin *	33,000,000
CG Railway Terminal *	27,000,000
Land Acquisition for Intermodal Expansion / Logistics	25,000,000
Container Terminal Bridge *	18,000,000
Pier C North Terminal	18,000,000
Pier A North Warehouse	15,000,000
Freezer Terminal *	12,000,000
Grain Elevator Expansion *	10,000,000
Pier E Expansion	9,000,000
Total Investment	$ 769,000,000

* Projects Received Private or Federal Funding Contributions

Note: Not an All-Inclusive Listing of ASPA Capital Investments

Note: Does Not Include the ASPA 5-Year Capital Program

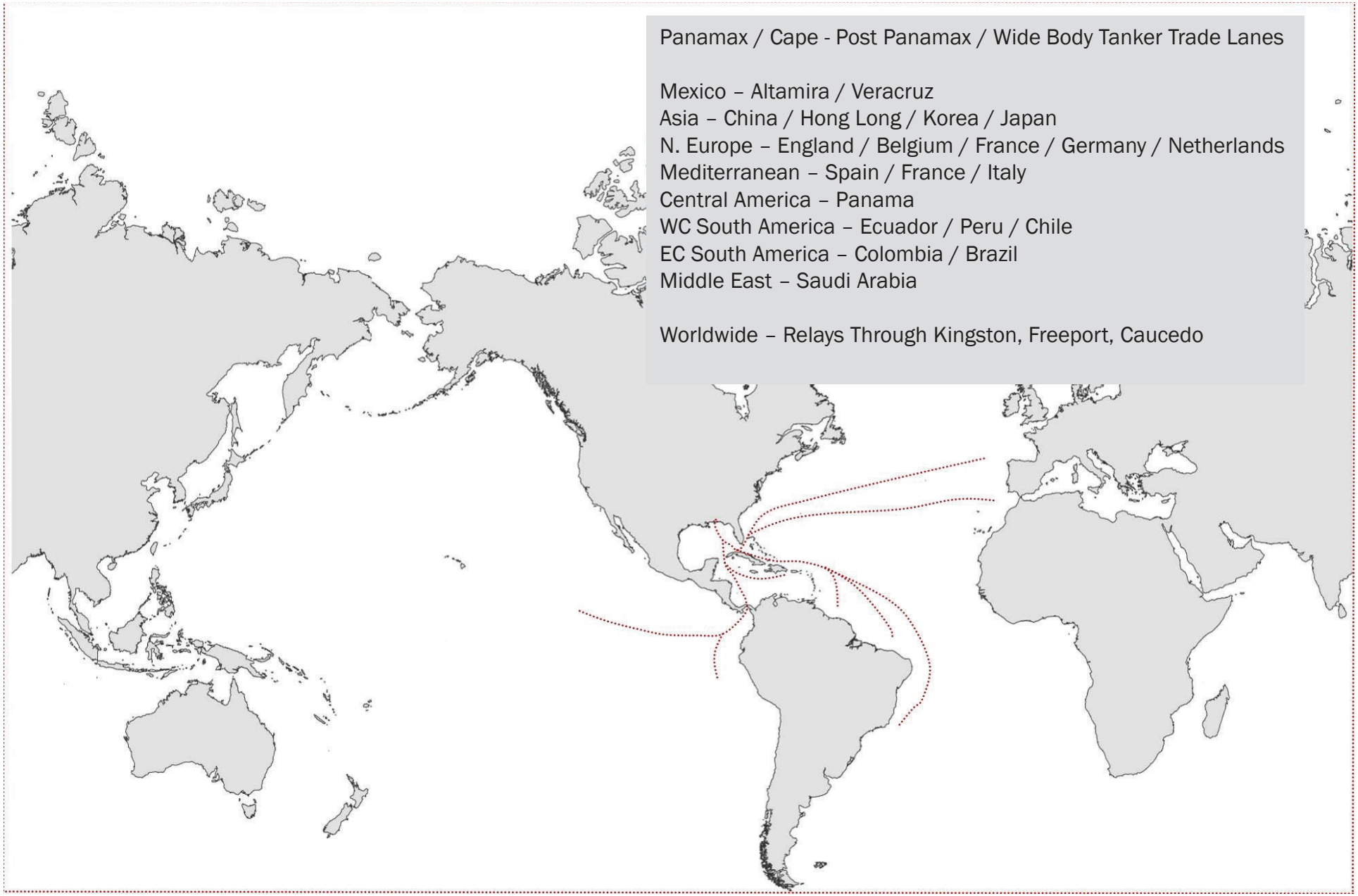
ASPA Five Year Capital Program

	Est. Project Cost	Schedule
▪ Container Terminal Phase II (Underway)	$68M	2015-2016
▪ Garrows Bend Logistic Park (2 Active Prospects)	$57M	2015-2017
▪ New Shiploader/Rail Loop Track/Yard 5 @ McDuffie Coal Terminal	$70M	2015-2017
▪ Intermodal Rail (ICTF – Phase II) Truck/Vehicle Bridge Connector	$44M	2015-2018
▪ Automobile RO-RO Terminal	$65M	2015-2018
▪ Middle Bay Port Pier/Yard	$21M	2015-2018
▪ Interchange Rail Yard Expansion	$5M	2015-2018
▪ Axis Inland Dock Expansion	$5M	2015-2018
Total Cost	**$335M**	

Channel Widening & Deepening

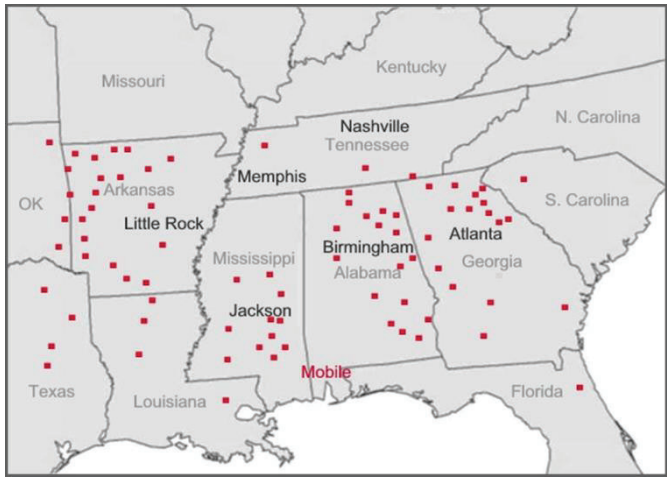
Why Now and What are the Issues?

Port of Mobile's Trade Lanes



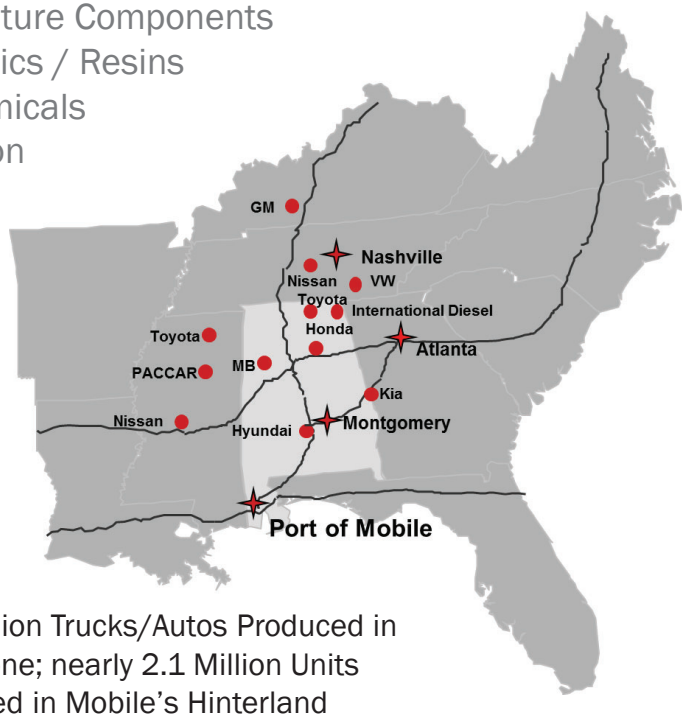
Port of Mobile's Larger Containerized Cargo Markets

201 Distribution Centers Located in Mobile's Hinterland



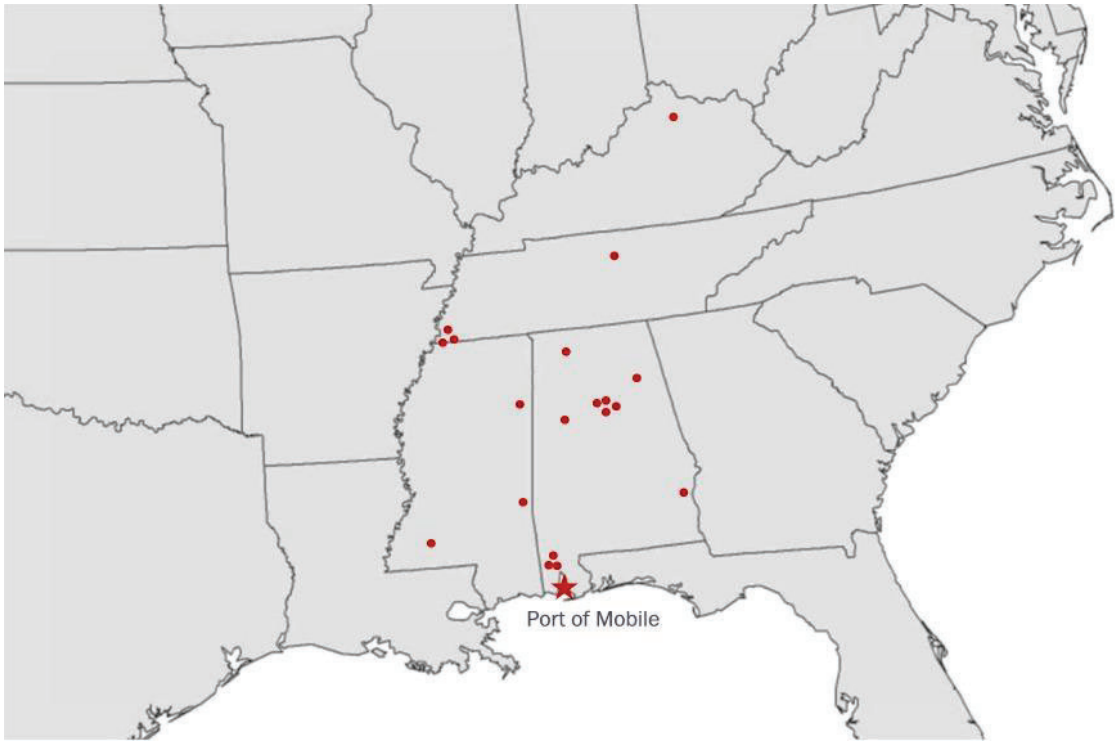
Over 12.5 Million Tons of Poultry Produced in the Southeast

- **APM Terminals Mobile** Opened in 2008
- Phase II and ICTF Investments Underway
- APM Terminals Mobile Posted a 5% Gain in Business in FY2014 (232,464 TEUs)
- Previous Years – Steady Double Digit Growth
- Other Markets Served
  - ✓ Forest Products
  - ✓ Furniture Components
  - ✓ Plastics / Resins
  - ✓ Chemicals
  - ✓ Cotton



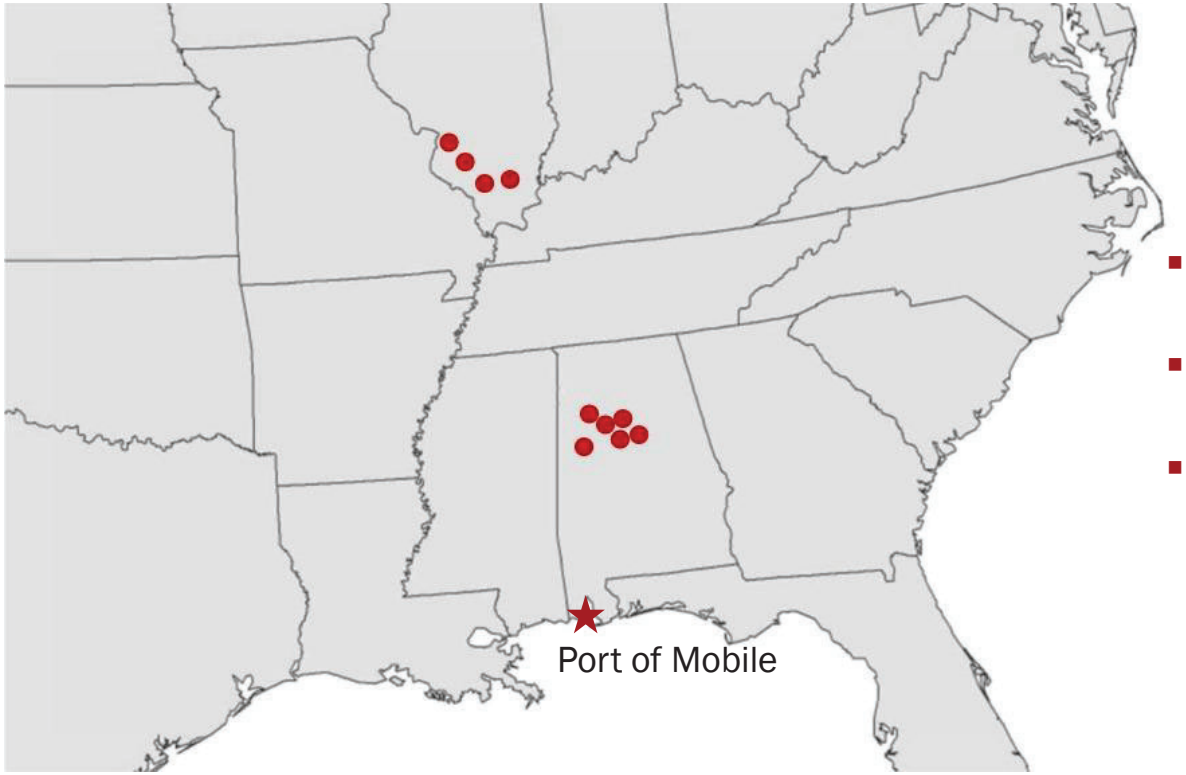
Nearly 1 Million Trucks/Autos Produced in Alabama Alone; nearly 2.1 Million Units Manufactured in Mobile's Hinterland

Port of Mobile's Metals Markets



- Mobile Serves the SE U.S. Iron/Steel/Non-Ferrous Metals Markets (London Metal Exchange Port)
- Mobile Has Emerged as the 2nd Largest Steel Port in the U.S.
- Metals Accounted for 5,912,098 Tons in FY2014
- 3.8 Million Tons Attributed to Steel Through **ASPA's Pinto Terminal** in FY2014 (52% Gain Over Previous Fiscal Year)

Port of Mobile's Coal Markets



- Mobile Serves Alabama and Illinois Basin Coal Production
- 18.4 Million Tons Handled in FY2014
- 16.6 Million Tons Alone at **McDuffie Terminal** (14% Gain Over Previous Fiscal Year)

Vessel Size & Utilization

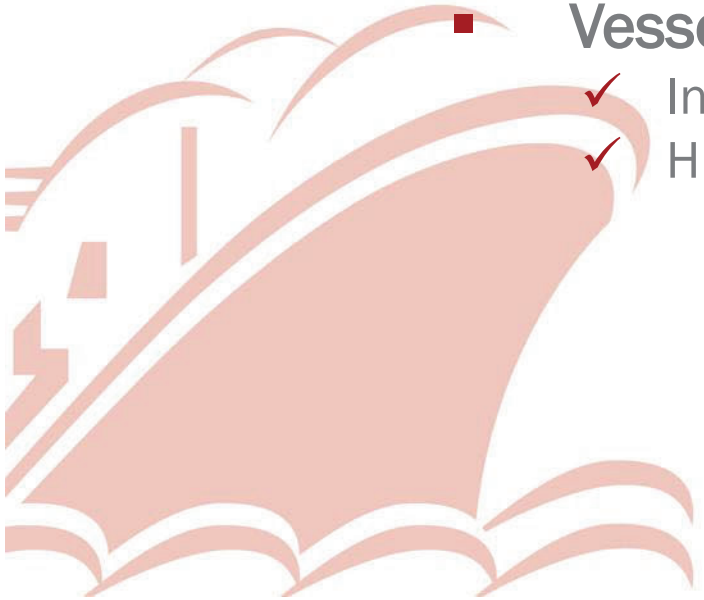
A Deeper Channel at Mobile Improves Shipper Efficiency and Lower Costs

- Pinto Steel Shipments - Panamax / Some Post-Panamax
  - ✓ At 45' Draft, Shippers Cannot Fully Utilize Vessel Capacity
- McDuffie Coal Shipments – Currently Serving Cape / Post-Panamax Vessels
  - ✓ At 45' Draft, Shippers Cannot Fully Utilize Vessel Capacity
  - ✓ One Shipper Lightering Offshore Today
  - ✓ Coal Shippers Forecast Availability of Deeper Drafts Along with Expanded Panama Canal Would Increase U.S. Coal Competitiveness in Asia
- APM Terminals Mobile Shipments – Currently Serving Post Panamax Vessels
  - ✓ 2/3rd of the Vessels Calling Mobile are Restricted by Depth
  - ✓ 2/3rd of the Vessels Calling Mobile are Restricted to One-Way or Daylight Transit
  - ✓ CMA CGM Asian Service Will Begin Using 8000 TEU Ships at Mobile Upon Panama Canal Opening – Mobile's 45 ft. Draft Limits Full Utilization of Vessel Capacity and Reduces the Port's Slot Allocation
  - ✓ For It's Three Largest Carriers, Mobile is the Last Port of Call Prior to Miami (soon to be at 50 ft.) and Freeport (currently at 52 ft.). Mobile's 45 ft. Draft Contributes to Inefficient Vessel Utilization
    - Underserving Shipper Demand at Mobile – Turning Cargo Away
    - Increased Shipper and Ocean Carrier Costs at Mobile is Shifting Containers to East & West Coast Ports

Navigation & Safety

A Wider Channel at Mobile Improves Safety, Transit Efficiency Port-wide and Lowers Vessel Costs

- Cape / Post-Panamax / Wide-body Tanker Traffic On the Rise
  - ✓ Delays Impact Panamax Ships Calling Today
- Daylight / One-Way Traffic Restrictions (400 ft. Wide Channel)
- Vessel Delays
  - ✓ Increased Vessel & Shipper Cost
  - ✓ Higher Costs Impact US Competitiveness



Environmental Considerations

Sediment Management Opportunities

- Proposed Upper Bay Beneficial Use Area
- Bay Hypoxic Conditions – Ecosystem Restoration
- Marsh Creation
- Shoreline Restoration
- Beach Re-nourishment

Alabama State Port Authority

Thank You!

James K. Lyons, Chief Executive Officer
Alabama State Port Authority
251-441-7200 / jlyons@asdd.com

From:
To: (b)(6)

Subject: FW: Meeting with SEN Shelby
Date: Thursday, April 26, 2018 8:53:00 AM

All: See e-mail below on Mobile Harbor.

(b)(6): I think we are going to be asked for another update on the economics.

(b)(6) Maybe we need to go ahead and ensure the borings cover us for 50' depth. Can't think of any other areas where a change to 50' could impact us. At this time.

(b)(6)

From (b)(6)
Date: April 25, 2018 at 8:08:33 PM EDT
To: Holland, Diana M BG USARMY CESAD (US) <Diana.M.Holland2@usace.army.mil>, (b)(6) (b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>, (b)(6) (b)(6)
Cc: (b)(6) (b)(6)
Subject: Meeting with SEN Shelby

Ma'am/Gentlemen: Wanted to write a quick note to summarize the meeting with SEN Shelby today. First of all, a very positive engagement - he had several staff in the meeting with him.

In general, he is very satisfied with the Corps' work on Mobile Harbor and is interested, in his role as Chairman, to assist the Corps with the funding/flexibility it needs.

Several specifics:

He does feel that the Corps needs to be more efficient and need to be able to provide more certainty (directly related to funding). The one specific issue that came up was the TSP at 49 feet. Bottom line, he believes that the plan needs to be 50 feet. We discussed the 49 feet + the widening and costs associated with both. Explained it had to do with total cost of project. He is still very interested in 50 feet and plans to discuss this with the port. We did explain

that we had been working very closely with the port and also that any documentation we are currently producing would not preclude going to 50 feet at some point now or in the future. It is my impression that he is going to push for 50 feet now. I fully expect this to come up during your meeting on Monday.

He also plans to make sure that all in attendance on Monday understand the importance of continuing to move forward as quickly as possible - including Secretary James.

No due outs from the meeting - thanks so much for the very thorough discussion and info paper NOT RELATED

NOT RELATED

v/r, Jen

(b)(6)

From: (b)(6)
To:
Subject: FW: Itinerary for Hon. R.D. James Mobile Visit
Date: Thursday, April 26, 2018 1:57:00 PM
Attachments: 1. ASA(CW) Visit (30 April 2018) v1.docx
c. Briefing list.docx

(b)(5)

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 1:41 PM
To: (b)(6);
DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>; (b)(6)
(b)(6)
Subject: Itinerary for Hon. R.D. James Mobile Visit

All,
Please find the attached itinerary and participant list for the various activities. When available (no later than mid-day tomorrow), I will send the read-aheads for the Mobile Harbor Update and the Mobile District Information Brief. The lunch at Gulf Quest will be catered sandwiches and soft drinks. The Port Authority is not authorized to provide a meal to USACE personnel so please bring cash (USACE only). I will publish the cost shortly. Let me know if you have any questions. Thank you.

Very Respectfully,

(b)(6)

US Army Corps of Engineers

Assistant Secretary of the Army (Civil Works) Visit Read-ahead

Mobile Harbor Tour / Mobile District Visit

30 April 2018

Mobile, AL

US Army Corps of Engineers

ASST. SEC ARMY (CW)
EVENTS READ-AHEAD
PRINTED:

EVENT SUBJECT: Mobile Harbor Tour / Mobile District Visit

DATES: 30 April 2018

LOCATIONS: Mobile, AL

PURPOSES:

- Mobile Harbor Update
- Mobile Harbor Tour
- Mobile District Visit

TRAVEL PARTY

Hon. R.D. James	ASA (CW)
LTC Joseph Goetz	Military Assistant to the ASA(CW)
Mr. Tyler Owens	Clerk, Senate Appropriations Committee
Ms. Jen Armstrong	Professional Staff Member, Senate Appropriations Committee
	Escort Officer
Mr. James Dalton, SES	Director of Civil Works, HQUSACE
Mr. Al Lee, SES	Director of Programs, SAD
Mr. Neil Purcell	Chief Counsel, SAD

TIME ZONE: Central Daylight Time (**CDT**) & Eastern Daylight Time (**EDT**)

UNIFORM:

Date	Occasion	Uniform
30 Apr	All	ASU-B (Short Sleeve, Open Collar)

WEATHER (TBD):

Date	Location	Forecast
30 Apr	Atlanta, GA	Sunny, 69 / 50
30 Apr	Mobile, AL	Mostly Sunny, 83 / 63

TABLE OF CONTENTS / LIST OF ATTACHMENTS:

TAB	ACTIVITY
a.	Mobile Harbor Brief
b.	Mobile District Information Brief
c.	Briefing Audience Lists / Vessel Manifest

SAM POC: Eric North
(b)(6)

Prepared by: Eric North
Version: 1

US Army Corps of Engineers

ASST. SEC ARMY (CW)
EVENTS READ-AHEAD
PRINTED:

SYMBOL LEGEND:

✈	Air Transportation
🚌	GOV
👁	Site Visit

ITINERARY:
MON, 30 Apr, Washington, DC / Mobile, AL
(All Times are Local) **EDT in Blue** / **CDT in Green**

	TIME		Activity	Comments
✈	0800	0936	Fly to **Mobile, AL**	MILAIR
	0936	0945	Welcome / Move to **Signature Conference Room**	
	0945	1045	**Mobile Harbor GRR Update**	
🚌	1045	1100	**GOV to Gulf Quest**	
	1100	1105	Meet **Senator Shelby and Jimmy Lyons**	Board MV Irvington
👁	1105	1220	**Mobile Harbor Tour**	
	1220	1225	Walk to **Gulf Quest Conference Room**	
	1225	1300	**Lunch with Senator and Port Authority**	
🚌	1300	1315	GOV to **Mobile District Headquarters**	
	1315	1430	**Mobile District Information Brief**	
🚌	1430	1450	GOV to **Mobile Downtown Airport**	
	1450	1515	**Deployable Tactical Operations System Brief/Tour**	
	1515	1530	Preflight activities	
✈	1530	1848	Fly to **Joint Base Andrews**	MILAIR

COORDINATION:

SAM
COL Jim DeLapp, CDR
Pete Taylor, Deputy for Programs and Project Management
Pat Robbins, Legislative Affairs Officer
Eric North, Executive Assistant

(b)(6)

Mobile Harbor Brief

1. Hon. R.D. James	ASA (CW)
2. LTC Joseph Goetz	Military Assistant to the ASA (CW)
3. Mr. Tyler Owens	Clerk, Senate Appropriations Committee
4. Ms. Jen Armstrong	Professional Staff Member, Senate Appropriations Committee
5. Mr. James Dalton, SES	Director of Civil Works, HQUSACE
6. CPT Catie Shutters	Budget Liaison Escort Officer
7. Mr. Al Lee, SES	Director of Programs, SAD
8. Mr. Neil Purcell	Chief Counsel, SAD
9. COL DeLapp	Commander, SAM
10. Mr. Pete Taylor	Deputy for Programs and Project Management, SAM
11. Mr. David Newell	Civil Works Project Manager, SAM
12. Mr. Justin McDonald	Senior Engineering Technical Lead for Civil Works

Van passengers

Van #1

Driver: Eric North	Executive Assistant, SAM
1. COL DeLapp	Commander, SAM
2. Hon. R.D. James	ASA (CW)
3. LTC Joseph Goetz	Military Assistant to the ASA (CW)
4. Mr. David Newell	Civil Works Project Manager, SAM

Van #2

Driver: (b)(6)	
1. Mr. Pete Taylor	Deputy for Programs and Project Management, SAM
2. Mr. Tyler Owens	Clerk, Senate Appropriations Committee
3. Ms. Jen Armstrong	Professional Staff Member, Senate Appropriations Committee
4. CPT Catie Shutters	Budget Liaison Escort Officer

Van#3

Driver: (b)(6)	
1. Mr. James Dalton, SES	Director of Civil Works, HQUSACE
2. Mr. Al Lee, SES	Director of Programs, SAD
3. Mr. Neil Purcell	Chief Counsel, SAD
4. Mr. Justin McDonald	Senior Engineering Technical Lead for Civil Works

Boat passengers

1. Hon. Richard Shelby	United States Senator
2. Hon. R.D. James	ASA (CW)
3. Mr. James Dalton, SES	Director of Civil Works, HQUSACE
4. Mr. Alvin “Al” Lee, SES	Director of Programs, SAD
5. LTC Joseph Goetz	Military Assistant to the ASA (CW)
6. Ms. Jen Armstrong	Professional Staff Member, Senate Appropriations Committee
7. Ms. Tyler Owens	Clerk, Senate Appropriations Committee
8. CPT Catie Shutters	Budget Liaison Escort Officer
9. Ms. Katie Britt	Chief of Staff, Office of Senator Shelby

10. Mr. Morgan Carter	Legislative Director, Office of Senator Shelby
11. Mr. Jimmy Lyons	Director & CEO, Alabama State Port Authority
12. Ms. Judith Adams	Vice President, Marketing, Alabama State Port Authority
13. Mr. Horace Horn	Chairman of the Board, Alabama State Port Authority / Vice President, External Affairs, PowerSouth
14. Hon. Sandy Stimpson	Mayor of Mobile
15. COL DeLapp	Commander, SAM
16. Mr. Pete Taylor	Deputy for Programs and Project Management, SAM
17. Mr. Wynne Fuller	Chief, Operations Division, SAM
18. Mr. David Newell	Civil Works Project Manager, SAM
19. Mr. Justin McDonald	Senior Engineering Technical Lead for Civil Works, SAM
20. Mr. Pat Robbins	Legislative Affairs Officer, SAM

Mobile District Information Brief

1. Hon. R.D. James	ASA (CW)
2. LTC Joseph Goetz	Military Assistant to the ASA (CW)
3. Mr. Tyler Owens	Clerk, Senate Appropriations Committee
4. Ms. Jen Armstrong	Professional Staff Member, Senate Appropriations Committee
5. Mr. James Dalton, SES	Director of Civil Works, HQUSACE
6. CPT Catie Shutters	Budget Liaison Escort Officer
7. Mr. Al Lee, SES	Director of Programs, SAD
8. Mr. Neil Purcell	Chief Counsel, SAD
9. COL DeLapp	Commander, SAM
10. Mr. Pete Taylor	Deputy for Programs and Project Management, SAM
11. Ms. Kris Mullins	Chief of Staff, SAM
12. Mr. Wynne Fuller	Chief, Operations Division, SAM
13. Mr. Doug Otto	Chief, Engineering Division, SAM
14. Mr. Curtis Flakes	Chief, Planning and Environment Division, SAM
15. Mr. James Hathorn	Chief, Water Management Section, SAM
16. Mr. Pat Robbins	Legislative Affairs Officer, SAM

From: (b)(6)
To:
Subject: FW: Mobile Harbor Placemat_30 Apr 2018v3.pptx
Date: Thursday, April 26, 2018 12:12:00 PM

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 12:00 PM
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

Yes. Met with team this morning. We know bOth the initial construction cost and maintenance. Already had initial conversation with her.

From: (b)(6)
Date: April 26, 2018 at 11:40:27 AM CDT
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

(b)(6) is going to call you. Do you know the cost for just the widening if they decided to go with 50 ft, widener as an LPP?

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 11:39 AM
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

We decided to go with the very latest costs.

From (b)(6)
Date: April 26, 2018 at 11:15:22 AM CDT
To: (b)(6)

Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

I like it, might make one small wording change. Why are the costs slightly different than what we had in the TSP brief?
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 10:08 AM
To
Cc (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

(b)(6): Placemat with (b)(6) comments incorporated.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 4:51 PM
To:
Cc: (b)(6)
Subject: Mobile Harbor Placemat_30 Apr 2018v3.pptx

Latest placemat attached...

(b)(6)

From:
To: (b)(6)

Subject: FW: Mobile Harbor Placemat_30 Apr 2018v5.pptx
Date: Thursday, April 26, 2018 10:20:00 AM
Attachments: Mobile Harbor Placemat_30 Apr 2018v5.pptx

Latest placemat for the Sen. Shelby/ASA Meeting next Monday attached. Please let me know if you see any critical flaws...

(b)(6)

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

The US Army Corps of Engineers is studying the feasibility of enlarging the size of the channel leading to and from port facilities located in Mobile Bay. The non-federal sponsor is the Alabama State Port Authority. In 1986, Congress authorized various modifications to Mobile Harbor including deepening and widening the majority of the channel to 55 feet deep and 550 feet wide. The GRR will be a 4 year, $7.8M effort. Along with the GRR, Mobile District is preparing an integrated Supplemental Environmental Impact Statement (SEIS).

TENTATIVELY SELECTED PLAN

- ❑ Channel Deepening: 49 feet*
- ❑ Channel Widening: 3 mi. long, 100 ft wide* (A)
- ❑ Turning Basin Modification (B)
- ❑ Bar Channel Bend Easing (C)

* Environmental impact analysis is based on a 50 foot depth and 100 foot widener for a distance of 5 miles

Proposed Placement Locations

- ❑ Formerly mined relic shell area (1)
- ❑ Sand Island Beneficial Use Area (SIBUA) (2)
- ❑ Pelican/Sand Island Complex (3)
- ❑ Ocean Dredged Material Disposal Site (ODMDS) (4)

MOBILE BAY AREA OF INTEREST

COST AND BENEFIT SUMMARY

	47'	48'	49'	50'	51'
Total Project Cost	$199M	$276M	$351M	$430M	$548M
Net Benefits	$13.9M	$21.3M	$28.8M	$33.9M	$37.8M
BCR	2.7	2.9	3.0	2.9	2.8

FUNDING STATUS (Federal)

	FY15	FY16	FY17	FY18	FY19	TOTAL
Scheduled	$0.6M	$1.5M	$1.7M	$2.1M	$0	$5.9M

ENVIRONMENTAL CONSIDERATIONS

COASTAL PROCESSES

- ❑ Hydrodynamic and Water Quality
- ❑ Coastal Sediment Transport
- ❑ Estuarine (In-Bay) Sediment Transport
- ❑ Ship Wake Effects

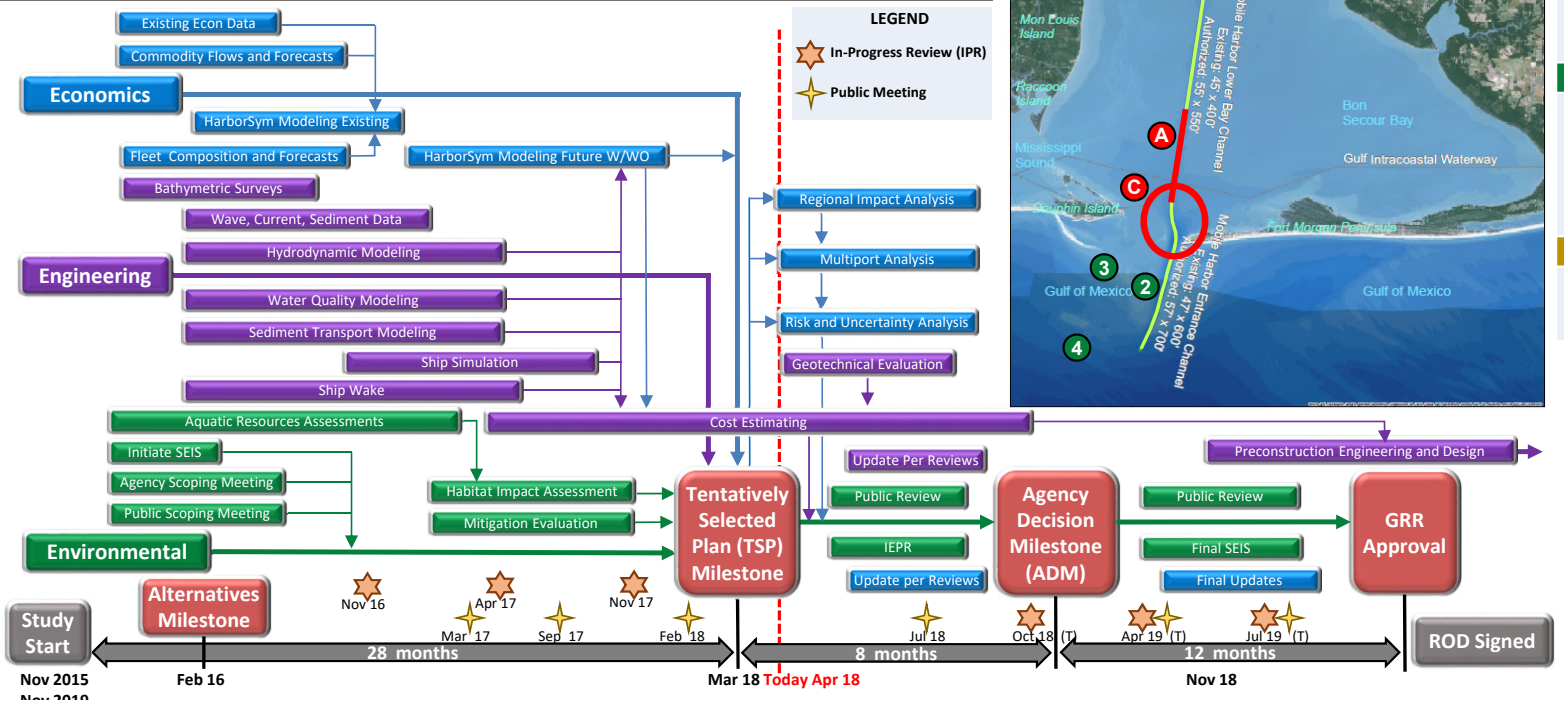
AQUATIC RESOURCE ASSESSMENT

- ❑ Fish
- ❑ Oysters
- ❑ Submerged Aquatic Vegetation
- ❑ Wetlands
- ❑ Benthics

OTHER

- ❑ Cultural Resources
- ❑ Environmental Justice
- ❑ Air/Noise Pollution

SCHEDULE & MAJOR MILESTONES



US Army Corps of Engineers

U.S.ARMY

From:
To: (b)(6)

Subject: FW: Mobile Harbor Placemat_30 Apr 2018v7.pptx
Date: Thursday, April 26, 2018 4:40:00 PM
Attachments: Mobile Harbor Placemat_30 Apr 2018v6.pptx
Mobile Harbor Placemat_30 Apr 2018v7.pdf

Colonel DeLapp edits...

(b)(6)

-----Original Message-----
From: DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Sent: Thursday, April 26, 2018 3:20 PM
To:
Cc: (b)(6)
USARMY CESAM (US) <Eric.J.North@usace.army.mil>
Subject: FW: Mobile Harbor Placemat_30 Apr 2018v6.pptx

(b)(6),

Attached is the approved GRR Placemat for use Monday AM. Any electronic distribution should be .PDF only. Hard copies will be 11x17 printed.

v/r
COL D

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 1:54 PM
To: DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>
Subject: FW: Mobile Harbor Placemat_30 Apr 2018v6.pptx

Here's the placemat with my edits incorporated.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)

Sent: Thursday, April 26, 2018 1:47 PM
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v6.pptx

Placemat with updated funding status attached.

-----Original Message-----
From: (b)(6)
Sent: Thursday, April 26, 2018 10:08 AM
To:
Cc: (b)(6)
Subject: RE: Mobile Harbor Placemat_30 Apr 2018v3.pptx

(b)(6): Placemat with (b)(6) comments incorporated.

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 4:51 PM
To:
Cc: (b)(6)
Subject: Mobile Harbor Placemat_30 Apr 2018v3.pptx

Latest placemat attached...

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Proposed Placement Locations

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- ❑ Sand Island Beneficial Use Area (SIBUA) (2)
- ❑ Pelican/Sand Island Complex (3)
- ❑ Ocean Dredged Material Disposal Site (ODMDS) (4)

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BCR	2.7	2.9	3.0	2.9	2.8

FUNDING STATUS (Federal)

	FY15	FY16	FY17	FY18	FY19	TOTAL
Appropriated	$0.6M	$1.5M	$1.7M	$0	$0	$3.8M
Anticipated				$2.1M		$2.1M
Total Federal						$5.9M

ENVIRONMENTAL CONSIDERATIONS

COASTAL PROCESSES

- ❑ Hydrodynamic and Water Quality
- ❑ Coastal Sediment Transport
- ❑ Estuarine (In-Bay) Sediment Transport
- ❑ Ship Wake Effects

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OTHER

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- ❑ Environmental Justice
- ❑ Air/Noise Pollution

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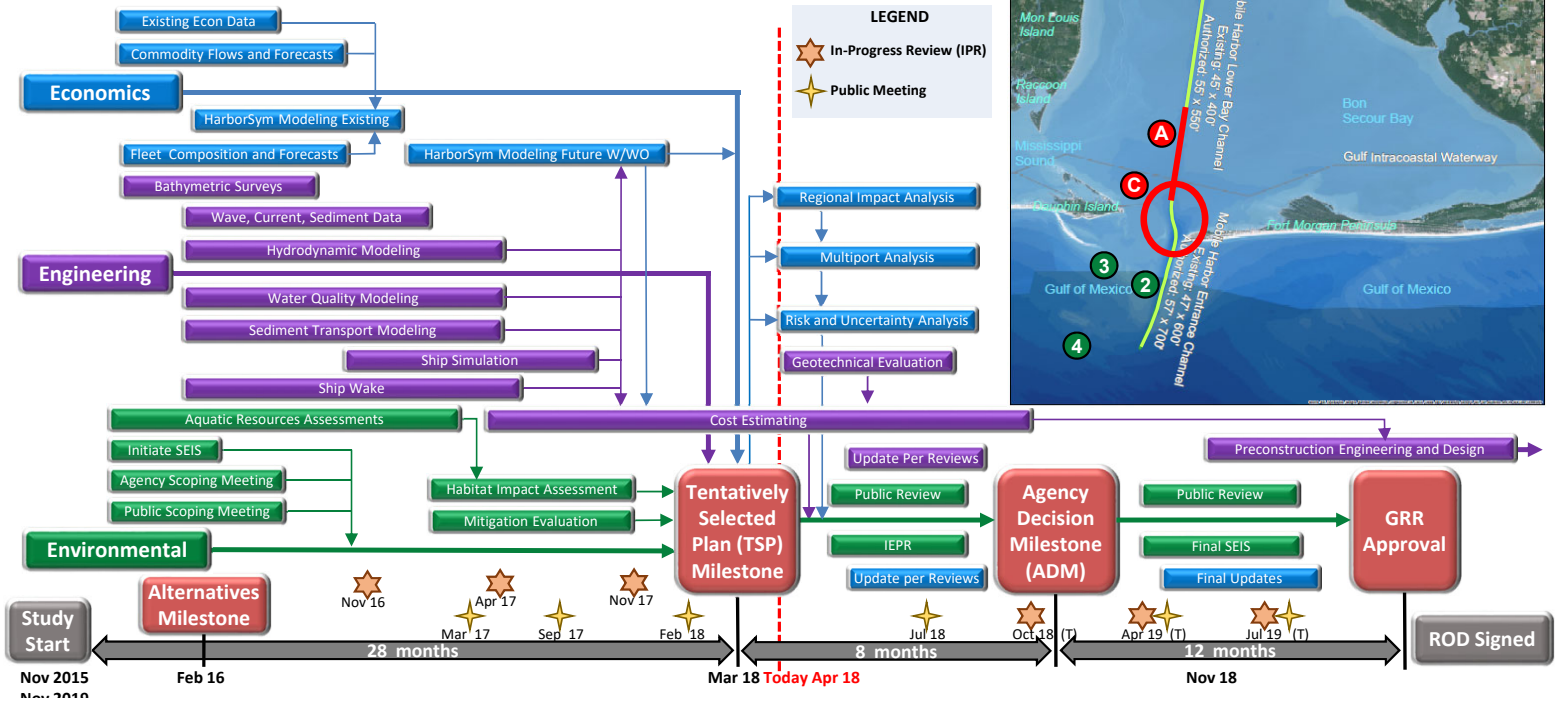

US Army Corps of Engineers

U.S.ARMY

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

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PROPOSED PLACEMENT AREAS

1. Formerly mined relic shell area
2. Sand Island Beneficial Use Area (SIBUA)
3. Pelican/Sand Island Complex
4. Ocean Dredged Material Disposal Site (ODMDS)

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Anticipated				$2.1M		$2.1M
Total Federal						$5.9M

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COASTAL PROCESSES

- ✓ Hydrodynamic and Water Quality
- ✓ Coastal Sediment Transport
- ✓ Estuarine (In-Bay) Sediment Transport
- ✓ Ship Wake Effects

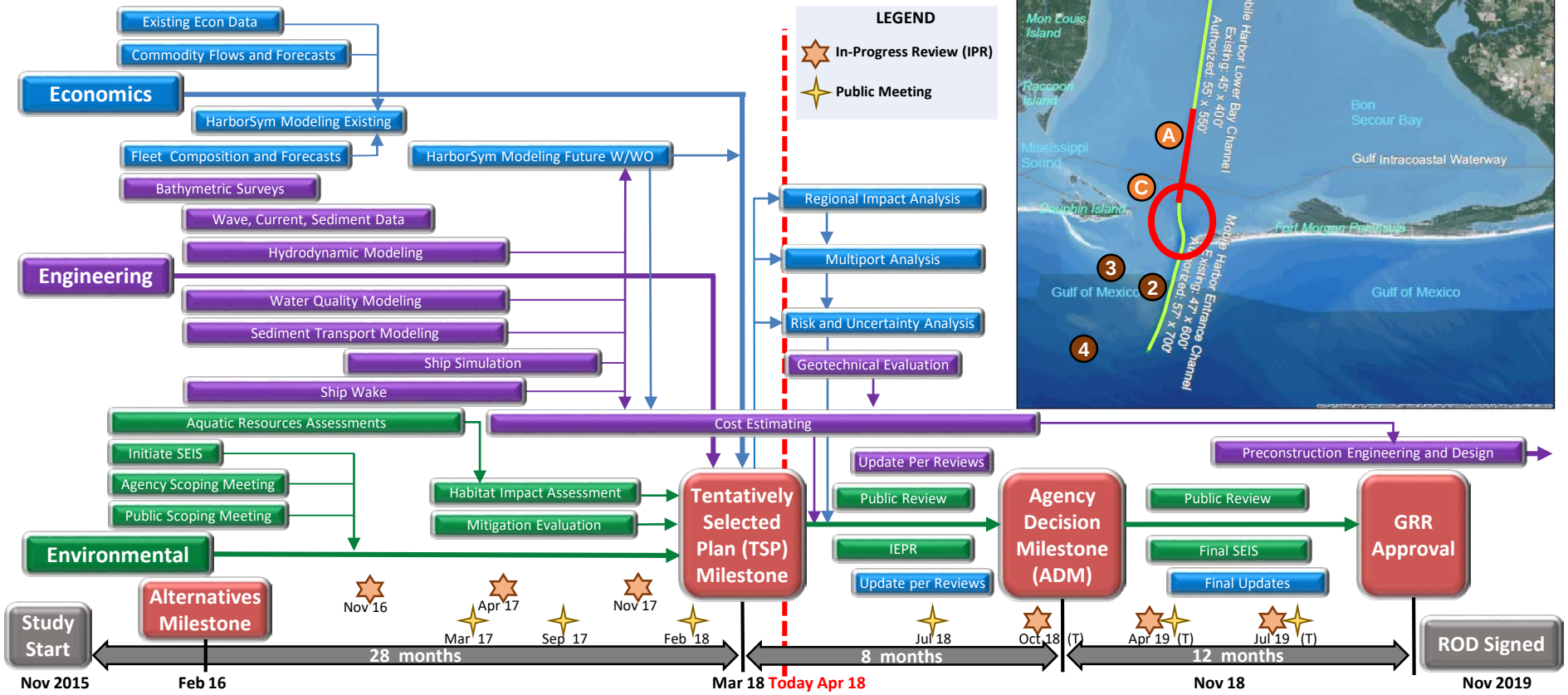
AQUATIC RESOURCE ASSESSMENT

- ✓ Fish
- ✓ Oysters
- ✓ Submerged Aquatic Vegetation
- ✓ Wetlands
- ✓ Benthics

OTHER

- ✓ Cultural Resources
- ✓ Environmental Justice
- ✓ Air/Noise Pollution

SCHEDULE & MAJOR MILESTONES



US Army Corps of Engineers

U.S.ARMY

Point of Contact: David Newell
Mobile District

Updated as of: 26 April 2018

From:	(b)(6)
To:	
Subject:	Mobile Harbor Placemat_30 Apr 2018v4.pptx
Date:	Thursday, April 26, 2018 9:58:00 AM
Attachments:	Mobile Harbor Placemat_30 Apr 2018v4.pptx

Please do quick check before I send to (b)(6)..

Page 2 redacted for the following reason:
- -
(b)(5)

From:
To:
Cc: (b)(6)

Subject: Update on Cost share for LPP on Mobile Harbor
Date: Thursday, April 26, 2018 1:45:00 PM

(b)(6) (b)(6) met with (b)(6) on the phone this morning in regards to the LPP. The group agreed that, as an LPP, the sponsor would be responsible for 100% of the costs for the additional 1' of depth along the length widener as well as the associated maintenance of the additional foot of depth over the life of the project. The rest of the project would be cost shared at the 75/25% cost share. (b)(6) is going to discuss this issue with (b)(6) this afternoon to ensure that he concurs.

In regards to the Draft Report, we will present the tsp, however, we will include language that we are continuing to evaluate the economics and there is the potential that the sponsor could pursue and LPP, either of which could lead to a 50' deepening.

(b)(6) are going to meet with (b)(6) to get information to better determine the cost and schedule to update the economics.

(b)(6)

From: (b)(6)
Date: April 25, 2018 at 8:08:33 PM EDT
To: Holland, Diana M BG USARMY CESAD (US) <Diana.M.Holland2@usace.army.mil>, (b)(6) (b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>, (b)(6) (b)(6)
Cc: (b)(6) (b)(6)
Subject: Meeting with SEN Shelby

Ma'am/Gentlemen: Wanted to write a quick note to summarize the meeting with SEN Shelby today. First of all, a very positive engagement - he had several staff in the meeting with him.

In general, he is very satisfied with the Corps' work on Mobile Harbor and is interested, in his role as Chairman, to assist the Corps with the funding/flexibility it needs.

Several specifics:

He does feel that the Corps needs to be more efficient and need to be able to provide more certainty (directly related to funding). The one specific issue that came up was the TSP at 49 feet. Bottom line, he believes that the plan needs to be 50 feet. We discussed the 49 feet + the widening and costs associated with both. Explained it had to do with total cost of project. He is still very interested in 50 feet and plans to discuss this with the port. We did explain that we had been working very closely with the port and also that any documentation we are currently producing would not preclude going to 50 feet at some point now or in the future. It is my impression that he is going to push for 50 feet now. I fully expect this to come up during your meeting on Monday.

He also plans to make sure that all in attendance on Monday understand the importance of continuing to move forward as quickly as possible - including Secretary James.

No due outs from the meeting - thanks so much for the very thorough discussion and info paper. NOT RELATED

NOT RELATED

(b)(6)

From:
To: (b)(6)

Subject: FW: Dauphin Island.pptx
Date: Friday, April 27, 2018 12:58:00 PM
Attachments: Mobile Harbor Placemat_30 Apr 2018v8.pptx

Let's meet at 1:30 in the small conference room to discuss the attached.

(b)(6)

-----Original Message-----
From: DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Sent: Friday, April 27, 2018 12:52 PM
To:
Cc: (b)(6)
(b)(6)
Subject: RE: Dauphin Island.pptx

(b)(6)

Attached is the updated slide, page 2 should be printed on the back (two-sided). Please review what I have and also if possible, (b)(6) should review. I want to keep simple, but have some graphics to be able to talk from. Read the narrative in the upper left corner as well.

Please have hard copies 11x17 for Monday.

Thanks
COL D

-----Original Message-----
From: (b)(6)
Sent: Friday, April 27, 2018 9:49 AM
To: DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>
Subject: FW: Dauphin Island.pptx

Attached...

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 3:00 PM
To:
Cc: (b)(6)
(b)(6) DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil>; (b)(6)
(b)(6)

(b)(6)
Subject: FW: Dauphin Island.pptx

(b)(6) -- attached are three slides from our latest public engagement that provide graphics on sediment transport that incorporate the latest USGS report...also shows the revised location COL DeLapp described that we're considering for placement of O&M material. Let me know if you need more.
(b)(6)

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Wednesday, April 25, 2018 2:14 PM
To: (b)(6)
(b)(6)
Subject: RE: Dauphin Island.pptx

(b)(6)

Per our discussion, I rearranged the slides (i.e., moved the dredged material placement slide to the end). The take home message for each one is shown below. Let me know if you have any questions.

Slide 1 - The USGS and ERDC conducted sediment transport modeling to evaluate possible effects of widening deepening the channel on sediment transport in Mobile Bay and on the ebb-tidal shoal/nearshore coastal areas. Bottom line is we expect minimal changes to sediment transport; however, we do expect an increase of up to 15% in annual shoaling (which is common when we widen/deepen a channel)

Slide 2 - Since we expect an increase in annual shoaling , we looked at the transport rates over long and short term periods (1941 - 2002, 1987 - 2015, and 2002 - 2014) around our current placement area (i.e., the Sand Island Beneficial Use Area (SIBUA)) to determine if we have capacity to handle the expected increase in material. Bottom line is we don't have capacity in the existing SIBUA to handle our current or future placement needs; therefore, we need expand the site to the north/northwest to ensure we have adequate capacity for the next 20 yrs (required by USACE guidance).

Slide 3 - A rough idea of the proposed SIBUA northwest extension is shown.

(b)(6)

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

The US Army Corps of Engineers is studying the feasibility of enlarging the size of the channel leading to and from port facilities located in Mobile Bay. The non-federal sponsor is the Alabama State Port Authority. In 1986, Congress authorized various modifications to Mobile Harbor including deepening and widening the majority of the channel to 55 feet deep and 550 feet wide. The GRR is a 4-year, $7.8M effort. Along with the GRR, Mobile District is preparing an integrated Supplemental Environmental Impact Statement (SEIS).

TENTATIVELY SELECTED PLAN

Channel Deepening: 49 feet*

- A Channel Widening: 3 mi. long, 100 ft wide*
- B Turning Basin Modification
- C Bar Channel Bend Easing

* Environmental impact analysis is based on a 50 foot depth and 100 foot widener for a distance of 5 miles

PROPOSED PLACEMENT AREAS

1. Formerly mined relic shell area
2. Sand Island Beneficial Use Area (SIBUA)
3. Pelican/Sand Island Complex
4. Ocean Dredged Material Disposal Site (ODMDS)

MOBILE BAY AREA OF INTEREST

COST AND BENEFIT SUMMARY

	47'	48'	49'	50'	51'
Total Project Cost	$199M	$276M	$351M	$430M	$548M
Net Benefits	$13.9M	$21.3M	$28.8M	$33.9M	$37.8M
BCR	2.7	2.9	3.0	2.9	2.8

FUNDING STATUS (Federal)

	FY15	FY16	FY17	FY18	FY19	TOTAL
Appropriated	$0.6M	$1.5M	$1.7M	$0	$0	$3.8M
Anticipated				$2.1M		$2.1M
Total Federal						$5.9M

ENVIRONMENTAL CONSIDERATIONS

COASTAL PROCESSES

- ✓ Hydrodynamic and Water Quality
- ✓ Coastal Sediment Transport (Dauphin Island)
- ✓ Estuarine (In-Bay) Sediment Transport
- ✓ Ship Wake Effects

AQUATIC RESOURCE ASSESSMENT

- ✓ Fish
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OTHER

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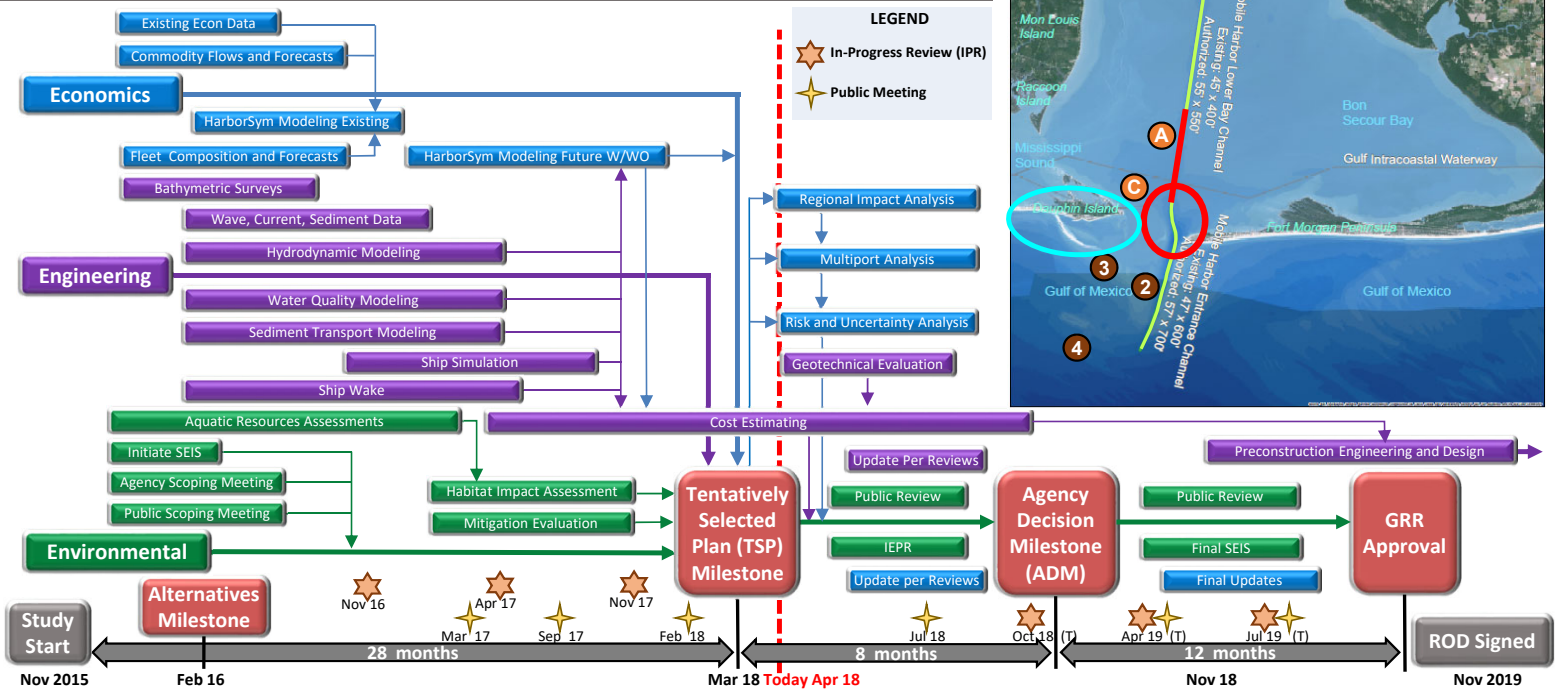
- ✓ Air/Noise Pollution

SCHEDULE & MAJOR MILESTONES



US Army Corps of Engineers

U.S.ARMY

Point of Contact: David Newell
Mobile District

Updated as of: 26 April 2018

DAUPHIN ISLAND CONCERNS

The Mobile District is working to address concerns of residents of Dauphin Island over the sediment transport to the coastal barrier island. The Corps has conducted analysis based on modeling from USGS and data collected from operations and maintenance of disposal material. The Corps is working to establish an western extension area to the current Sand Island Beneficial Use Area (SIBUA) to enhance the transport of material to the barrier island. This are will be used for future O&M dredging operations of quality material.

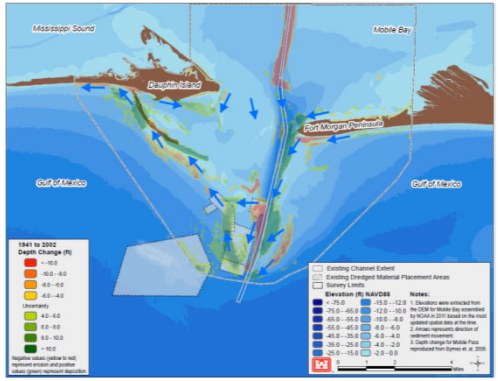
FUTURE MAINTENANCE MATERIAL PLACEMENT

Approach: Compare short and long-term changes in bathymetry to quantify sediment transport rates and identify transport pathways along the ebb-tidal shoal to determine if adequate disposal capacity exists for future maintenance material placement in the Sand Island Beneficial Use Area (SIBUA).

Analysis Period: 1941 – 2015

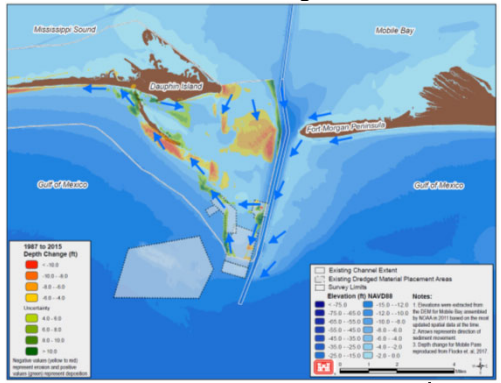
Results: Consistent sediment transport pathways are observed over the short and long-term periods. Material placed in SIBUA is in the active transport system; however, since placement in SIBUA was initiated in 1999, material has left the site at a lower rate than it has been placed in the site resulting in a need for expansion in the north/northwest direction to accommodate future needs.

Mobile Pass Bed Level Change 1941 to 2002



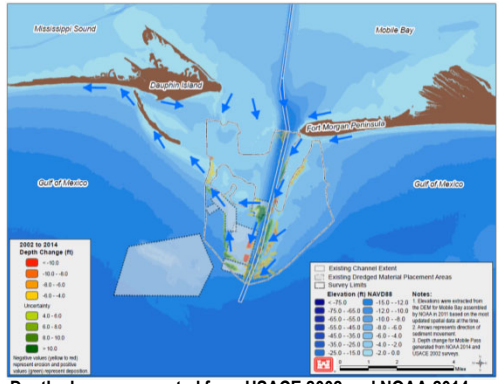
Depth change reproduced from Byrnes et. al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama"

Mobile Pass Bed Level Change 1987 to 2015

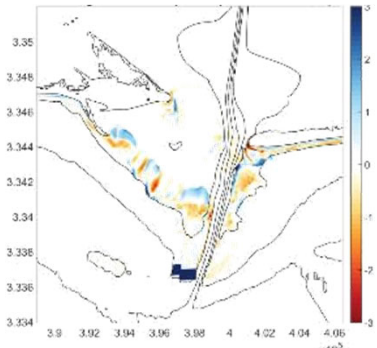


Depth change reproduced Flocks, et. al, 2017 "Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015" Open-File Report 2017–1112.

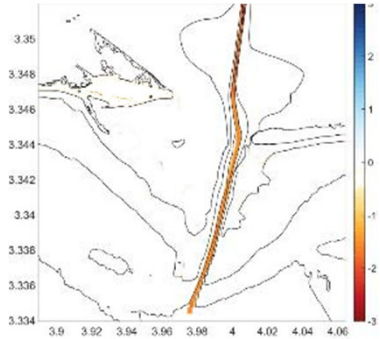
Mobile Pass Bed Level Change 2002 to 2014



Depth change generated from USACE 2002 and NOAA 2014 surveys.



With Project Condition 10 Year Simulation Bed Level Change (+/- Erosion/Deposition, m)



With Project – Existing Condition Bed Level Change (+/- Erosion/Deposition, m)

US Army Corps of Engineers.

U.S.ARMY

Point of Contact: Justin McDonald
Mobile District
Updated as of: 26 April 2018

From: (b)(6)
To: DeLapp, James Andrew (Jim) COL USARMY CESAM (US); (b)(6)
Cc: (b)(6)
Subject: Latest Placemat
Date: Friday, April 27, 2018 3:12:00 PM
Attachments: Mobile Harbor Placemat_30 Apr 2018v10.pdf

Attached is the latest placemat. We will have 30 hardcopies made for Monday.

(b)(6)

MOBILE HARBOR GENERAL REEVALUATION REPORT (GRR)

The US Army Corps of Engineers is studying the feasibility of enlarging the size of the channel leading to and from port facilities located in Mobile Bay. The non-federal sponsor is the Alabama State Port Authority. In 1986, Congress authorized various modifications to Mobile Harbor including deepening and widening the majority of the channel to 55 feet deep and 550 feet wide. The GRR is a 4-year, $7.8M effort. Along with the GRR, Mobile District is preparing an integrated Supplemental Environmental Impact Statement (SEIS).

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- Channel Deepening: 49 feet*
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PROPOSED PLACEMENT AREAS

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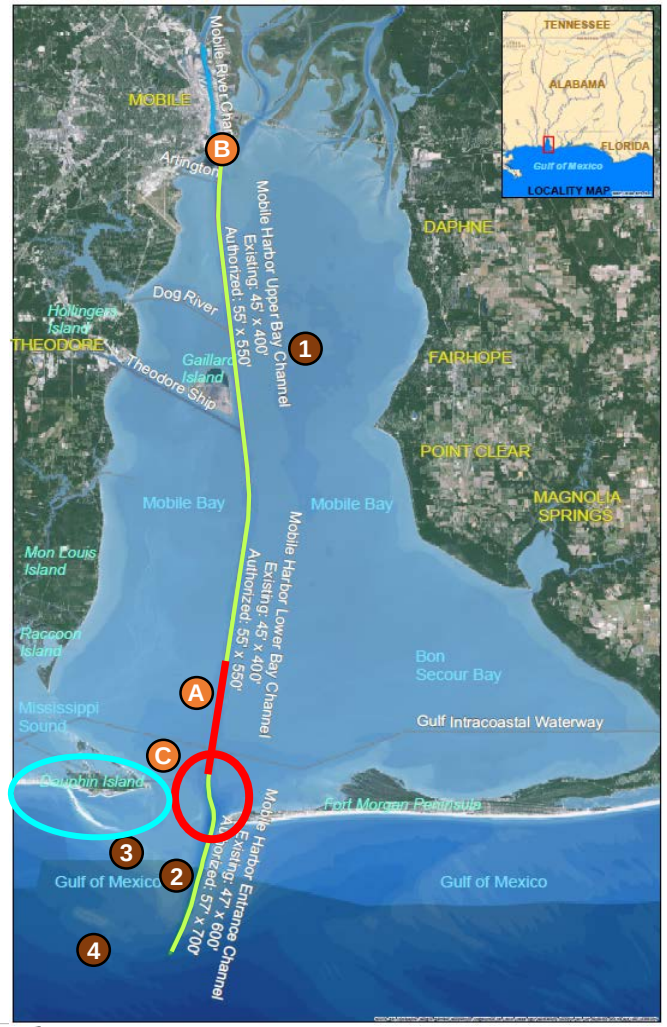
2. Sand Island Beneficial Use Area (SIBUA)
3. Pelican/Sand Island Complex
4. Ocean Dredged Material Disposal Site (ODMDS)

MOBILE BAY AREA OF INTEREST



COST AND BENEFIT SUMMARY

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FUNDING STATUS (Federal)

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Anticipated				$2.1M		$2.1M
Total Federal						$5.9M

ENVIRONMENTAL CONSIDERATIONS

COASTAL PROCESSES

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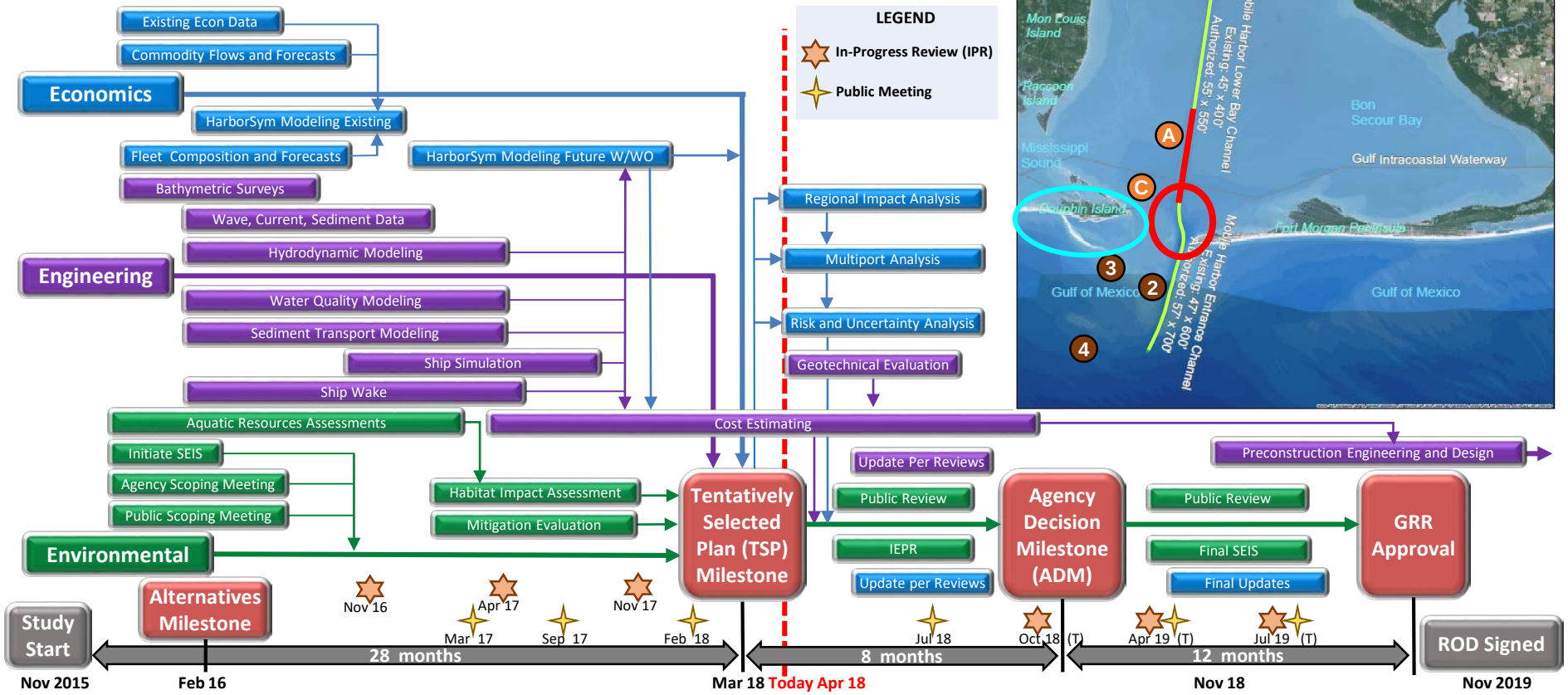
SCHEDULE & MAJOR MILESTONES



US Army Corps of Engineers

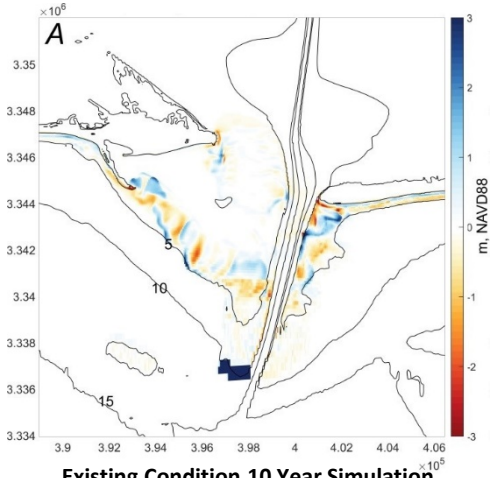
U.S.ARMY

Point of Contact: David Newell
Mobile District

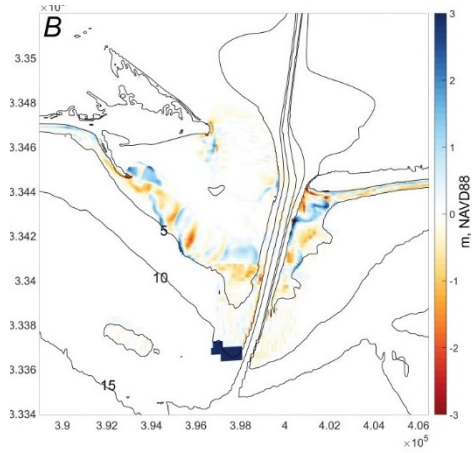
Updated as of: 26 April 2018

DAUPHIN ISLAND

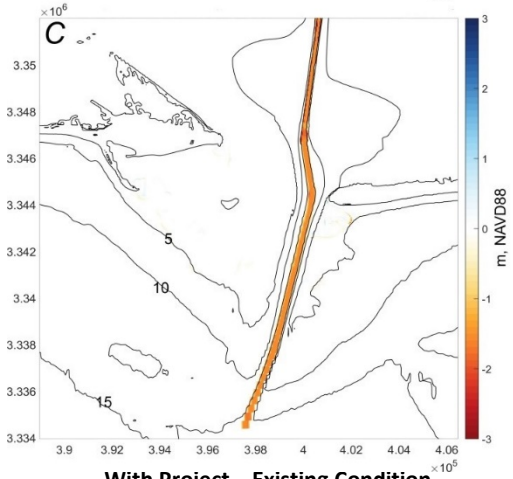
The Mobile District and the USGS evaluated the possible effects of widening and deepening the channel on the hydrodynamic and sediment transport processes around the ebb-tidal shoal/nearshore coastal areas, including Dauphin Island. As shown in the figures below, minimal changes are expected, but shoaling rates are anticipated to increase up to 15 percent (commonly seen when widening and deepening a navigation channel).



Existing Condition 10 Year Simulation Bed Level Change (+/- Erosion/Deposition, m)



With Project Condition 10 Year Simulation Bed Level Change (+/- Erosion/Deposition, m)



With Project – Existing Condition Bed Level Change (+/- Erosion/Deposition, m)

FUTURE MAINTENANCE MATERIAL PLACEMENT

Short and long-term changes in bathymetry were compared to quantify sediment transport rates and identify transport pathways along the ebb-tidal shoal to determine if adequate disposal capacity exists for future maintenance material placement in the Sand Island Beneficial Use Area (SIBUA). Results indicate sediment transport pathways are consistent over the short and long-term periods and material placed in SIBUA is in the active transport system; however, since placement in SIBUA was initiated in 1999, material has left the site at a lower rate than it has been placed in the site resulting in a need for expansion in the north/northwest direction to accommodate future needs.

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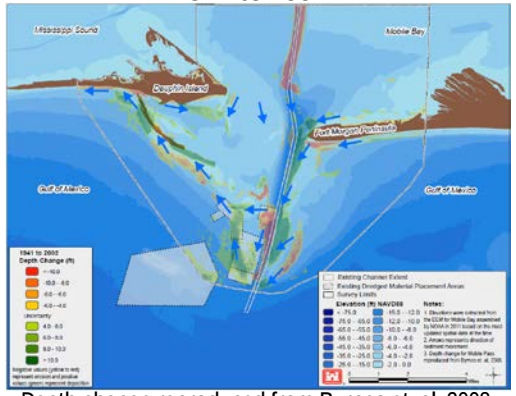
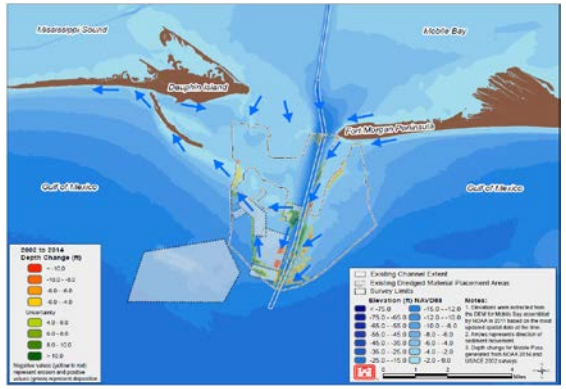


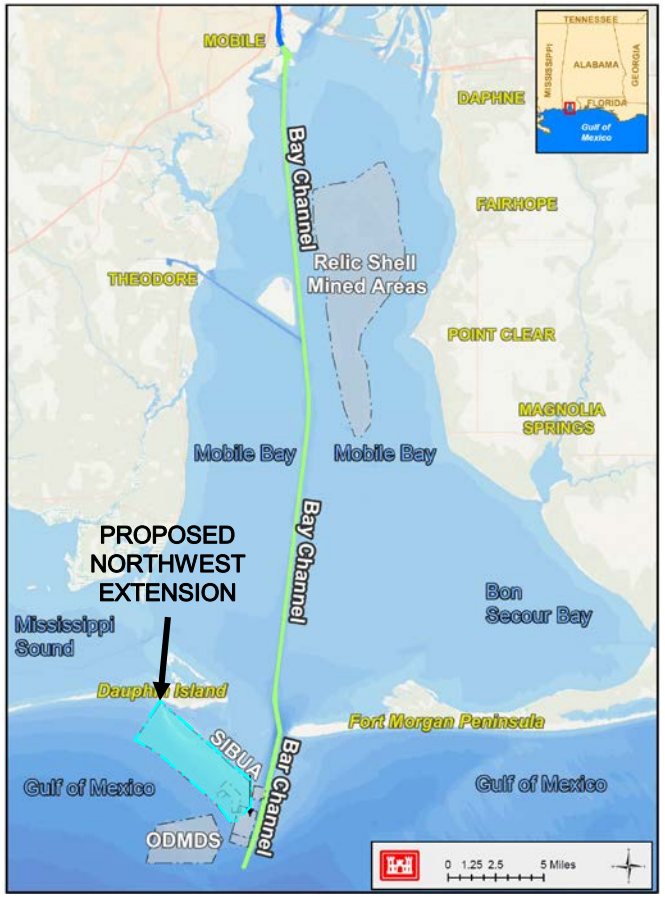
Depth change reproduced from Byrnes et. al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Al"

Mobile Pass Bed Level Change 2002 to 2014



Depth change generated from USACE 2002 and NOAA 2014 surveys.

Proposed Placement Locations



From: (b)(6)
To:
Subject: Emailing: Mobile Harbor GRR Report Summary 14 March 2018.docx
Date: Monday, April 30, 2018 4:33:00 PM
Attachments: Mobile Harbor GRR Report Summary 14 March 2018.docx

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Your message is ready to be sent with the following file or link attachments:

Mobile Harbor GRR Report Summary 14 March 2018.docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Report Summary
for
Mobile Harbor, Mobile, Alabama
Integrated General Reevaluation Report with Supplemental Environmental Impact Statement

1.0 Stage of Planning Process

The Mobile District is conducting a General Re-evaluation study of Mobile Harbor at Mobile, Alabama. Work on the feasibility analysis began in November 2015. Currently, the Mobile District has developed information for the Tentatively Selected Plan (TSP) milestone. The TSP Milestone meeting is scheduled for 28 March 2018.

A charette was held with vertical team members and agencies on 28-29 January, 2015, where decisions logged included: 1) there is a Federal interest and 2) the Project Delivery Team (PDT) should pursue a 3x3x3 exemption. A 3x3x3 exemption was granted on 09 October, 2015 and an Amendment to the Design Agreement was executed on 09 November, 2015. Environmental representatives mailed a Notice of Intent (NOI) to publish a Supplemental Environmental Impact Statement (EIS) on 11 December, 2015. The NOI to prepare an SEIS appeared in the Federal Register on 23 December, 2015. The PDT held a Public Scoping Meeting on 12 January, 2016. An Alternative Milestone meeting was held with the vertical team on 16 Feb 2016. The cost for the study is estimated to be $7.8M with an expected execution time of 48 months.

2.0 Study Authority

Improvements to Mobile Harbor were most recently reauthorized in Section 201 of the Water Resources Development Act of 1986 (PL 99 – 662, Ninety-ninth Congress, Second Session), which was approved 17 November 1986, and subsequently amended by Section 302 of the Water Resources Development Act of 1996, to read:

> *(a) "AUTHORIZATION OF CONSTRUCTION - The following projects for harbors are authorized to be prosecuted by the Secretary substantially in accordance with the plans and subject to the conditions recommended in the respective reports designated in this subsection:*
>
> *The project for navigation, Mobile Harbor, Alabama: Report of the Chief of Engineers, dated November 18, 1981, at a total cost of $451,000,000, with an estimated first Federal cost of $255,000,000 and an estimated first non-Federal cost of $196,000,000."*

The report referenced by this authorization recommended the following improvements to the Federal project:

a. Deepen and widen entrance channel over the bar to 57 by 700 feet, a distance of about 7.4 miles.
b. Deepen and widen Mobile Bay Channel from mouth of bay to south of Mobile River, 55 by 550 feet, a distance of about 27.0 miles.
c. Deepen and widen an additional 4.2 miles of Mobile Bay Channel to 55 by 650 feet.
d. Provide 55-foot deep anchorage area and turning basin in vicinity of Little Sand Island.
e. Deepening the Mobile River channel to 55 feet to a point about 1 mile below the Interstate 10 and U.S. 90 highway tunnels.

2.1 Additional Study Guidelines

No study specific phase guidance has been provided

3.0 Non-Federal Sponsor

The Project Sponsor is the Alabama State Port Authority (ASPA).

4.0 Purpose and Need

This report is an interim response to the study authorization. The report will examine the costs and benefits as well as the environmental impacts of increasing the dimensions of the existing Federal project within its authorized limits. As the volume of cargo has grown, which results in increased vessel calls, and as larger vessels call on the port, inefficiencies have increased causing vessels to experience delays leaving and arriving at port facilities as well as being unable to fully utilize their capacity. The purpose of the study will be to determine what improvements can be made for safety and efficiency of harbor users.

4.1 Federal Interest

The channel for Mobile Harbor has a long history of Federal involvement stretching back to the 1880's. Traditionally, Mobile Harbor's ranking as a global trading port is consistently in the top twelve nationally; however, in 2016, Mobile Harbor was ranked the 10th largest port in the nation in terms of tonnage with 58 million tons of cargo moved through the port. To reduce inefficiencies which have occurred as traffic has increased, improvements to the harbor are needed that reasonably maximize net economic benefits consistent with protecting the environment.

5.0 Study Scope

The study scope encompasses the study area described in paragraph 5.1 and project area identified in paragraph 5.2. The feasibility study includes (1) a survey of existing and future conditions; (2) an evaluation of related problems and opportunities; (3) development of potential alternatives; (4) evaluation of alternatives; (5) a comparison of costs, benefits,

adverse impacts, environmental acceptability, and feasibility of those alternatives; and, (6) identification of a Recommended Plan. Information for the analysis came from land and hydrographic surveys, hydrodynamic surveys, available water quality information, socio-economic projections, sediment sampling, and numerous other data collection efforts. The study includes data from previous studies augmented with information from the ASPA, Mobile Harbor Bar Pilots, commercial shippers, Federal, state, and local resource agencies, as well as Geographic Information System (GIS) mapping of significant resources and features. Analyses conducted for this feasibility study include forecasts of waterborne cargo volumes, traffic patterns and vessel fleets, and evaluation of the need for navigation system improvements over a 50-year period of analysis. The study considers a range of structural measures within the harbor that could address inefficiencies within the system. The study concentrates on potential changes to water-based transportation system components that are within the scope of the study authority described previously. Throughout this study, the main factors influencing the total cargo throughput of Mobile Harbor revolve around land-based factors such as population growth, industrial and manufacturing changes, and regional maritime shipping trends limited by the capacity of the land-based infrastructure to process it.

5.1 Study Area

Mobile Harbor, Alabama, is located in the southwestern part of the state, at the junction of the Mobile River with the head of Mobile Bay. The port is about 28 nautical miles north of the Bay entrance from the Gulf of Mexico and 170 nautical miles east of New Orleans, Louisiana. The current dimensions of the existing navigation channel are: 47 feet deep by 600 feet wide across Mobile Bar and 45 feet deep by 400 feet wide in the bay and 45 feet deep by 730 feet wide in the Mobile River to a point about 1 mile below the Interstate 10 highway tunnels. The channel then becomes 40 feet deep and proceeds north over the Interstate 10 and U.S. 90 highway tunnels to the Cochrane/Africatown Bridge. The Mobile River, on which the Alabama State Port Authority facilities are located, is formed some 45 miles north of the city with the joining of the Alabama and Black Warrior/Tombigbee Rivers. The Mobile River also serves as the gateway to international commerce for the Tennessee/Tombigbee Waterway. In the southern region of Mobile Bay, access can be gained to the Gulf Intracoastal Waterway which stretches from St. Marks, Florida, to Brownsville, Texas. Figures 1 and 2 show the authorized limits of the Mobile Harbor Federal Navigation Channel.

5.2 Project Area

The project area encompasses the primary Federal navigation channel within the harbor, including the 47 foot deep bar channel and the 45 foot deep navigation channel through the bay and into the Mobile River as well as the turning basin near Little Sand Island. Included are any shorelines and extensions of the water bodies and disposal areas that are potentially

impacted by channel enlargement alternatives as well as the ocean dredged material disposal site (ODMDS). A map of the project area is shown on Figure 3.

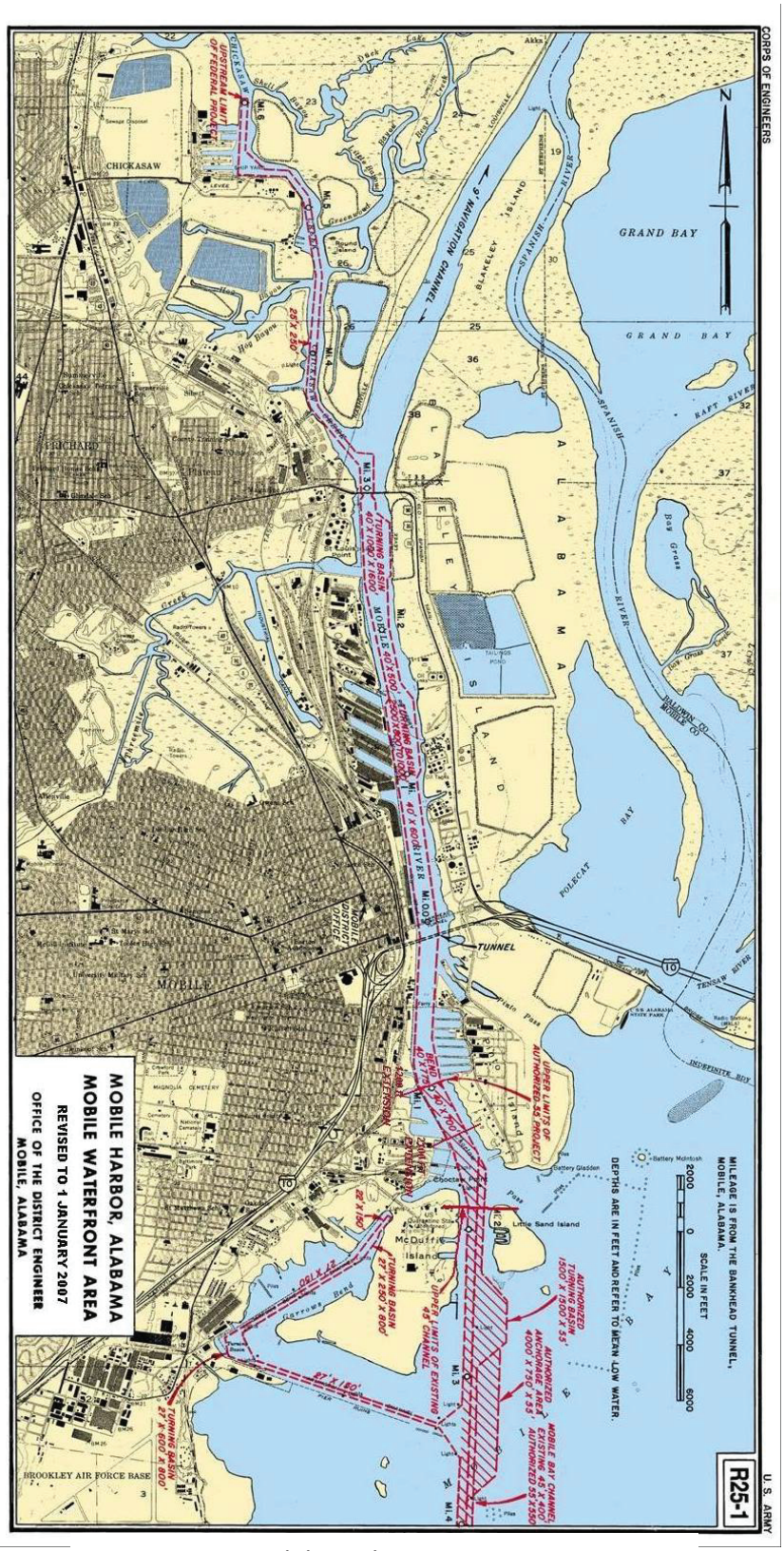

Figure 1 Mobile Harbor Navigation Project

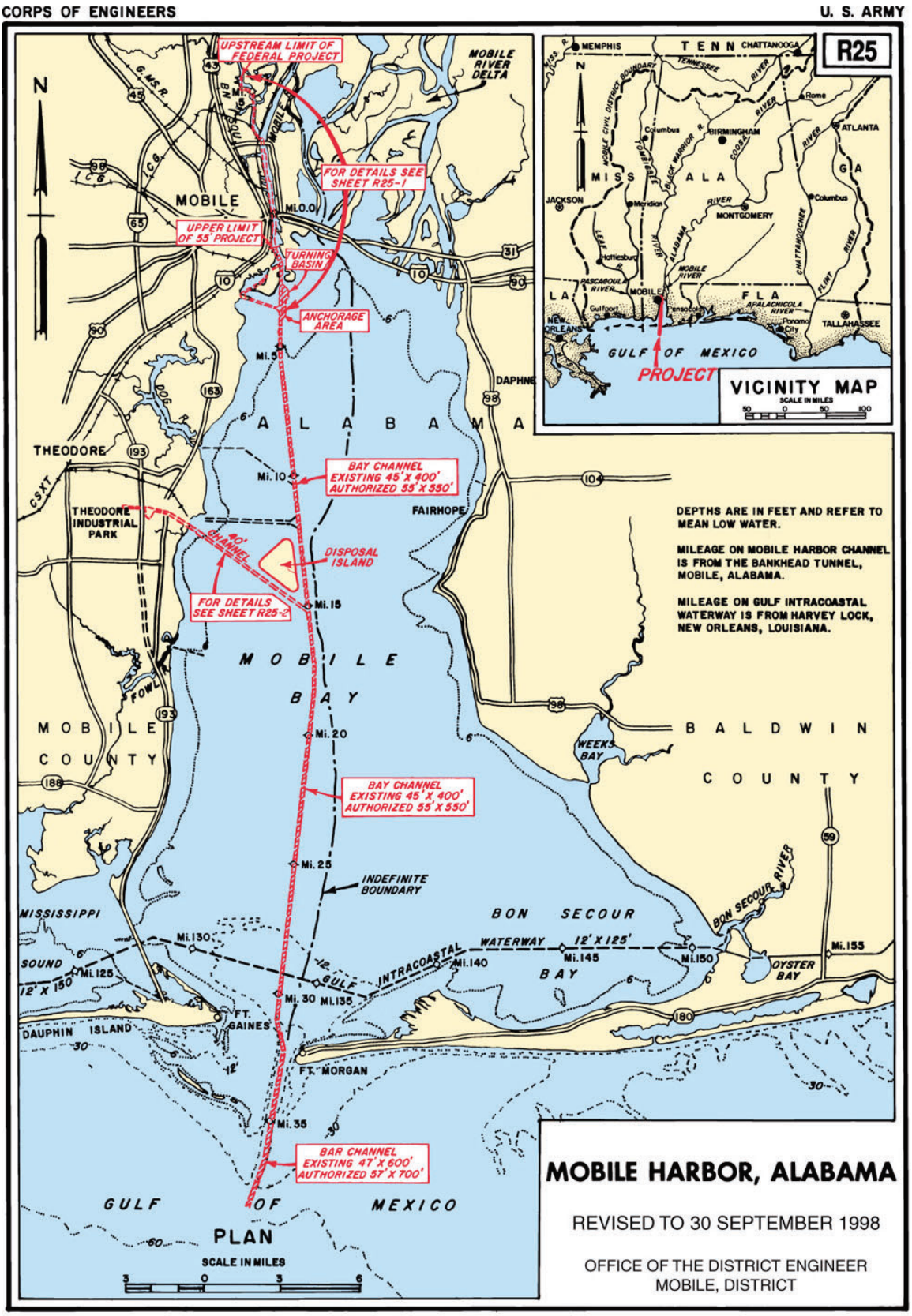

Figure 2 Mobile Harbor Navigation Project

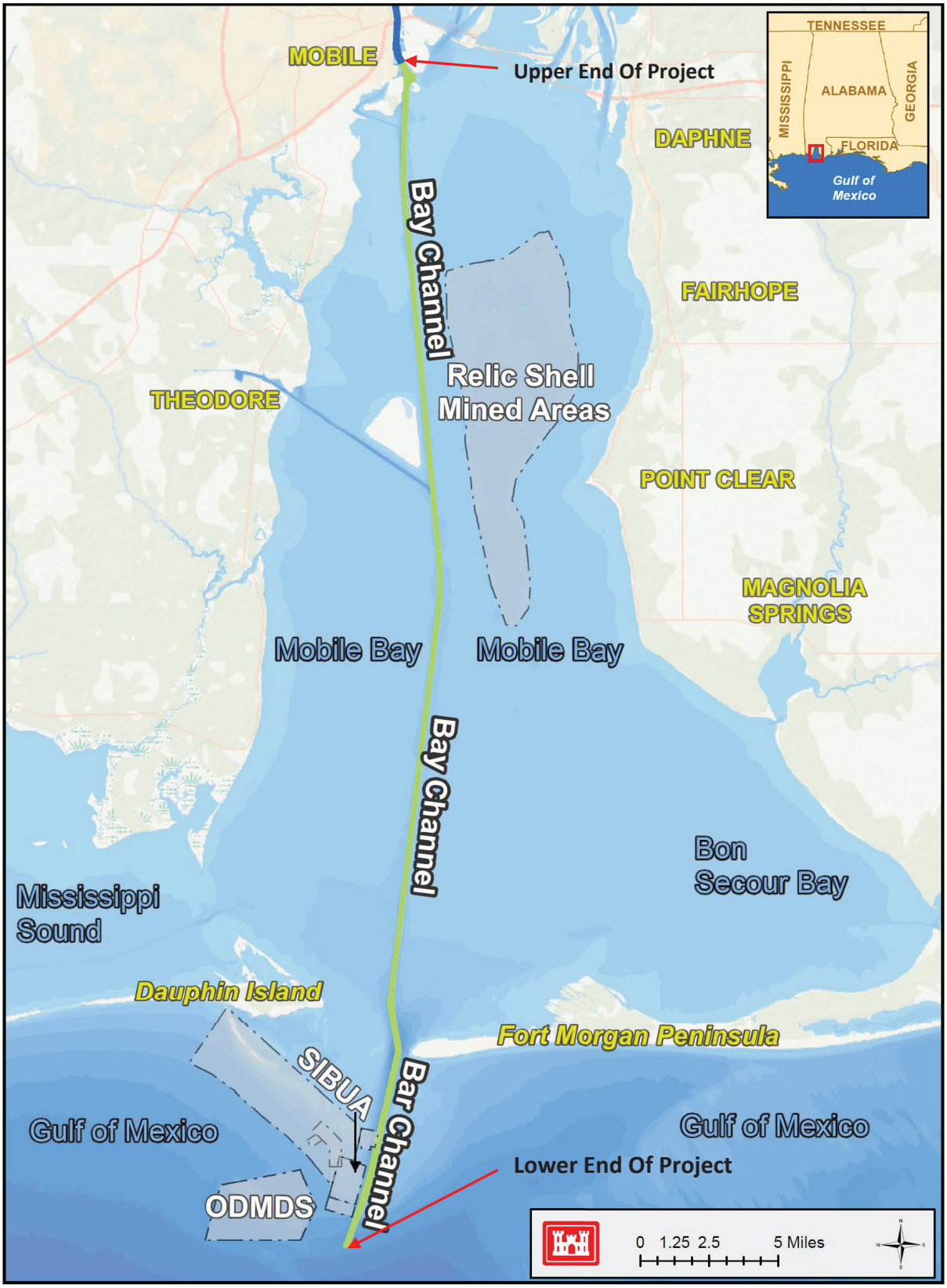

Figure 3 Project Area Map

6.0 Prior Reports and Existing Water Projects

Department of the Army, Assistant Secretary of the Army (Civil Works). (1986). *A Report of the Chief of Engineers, Department of the Army, on Mobile Harbor, Alabama, Together with Other Pertinent Reports 99th Congress, 2d Session, House Document 99-241.* Washington: U.S. Government Printing Office.

U.S. Army Corps of Engineers. (1975). *Final Environmental Impact Statement, Mobile Harbor (Maintenance Dredging) Mobile County, Alabama.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1977). *Special Report, Mobile Harbor, Alabama, Theodore Ship Channel (approved as General Design Memorandum-Phase I).* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1977). *Theodore Ship Channel & Barge Channel Extension, Mobile Harbor, Alabama, Phase II, General Design Memorandum, Design Memorandum No. 1.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1984). *Draft Supplemental Environmental Impact Statement, Mobile Harbor, Alabama, Channel Improvements, Offshore Dredged Material Disposal.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1985). *General Design Memorandum, Mobile Harbor Deepening, Alabama, General Design Memorandum No. 1, Main Report.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1985). *Mobile Harbor, Alabama Channel Improvements, Offshore Dredged Material Disposal, Environmental Impact Statement.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1986). *General Design Memorandum, Mobile Harbor Deepening, Alabama, Design Memorandum No. 1, Appendix H, Design Analysis.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1991). *Mobile Harbor Deepening, Design Supplement No. 1, General Design Memorandum, Turning Basin Basin Development Plan.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1995). *Mobile Harbor Deepening, Design Supplement No. 2, General Design Memorandum, Turning Basin Basin Development Plan.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (1997). *Limited Reevaluation Report, Mobile Harbor Project Extension.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (2000). *Mobile Harbor 2100-foot Project Extension, Limited Reevaluation Report.* Mobile: U.S. Army Corps of Engineers, Mobile District.

U.S. Army Corps of Engineers. (2004). *Final Environmental Impact Statement for Choctaw Point Terminal Project, Mobile, Alabama.* Mobile: U.S. Army Corps of Engineers, Mobile District.
U.S. Environmental Protection Agency. (1982). *Environmental Impact Statement (EIS) for the Pensacola, FL., Mobile, AL., and Gulfport, MS. Dredged Material Disposal Site Designation (Including Appendix A).* Washington: U.S. Environmental Protection Agency.

Construction of Mobile Harbor to its current depth and width was completed in FY94. The construction was limited to less than the authorized dimensions because the sponsor did not have the funds to construct to the fully authorized depth. A 1300-foot extension in the river channel was completed in 2000. A 1200-foot and a 2100-foot extension in the river channel were completed in FY08. The Turning Basin construction was completed in Aug 2010.

7.0 Problems/Opportunities

The following problems and opportunities have been identified by the sponsor and the PDT for this study.

7.1 Problem Identification

The principal navigation problem is larger vessels are experiencing transportation delays and inefficiencies due to insufficient channel depth and width. This problem is a result of increasing number and size of vessels entering and departing the port. The Alabama State Port Authority (ASPA) has added two new facilities at the lower end of the Mobile River (at the upper portion of Mobile Bay) -- the Choctaw Point container terminal and the Pinto Island Terminal. Both facilities have increased the amount of traffic into the port. The existing channel depths and widths limit vessel cargo capability, restrict many vessels to one-way traffic and in some reaches limit transit operations to daylight only. Therefore, evaluation of deepening and widening the Bar and Bay channels over a combined distance of approximately 37 miles to their fully authorized dimensions through a GRR is being conducted. The GRR is investigating channel improvement alternatives within the authorized dimensions of the Mobile Harbor Federal Navigation Project that could be capable of increasing channel efficiency by alleviating harbor delays and improving cargo capacity through sound, cost effective and environmentally acceptable means.

7.2 Opportunities

Since 2000, the total value of international trade has risen by over 40 percent and it is becoming a larger part of our national economy. The combined value of foreign trade (imports and exports) represented 13 percent of Gross Domestic Product (GDP) in 1990, rising to nearly 22 percent in 2006. If this trend continues, it is projected that the value of U.S. foreign trade will be equivalent to 35 percent of the Nation's GDP in 2020 and 60 percent in 2030. Marine

transportation will become even more important to our economy as 95 percent of America's foreign trade is moved by ship. The bottom line: to sustain expected growth, it is estimated the U.S. must expand its overall port capacity by 10 percent annually. This would require port expansion, mainly on the West Coast, Gulf Coast and South Atlantic. That is the equivalent of adding capacity equal to the Port of Oakland every year.

Mobile Harbor's ranking as a global trading port is consistently in the top twelve nationally. In 2016, Mobile handled a total of 58 million tons of commerce making it the 10th largest port in the United States in terms of total tonnage. Based on the most recent five years of available data (2012 – 2016), foreign shipments averaged 33.1 million short tons. Coal shipments have varied over the period, but remain the largest commodity with 36% of total commerce. Of the total, petroleum products averaged about 23% of the total and crude materials being 12% of total shipments. Primary manufactured goods accounted for 19% of total shipments and chemicals and farm products accounting for 5% and 3% of total shipments.

Shipping trends for Mobile Harbor show adherence to projections for growth in ship size, in all three dimensions, draft, beam, and length. As economies of scale and improved vessel technologies have driven ship sizes larger, the world's port infrastructure must be expanded in channel depths and widths and terminal capacity to accommodate larger ships. The number of ports able to handle larger vessels around the world is growing, and, most importantly, the Panama Canal has expanded lock capacity to handle ships of 25% greater draft (up to 50 ft), 52% greater beam (up to 160 feet), and 30% greater length (up to 1250 feet). Ships have been under construction for several years to take advantage of the increased canal capacity realized with the 2016 opening of the new Panama Canal locks.

There is opportunity to bring the forecasted volume of goods into the harbor on fewer ships and reducing delays resulting in in transportation cost savings. Particularly important is the great increase in the deployment of those vessels, which is occurring now and expected to continue with the Panama Canal Expansion Project completed in 2016. These larger vessels, commonly referred to in the shipping industry as the "Super Post-Panamax" vessels, are expected to comprise greater percentages of vessel fleet composition over the next several decades.

The McDuffie coal shipments are currently utilizing Cape/Post-Panamax size vessels. At the current channel depth, vessels cannot fully utilize vessel capacity. Coal shippers forecast that availability of deeper draft vessels along with the expanded Panama Canal will increase the US coal competitiveness in Asia.

In addition to the economic opportunities afforded by a larger channel, there also exists safety and potentially environmental opportunities. Hazards of traffic moving in and out of the port as well as navigation features of the channel would be improved by a larger channel. There is also potential for beneficial use of sediment material that would be obtained from the channel dredging.

8.0 Planning Goals/Objectives

The National or Federal objective of water and related land resources planning is to contribute to National Economic Development (NED) consistent with protecting the nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. This objective is the project goal for this effort. Planning objectives of this study involved using as much available information as possible as well as new information to evaluate improvements for Mobile Harbor to efficiently and safely accommodate larger vessels while preserving natural and recreational resources that may be impacted by navigation improvements. Specific planning objectives for the General Reevaluation Report for Mobile Harbor were:

(1) Determine if sufficient delays and other commercial navigation benefits exist to deepen and widen the Federal system of channels from existing project depths of 45 and 47 feet to depths of 55 and 57 feet and existing project widths of 400 and 600 feet to 550 and 700 feet;

(2) Evaluate components which would improve project safety and efficiency for the design vessel;

(3) Determine if the proposed components meet the needs of future commercial ship navigation requirements;

(4) Identify environmental and cultural resources in the study area and potential impacts from deepening or widening to those resources;

(5) Review the impact of proposed components on the existing harbor maintenance and future dredged material management plans; and

(6) Identify the NED plan for Mobile Harbor, which most efficiently and safely accommodates larger vessels while preserving the environment.

8.1 Planning Constraints

The formulation of alternatives to address the study objective is limited by planning constraints. Constraints are statements of effects that the alternative plans should avoid. Constraints are

designed to avoid undesirable changes between without and with-project future conditions. Constraints could include resources, legal, or policy constraints. Constraints which are applicable to this study, are:

a. Avoid or minimize to the extent practicable negative environmental impacts to:

    1. Protected species
    2. Essential Fish Habitat
    3. Existing Natural Resources (marshes, wetlands, submerged aquatic vegetation, and bay bottoms)
    4. Cultural Resources

b. Avoid or minimize to the extent practicable negative impacts to coastal and sediment transport processes
c. Avoid or minimize to the extent practicable shoreline erosion
d. There must be adequate disposal area capacity
e. Dredge material for ODMDS and open water placement must meet state and Federal suitability criteria

9.0 Inventory and Forecast

Mobile Bay has been recognized as a nationally significant estuary of the United States. The Mobile Bay and the Mobile Tensaw river delta supports a diverse set of fish and wildlife habitats including: bogs, bottomland hardwoods, freshwater and hardwood swamps, freshwater wetlands, maritime forests, pine savanna, submerged aquatic vegetation (SAV), tidal and brackish water marshes and oyster reefs. These habitats are present along the northern, eastern and western shores and upper and lower part of the Bay.

At the outset of the study, key uncertainties were identified and the PDT determined actions to address these uncertainties. As the study has progressed the actions to address the initial key uncertainties have been either eliminated or reduced. The key uncertainties at this time consist of the following:

<u>a. Unknown/unidentified cultural resource discovery could impact construction cost.</u>

Potential Impacts: There is the potential for discovery of culturally significant sites throughout the project area. Even though Section 106 coordination was conducted as part of the 1986 authorization, technology used at that time may not have captured all existing resources. Because the majority of the work will be performed within the limits of the existing maintained channel, it was decided that additional surveys will only be performed within the limits of the

channel widening. In regards to placement locations, the relic shell mined area is considered a highly disturbed area because of the mining operations that existed up until 1982. Additional survey will not be required within this area. SHPO consultation will be conducted for all proposed placement areas (SIBUA, ODMDS, Relic Shell Mined Area).

Uncertainties: Discovery of new historically significant sites and resources may add additional coordination above and beyond what was conducted during the last authorization. These activities could impact the cost, overall schedule, and delay construction.

Planning Decisions: Continue with current cultural resource investigations and associated consultations. Now that the TSP has been selected and the final widening and beneficial use options have been determined, activities will began to assess the need for additional cultural resources surveys and Section 106 coordination will proceed.

b. Sediment testing has not been performed on the entirety of the project area. Limited data is available.

Potential Impacts: Because sediment testing is delayed until the Preconstruction, Engineering, and Design Phase, testing results may indicate the presence of contaminants which could result in restricting disposal methods and hopper dredging load sizes being taken to the ODMDS. Such restrictions would result in significant cost and scheduling impacts over what is presented in the GRR and SEIS.

Uncertainties: Estimating costs on new work material disposal when using hopper dredges is based largely upon hopper volume capacity. If sediment testing reveals the presence of contaminants, the hopper load capacities going to the ODMDS could be significantly restricted causing significant uncertainties in disposal costs and project scheduling. This could also limit the type of beneficial use opportunities.

Planning Decisions: Some new work sediment testing was conducted in the lower bay channel during the LRR activities and results of that testing did not reveal any concerning presence of contaminants. Based on results of regular testing of maintenance sediments and that the new work material in other parts of the channel have not been exposed to modern-day conditions, it is believed that the risk has been reduced for the GRR by performing the sediment testing during PED.

c. Although significant geotechnical data is available, investigations have not been performed on the entirety of the project area.

Potential Impacts: Assumptions of the soil properties could differ from the actual soil properties present within the alignment of the channel alternatives under consideration. A misrepresentation of soil types could lead to changes in construction cost estimates due to possible changes in the required dredge equipment, placement area locations, and estimated production rates during dredging operations. Although these possible impacts are accounted for in the abbreviated risk analysis, the magnitude of those changes could exceed the current contingency.

Uncertainties: Geotechnical data is available for a large portion of the channel alignment; however, there are no borings outside the channel in the location of the widener. In addition, borings for bar channel show no available sand in sufficient quantity for beneficial use near Dauphin Island (e.g., placement in the Sand Island Beneficial Use Area). The currently assumed placement location for all material in the proposed widener and bar channel is the Ocean Dredge Material Disposal Site (ODMDS), due to the assumed material characteristics (i.e., intermixed silts and clays). This assumption could change, however, if suitable quantities of sand are located in the future channel alignment.

Planning Decision: The risk will be reduced by performing a limited geotechnical investigation of 15 borings to better characterize the material properties in the widener and bar channels.

<u>d. It is not known if there is adequate disposal capacity in the existing ODMDS for constructing and maintaining the project improvements.</u>

Potential Impacts: Although beneficial options will be explored, it is assumed a significant amount of new work material will be taken to the ODMDS. The Mobile District is in the process of coordinating with EPA regarding the re-designation of the Mobile ODMDS. It is a possibility that the ODMDS may be down-sized thus limiting the disposal capacity.

Uncertainties: EPA has provided a smaller 4.7 nmi^2 ocean disposal site which would not have the disposal capacity for constructing and maintaining the channel modifications. The Mobile District is actively coordinating with EPA in pursuit of expanding the ODMDS to 24 nmi^2. Progress on this effort is pending a USACE determination on cultural resource survey requirements. When this internal decision has been made, the expansion of the ODMDS can be finalized. The effort will require a Section 106 consultation and a modification to the Mobile Harbor Water Quality Certification. However, the timeframe of the expanded ODMDS is not known. Once the larger ODMDS is made available, there will be sufficient disposal capacity.

Planning Decisions: Tolerate the risk and proceed. The necessary analysis has been performed for the expanded ODMDS and determined that the site will have the disposal capacity necessary for construction of project and future maintenance. It is anticipated that the expanded ODMDS will be available at the time of construction and that the associated risk is tolerable.

e. Detailed ship simulations performed during PED phase could impact channel design.

Potential Impacts: Feasibility Level Ship Simulations using vessels that most closely matched the study's design vessels were conducted to evaluate varying channel widths for a two-way traffic area in lower Mobile Bay, a bend easing at the mouth of the Bay, and the turning basin near Little Sand Island (see Figures 1 and 2 for spatial reference). The specific design vessels for this study did not exist in ERDC's existing ship library; therefore, to limit monetary and resource commitments, information for vessels that most closely matched the study's design vessels were used to for the Feasibility Level Ship Simulations. Further simulations are recommended to be conducted during PED using the actual design vessels to confirm the TSP channel configuration, which could lead to refinements/revisions in the channel design (e.g., required length/width of the two-way passing area, size of the expanded turning basin, etc.).

Uncertainties: A Feasibility Level Screening Simulation Program (FLSSP) was conducted during the study to evaluate two areas of interest: (1) the turning basin near Little Sand Island and (2) the channel segment in lower Mobile Bay which includes a bend easing connected to a two-way traffic area (see Figure 4). For all simulations, the channel depth was increased from 45-ft (47-ft at entrance channel) to 51-ft (53-ft at entrance channel). Two different channel widths were screened for the passing area (500-ft and 550-ft). Each passing lane width spanned approximately 5 miles; however, evaluations were made during simulations for passing in lesser distances. All proposed passing lane testing included bend easing on the inside at buoys 18 and 21. The width increase of the bends in the simulations were based on design guidance, with width increases of approximately 185 ft at buoy 18 and 50 ft at buoy 21. The Little Sand Island Turning Basin was deepened to 51-ft for proposed testing with evaluations including a 100 ft expansion of the turning basin to the south.

The recommended design vessel for the study [i.e., a containership (1100-ft x 158-ft x 48-ft)] was not in the Engineering Research and Development Center's (ERDC) ship library, therefore, replacement ships were chosen for testing. For passing, the MSC Daniella 2 (1200-ft x 159-ft x 50-ft) was chosen as a replacement ship to closely match beam, which is vital to passing. In addition a variety of passing scenarios were tested that did not include the design vessel, but were used to assist in identifying passing rules for HarborSym. For the turning basin, the Humber Bridge (1102-ft x 150-ft x 46-ft) was chosen as a replacement ship to match length,

which is essential to turning. The purpose of a FLSSP was to screen proposed alternatives using lower resolution databases to limit monetary and time commitments while still providing vital insight of the proposed alternatives moving forward. The lower resolution databases were quicker and less costly to develop, and easier to quickly manipulate during the course of testing. This method allowed for discussion after the completion of each simulated run, the implementation of modifications, and the re-simulation of runs as necessary. By allowing for quick manipulation, the suggested adjustments were made during the testing week and then tested with the same group of pilots. Conclusions drawn from actual data however, are limited due to the use of these lower resolution databases. Additional evaluations would be necessary during PED utilizing the design vessel(s) and higher resolution databases, which may result in refinements to channel dimensions. If refinements are needed, the most likely outcomes are an increase in the required length of the two way traffic area (i.e., to a distance greater than 3 miles) and a possibly decrease in the size of the expanded turning basin; however, the exact magnitude of those refinements will not be known until additional simulations are conducted in PED.

Planning Decision: Tolerate the risk and proceed using the results of FLSSP study to inform plan selection during the study. Conduct more detailed ship simulations with the actual design vessels during PED.

f. Potential exists that there are unknown/unmarked pipelines within the limits of the proposed channel modifications.

Potential Impacts: Significant cost and schedule delay implications if pipeline relocations are required as a result of channel modifications.

Uncertainties: Currently, there are no known facility or utility relocations required in connection with the proposed project boundaries. Coordination has taken place between USACE Real Estate Division and state agencies and utility companies to verify utility locations.

Planning Decision: Continue with current research and analysis to confirm that locations and depths of pipelines are not impacted in relation to project footprint.

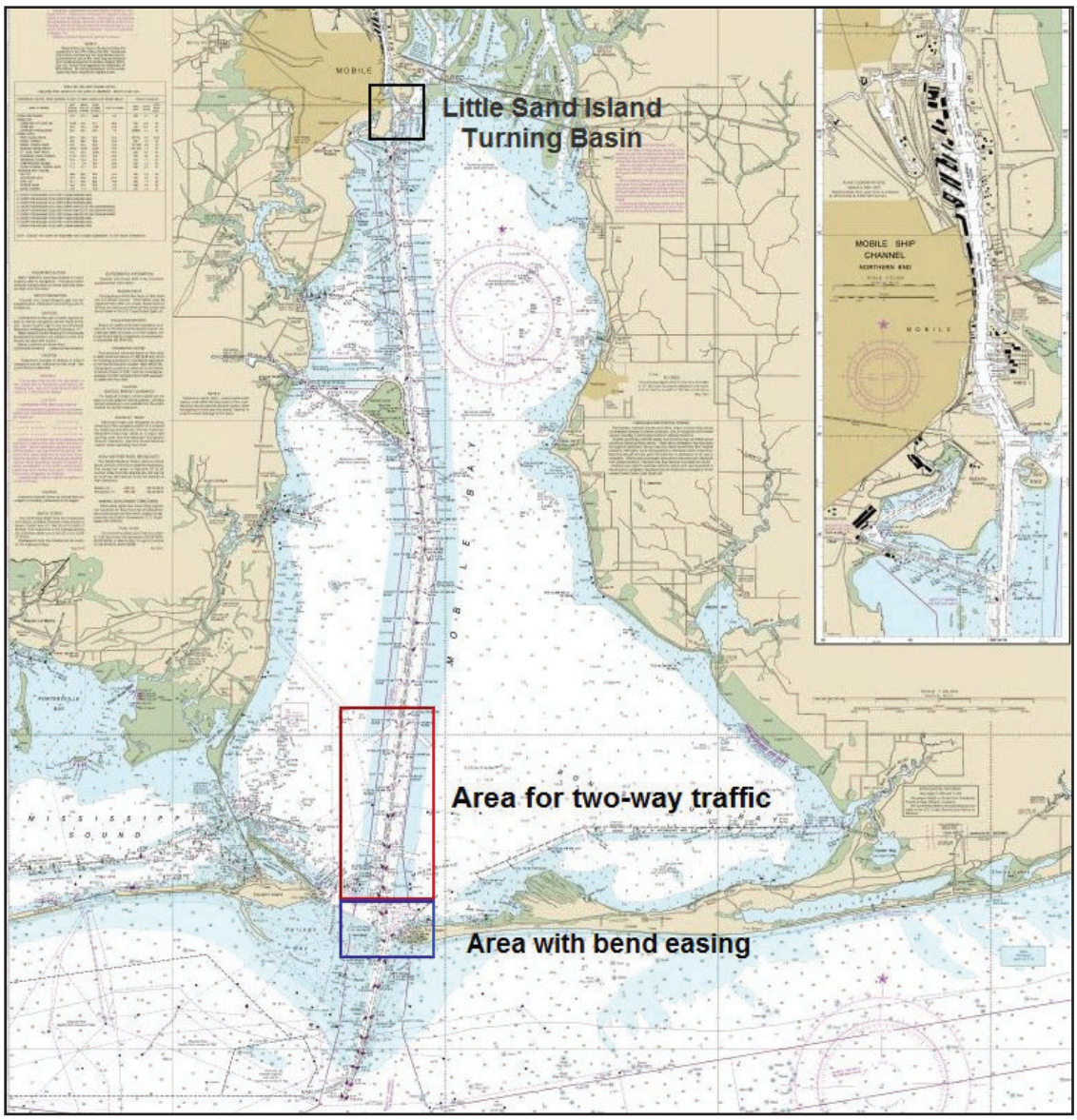

Figure 4 Channel Areas Evaluated in the FLSSP Study

g. Public acceptance of the environmental or shoreline impacts could affect project schedule.

Potential Impacts: There has been an effort by some property owners of Dauphin Island to have the Corps, as part of this study, include placing sand on the shoreline of the island. This is based on their view that the existing Mobile Harbor Project has caused erosion of the island's shoreline. Should they conclude at some point to seek injunctive relief, the timing of such action could delay completion of the study or impact future stages of work including construction. This issue has been previously litigated and settled with the Dauphin Island

Property Owner's Association. Delays would most likely impact project implementation costs. Results of the SEIS may also lead to legal objection with the same impact.

Uncertainties: There is no certainty that the parties expressing concerns at this time will seek any injunctive relief. Pending an analysis on wake impacts, it is uncertain whether there will be additional individuals concerned about any additional perceived project caused impacts. Likewise, the findings of the SEIS may not be accepted by the public.

Planning Decision: Continue with the current analysis utilizing the best available data and techniques to assure that we have adequately addressed those items of public concern. Continue with a robust public involvement process including coordinating agencies, NGO's, focus groups, and concerned public. To the extent practical, address concerns and comments that have been received in an appendix to the main report.

h. The vessel generated wave energy (i.e., ship wake) assessment is not complete at this time.

Potential Impacts: Coordination of specific mitigation measures (if necessary) and the identification of those costs cannot begin until the assessment is complete. However, possible mitigation was identified as a risk in the abbreviated cost risk analysis; therefore, mitigation costs are currently included in the project cost estimates. The team does not think mitigation, if needed, will exceed the amount included in the current estimates.

Uncertainties: Since the assessment is ongoing, the potential impacts to habitats, environments, and/or shorelines in Mobile Bay as a result of relative differences in larger commercial vessel generated wave energy (VGWE) is unknown at this time.

Planning Decision: Finish the analysis to determine if any mitigation is required. If so, coordinate with proper entities (e.g., resource agencies, NGOs, etc.) to identify possible mitigation measures and update the project costs accordingly. Include the details of the analysis, effects, mitigation measures, and associated costs in the draft feasibility report prior to release for public comment in the summer of 2018.

10.0 Formulating Alternative Plans

The USACE plan formulation process identifies existing and anticipated problems and opportunities to develop planning objectives. It then identifies and refines specific measures that could be combined to assemble alternative plans that comprehensively meet the planning objectives. These alternatives are then repeatedly screened, refined, and

compared with each other to identify the alternative that best balances the many factors that need to be considered to make a prudent decision.

During their repeated refinement, the alternatives are designed to be complete, effective, efficient, and acceptable in an effort to maximize overall benefits and minimize costs and adverse impacts. To select a plan, the alternatives are compared with each other from the perspectives of the National Economic Development (NED), Regional Economic Development (RED), Environmental Quality (EQ), and Other Social Effects (OSE) accounts to identify and recommend the alternative that provides the best and most balanced solutions, considering all four accounts.

The USACE began implementing the modernization of its planning program in 2012. The initiative applies a risk-based approach to shorten schedules and reduce the cost to complete the study process by eliminating non-essential activities while still producing reports that make and adequately support prudent recommendations. The risk-based process concentrates on collecting and presenting information related to the factors that most influence the decisions being considered and minimizing the collection and reporting of information that does not meaningfully influence the decisions and recommendations. When appropriate, it also uses assumptions, professional judgment, and/or estimates instead of acquiring new data to support the decision-making process after considering the relative likelihood, nature, and magnitude of the impacts to the overall decision and the associated environmental, social, and economic consequences. With this in mind, the project delivery team (PDT) determined that the study would identify the potential alternatives, develop an initial array, narrow that array into a focused array of alternatives, and narrowing that array into the final array of alternatives. As the focused array of alternatives was being analyzed, the PDT would also determine which of the considered alternatives would most likely bracket the maximum dimensions that would be implemented for the purpose of evaluating the environmental impact analysis. The results of analyses on the focused array would be screened to narrow the alternatives to a final array of alternatives. From that array, additional screening would narrow the plans to the likely alternative that could be considered as the TSP.

10.1 Management Measures and Screening of Measures

A management measure is a feature or activity that can be implemented at a specific geographic site to address one or more planning objectives. They are generally categorized as structural or nonstructural. Preliminary alternatives are formulated and refined by combining, adapting, and scaling management measures to best address the four criteria from the Principles and Guidelines:

Completeness. Extent to which the alternative provides and accounts for all necessary investments or actions to ensure realization of the planning objectives

Effectiveness. Extent to which the alternative contributes to achieving the planning objectives

Efficiency. Extent to which the plan is the most cost-effective means of addressing the specified problems and realizing the specified opportunities, consistent with protecting the nation's environment

Acceptability. The extent to which the alternative plans are acceptable in terms of applicable laws, regulations and public policies

In accordance with 40 CFR 1502.14, the USACE will "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives eliminated from detailed study, briefly discuss the reasons for their having been eliminated." For this GRR, a reasonable alternative is defined as an alternative that meets the objectives of the study and is under USACE jurisdiction to implement. A measure that could be implemented by others can be considered as long as it meets the objectives on its own or it can be a component of an alternative that meets the objectives in a way that is complete, effective, efficient, and acceptable.

Basic structural measures identified to be considered for Mobile Harbor include deepening the channel, widening the channel, and bend easing in the bar channel, and modifying the turning basin. Nonstructural measures that could be considered include relocation of navigation aids, use of tugs, lightering, topping-off offshore, and scheduling. Table 1 presents the measures that were considered for this study.

Table 1 – Measures Considered

Structural Measures	Non-Structural Measures
• Deepening • Widening • Bend Easing • Passing Lanes • Meeting Areas • Turning Basin	• No-Action • Relocation of buoys • Additional tugs • Light-loading • Lightering • Topping-off offshore • Scheduling

The Mobile Harbor GRR included evaluation of a future "without" project condition that would not include any changes to the current channel dimensions. The PDT screened the measures

considered to develop an initial array of alternatives to be analyzed to develop a focused array of alternatives. The initial array of alternatives is displayed in Table 2.

Table 2 – Initial Alternatives

Initial Alternatives		
Structural Measures		**Non-Structural Measures**
Depth	Width	Nonstructural alternatives will match nonstructural measures.
• 46 ft to 55 ft in 1 ft increments (48 ft to 57 ft in Bar Channel) • Turning Basin Depth to match channel depth	▪ 500 ft and 550 ft in Bay Channel ▪ Widen full channel length ▪ 700 ft in Entrance Channel ▪ Bend easing	

For the stated evaluation criteria, there would be a significant amount of analysis required to fully evaluate the entire range of deepening and widening alternatives. Based on guidance from the Corps' SMART Planning initiative, the number of alternatives to be analyzed were reduced considering information developed in previous study efforts, a planning Charette held in January 2015, and vertical coordination. After discussions within the PDT, it was determined that nonstructural measures alone would not achieve the planning objectives. An array of structural measures were identified to address the planning objectives and included modifications to the Bay and Entrance Channels and bend easing.

10.2 Array of Alternative Plans

The PDT determined that the best approach to achieve the project objectives would be to examine the array of structural measures including the existing condition, channel deepening, two widths and three lengths of wideners. The results of this analysis would develop a focused array of alternatives. The deepening alternatives considered for evaluation would range from useable drafts from 47 to 52 feet in the Bay Channel and 49 to 54 feet in the Bar Channel. Widening measures would evaluate adding 100 or 150 feet of width in the Bay Channel. The length of the widening components to be analyzed for economic justification would have length increments of 5, 10, and 15 miles. In addition to these alternatives, bend easing in the Bar Channel and increased depths of the turning basin to match deepening alternatives would be considered.

Based on historical vessels calling Mobile Harbor, few had design drafts greater than 52 feet. Data showed an increase in vessels calling Mobile Harbor with design drafts of 52 feet or less. Therefore, alternatives with depths greater than 53 feet were screened from further analysis. The depth of 46 feet was also screened from further analysis because the protocol in deep draft navigation projects is typically a minimum of two feet greater than the existing channel depth.

The analysis to this point also demonstrated the potential construction cost of each initial alternative. The study sponsor used the cost data to determine the range of cost that could be suitable for their cost share. The sponsor indicated that deepening to 50 feet appeared to be the maximum that they could support. It should be noted at this point that the sponsor's desire to not deepen below 50 feet led our benefit analysis to utilize the categorical exemption to the NED plan per paragraph 3-2b(10) of ER 1105-2-100.

Based on this information and in coordination with the sponsor, for environmental impact analysis, the PDT determined that the maximum project dimensions that could reasonably be expected would be a 50 foot deep channel (with an additional two feet in the Bar channel) added width of 100 feet for five miles for a widener with 50 foot depth with bend easing and turning basin modification. This information was provided to the engineering and modeling team for their development of the environmental impact analysis.

It was determined through ship simulation that bend easing was not a separable element but those changes would be necessary from a safe operations standpoint for the deepening alternatives. The turning basin would also be deepened to match any deepening alternative but ship simulation also found that some modification of the turning basin was needed to assure safe operations.

An analysis of the remaining initial deepening and widening alternatives was conducted using rough order magnitude costs and benefits that the team considered an appropriate level of detail. As this analysis progressed, the results helped shape the focused array of alternatives that would utilize more refined cost and economic data. It was found that each of the deepening alternatives had positive net benefits. It was also found that widening 5 miles of the channel with an additional width of 100 feet had negative net benefits. Based on this result widening lengths greater than 5 miles and widths greater than 100 feet would likely not be economically feasible for the depths being considered and therefore were dropped from consideration. Review of the 5 mile widening results and previously conducted ship simulation suggested that 100 feet of widening with a 3 mile length might be acceptable and economically feasible.

With the above considerations, the focused array of alternatives to be considered is shown in Table 3.

Table 3 – Focused Alternatives

Measure	Alternatives			
Deepening	47	48	49	50
Widening	Additional 100 feet of width for 3 miles for each depth alternative			
	Additional 100 feet of width for 5 miles for each depth alternative			

Note: Each depth alternative would include two feet of additional depth in the bar channel.

11.0 Evaluation and Comparison of Array of Alternative Plans

Alternative plans are evaluated by applying numerous, rigorous criteria. Per the *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*, as stated in the previous section, four general criteria are considered during alternative plan screening: completeness, effectiveness, efficiency, and acceptability.

There are also specific technical criteria related to engineering, economics, and the environment, which also need to be considered in evaluating alternatives. These are:

Engineering Criteria:

- The plan must represent a sound, acceptable, safe, efficient and reliable engineering solution.

Economic Criteria:

- The plan must contribute benefits to NED.
- Tangible benefits of a plan must exceed economic costs.
- Each separable unit of improvement must provide benefits at least equal to costs.

Environmental Criteria:

- The plan will fully comply with all relevant environmental laws, regulations, policies, and executive orders.
- The plan represents an appropriate balance between economic benefits and environmental sustainability.
- The plan has been developed in a manner that is consistent with the USACE Environmental Operating Principles (EOPs).

Adverse impacts to the environment is being avoided to the extent practicable. In cases where adverse effects cannot be avoided, mitigation must be provided based on the guidance in ER 1105-2-100, paragraph C-3(d)(1), and Memorandum dated 31 August 2009 Implementation Guidance for Section 2036(a) of WRDA 2007-Mitigation for Fish and Wildlife and Wetland Losses.

Following determination of the focused array, the PDT further refined the cost and economic data to provide information needed to meet the technical criteria above to narrow alternatives to a final array to determine the plan that could be considered as the Tentatively Selected Plan (TSP). Cost and economic data for the focused array is presented in Table 4.

Table 4 – Cost and Economic Data for Focused Array

Preliminary Project Cost ($M)				
Measure	Depth (Feet)			
	47	48	49	50
Deepening	195.69	271.84	347.32	429.74
Deepening and Widening 100 ft for 3 miles	204.39	282.04	359.42	434.34
Deepening and Widening 100 ft for 5 miles	207.89	286.34	365.22	449.34

Preliminary Project Net Benefits ($M)				
Measure	Depth (Feet)			
	47	48	49	50
Deepening	13.7	21.2	28.7	34.0
Deepening and Widening 100 ft for 3 miles	13.9	21.3	28.8	33.9
Deepening and Widening 100 ft for 5 miles	13.5	19.9	28.3	33.5

The refined data indicated that the 5 mile widener would not be feasible for the depths being considered therefore it was eliminated from further consideration. Similarly, the 3 mile widener at the 50 foot depth was also found to benot economically feasible and was therefore eliminated from further consideration. Based on the project objectives and sponsor input, both deepening and widening were to be desired outcomes. The 50 foot depth alternative could not be combined with a complimentary economically feasible widener and therefore, with concurrence from the sponsor, was eliminated from further consideration. Combining the results of the refined cost and economic data for the remaining depth and widening alternatives that satisfy the project objectives and sponsor preference defined the values for consideration as a TSP in the final array of alternatives. The results are provided in Table 5.

Table 5 – Final Array of Alternatives

Combined Measures Preliminary Project Cost and Net Benefits ($M)			
	Alternative (Depth in Feet)		
	47	48	49
Cost	204.39	282.04	359.42
Net Benefit	13.9	21.3	28.8

Note: Each depth alternative would include two feet of additional depth in the bar channel.

Risk informed planning requires transparency in the estimation of values. Table 6 shows the range of net benefits for deepening and widening, as shown all deepening alternatives are positive. The 49' deepening alternative has the highest possible net benefits.

Table 6 – Benefit Uncertainty Analysis

Alternative	Minimum	Quartile 1	Median	Quartile 3	Maximum	Avg Net Benefits
47 Foot Deepening	$7,797M	$9,738M	$13,630M	$17,590M	$20,531M	$13,690M
48 Foot Deepening*	$15,018M	$17,369M	$20,402M	$25,591M	$28,245M	$21,203M
49 Foot Deepening	$22,231M	$24,990M	$27,165M	$33,583M	$35,950M	$28,717M
49 Foot Widening	-$920,700	-$29,400	$74,000	$148,200	$275,700	$56,800

Alternative	Minimum	Quartile 1	Median	Quartile 3	Maximum	BCR
47 Foot Deepening	2.0	2.3	2.8	3.3	3.7	2.8
48 Foot Deepening*	2.4	2.6	2.9	3.4	3.6	3.0
49 Foot Deepening	2.6	2.8	3.0	3.4	3.6	3.1
49 Foot Widening	-0.5	1.0	1.1	1.2	1.4	1.1

Based on the results of the foregoing, the plan that best satisfies the project objectives and sponsor desire is the 49 foot alternative. This plan has greater net benefits than smaller scale plans (47 and 48 foot), and, considering categorical exemption from the NED plan per paragraphs 3-2b(10) of ER 1105-2-100, a sufficient number of alternatives were analyzed to insure that net benefits do not maximize at a scale smaller than the 49 foot plan.

12.0 Tentatively Selected Plan

The Tentatively Selected Plan was developed through an iterative process that evaluated the cost and benefit of alternatives selected for consideration. The costs for each alternative included a contingency amount to allow for possible mitigation costs depending on the outcome of the environmental impact analyses. The alternatives considered were those that the PDT identified as possibly fulfilling the identified needs for modifying the project and satisfying NED goals and complying with applicable laws and regulations. The alternatives had varying dimensions in depth, width, and length of widening. As the iterative process progressed the number of alternatives were narrowed based on evaluation criteria until one alternative was found to best satisfy the various evaluation criteria.

The alternative that best meets the project objectives includes: deepening the existing channel an additional 4 feet (existing 45 feet channel in the bay to 49 feet and exiting 47 feet channel in the bar to 51 feet); adding an additional 100 feet of widening for a distance of three miles beginning at the upper end of the bend area at the 49 foot depth; including bend easing with the deepening at the upper end of the bar channel; and, modification to the Choctaw Pass turning basin to ensure safe operation at the 49 foot depth.

Disposal Considerations

- **Placement Locations.** New work material for the proposed channel modifications will be placed in three locations. These are the Relic Shell Mined Area, Sand Island Beneficial Use Area (SIBUA), and the Ocean Dredged Material Disposal Site (ODMDS).

- **Relic Shell Mined Area.** The Shell Mined Area is located generally northeast of Gaillard Island on the eastern side of the ship channel. The proposed placement within this site is the result of beneficial use discussions with the cooperating agencies where it was suggested that Mobile District conduct open bay thin-layer placement in areas of historic relic shell mining operations.. One of the primary concerns expressed by the

- group were the areas in the northeastern portion of the bay where oyster shell mining operations were conducted prior to 1982 to mine relic oyster shell deposits. These operations have resulted in an overall deepening of the bay bottom in that area. A map of the relic shell mined area is shown in Figure 5.

  The potential placement areas have been laid out in sections where there were disturbances with 15-foot depths or greater based on surveys from 1960/61 and 1984/87. These areas encompass approximately 4,100 acres and, assuming a layered placement in these areas, it has been calculated that there is capacity for approximately 5.5 MCY. Existing depths within these sites generally range from 10 to 14 feet. Although volume estimates are based on an average thickness of approximately 1.5 feet, it is anticipated that placement would be accomplished with a maximum thickness of approximately 3 feet due to the characteristics of the new work material. Placement of dredged material into portions of this area would not only potentially help to increase the ecologically productivity of the bay bottom areas, but in general, would also keep the sediment within the sediment transport system. This disposal area has been coordinated with the cooperating agencies during the agency scoping process. Once the exact volumes and locations of placement have been determined, these activities will be included in obtaining the required WQC and other agency coordination.

- **Sand Island Beneficial Use Area (SIBUA).** In the 1996 WRDA, authority was given to the Corps to modify disposal practices for beneficial use of dredge material from the ODMDS. The Mobile District then partnered with the Alabama Department of Environmental Management (ADEM) to designate an area on the western side of the Bar Channel in which suitable material could be placed when any opportunity arose. Designation of the Sand Island Beneficial Use Area (SIBUA) was completed in 1998 and placement of the sandy bar channel maintenance material at this site became the preferred disposal option from that portion of the channel.

  On March 6, 2000, the Dauphin Island Property Owners' Association (DIPOA) filed a lawsuit in the United States Court of Federal Claims styled Dauphin Island Property Owners' Association, et al. vs. United States, No. 00-115-L (Fed. Cl.). In accordance with the terms of the addendum to the Settlement Agreement, the Corps would continue to conduct its maintenance dredging practices to deposit material dredged from the Bar Channel in the SIBUA and/or the Feeder Berm Disposal Area ("the alternate disposal areas"), *subject to* (i) channel shoaling that materially adversely affects or could reasonably be expected to materially adversely affect shipping traffic before the routine, scheduled dredging cycle occurs; (ii) the absence of competitive bid proposals

from operators owning equipment capable of disposing material in the alternate disposal areas (i.e., where disposal in these alternate disposal areas would thus violate the "least costly" restriction imposed by applicable laws); (iii) currently unforeseen negative consequences from repeated use of these alternate disposal areas are discovered; (iv) a change in the law, certifications, authorizations, or regulations that prohibits the deposit of such material in these two disposal areas; or (v) identification and authorization by the Corps of a more beneficial area for Dauphin Island.

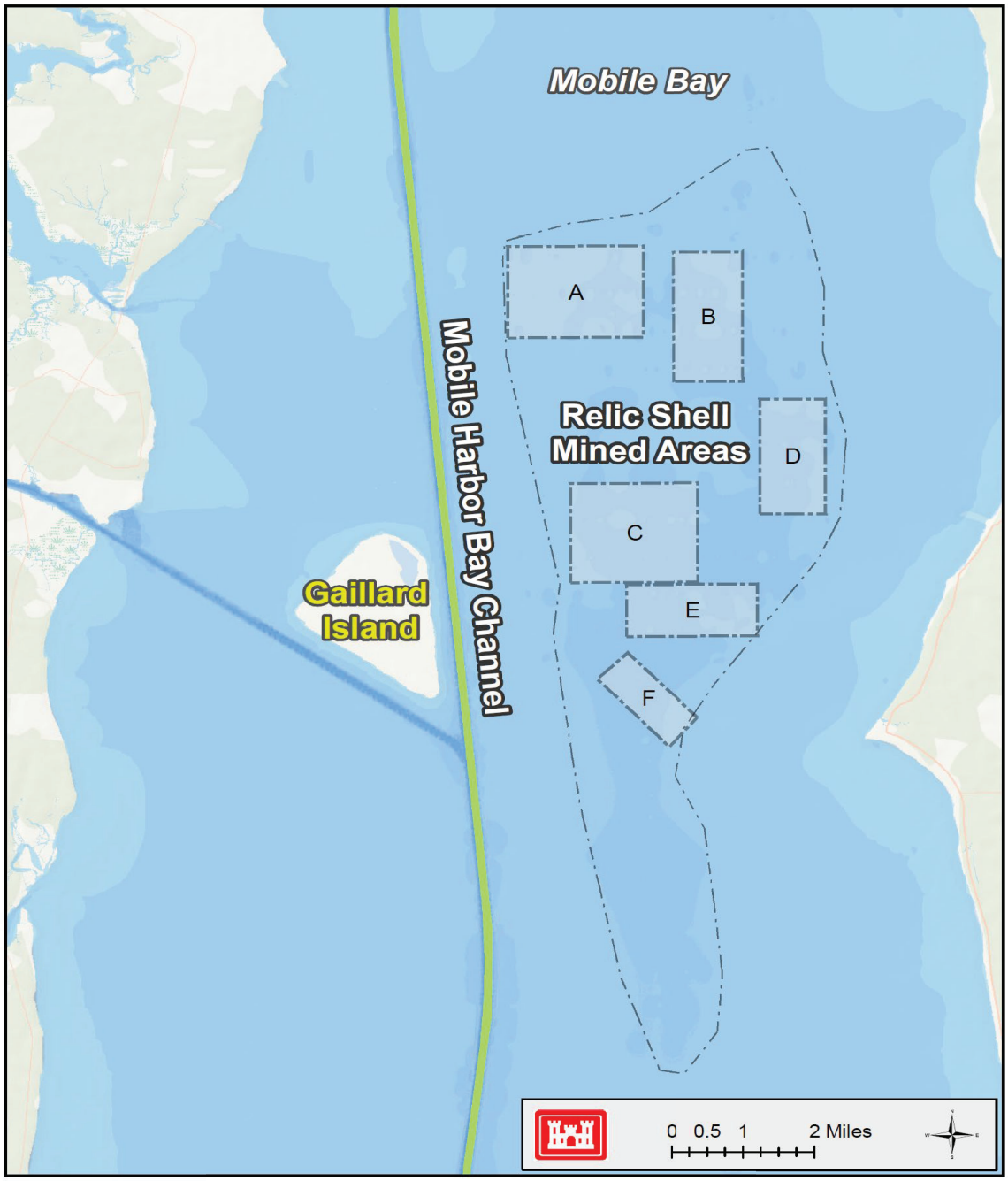

Figure 5 Relic Shell Mined Area

As part of this study, bathymetric change analysis and coastal sediment transport modeling indicated that material moving out of the SIBUA moves at a slower rate than what is needed to ensure adequate disposal capacity for the anticipated increase of maintenance material within the bar channel. As such, it will be necessary for the Mobile District to pursue modifications to extend the site beyond the existing boundaries of SIBUA that meet the requirements of the settlement and provide sufficient movement of material and capacity for new work and maintenance material. Currently, an analysis is being conducted to determine the location and size of the expanded footprint to ensure future capacity in the site. It is anticipated that the expansion of the SIBUA will extend its boundaries to include areas within the Sand Island-Pelican Island complex. When the expansion dimensions have been determined, the necessary coordination actions will be conducted to modify the WQC. Is should be understood that the proposed expansion is being conducted under O&M and not as part of this study.

Any suitable bar channel new work material dredged in sufficient quantity to warrant placement within the SIBUA will be accomplished accordingly. Based on existing geotechnical information, it is anticipated that the new work material does not contain enough suitable material to warrant placement within SIBUA.

- **Ocean Dredged Material Disposal Site (ODMDS).** The 1986 WRDA Authorization of the Mobile Harbor Project required that, for reasons of environmental quality, all dredged material from the project shall be placed within open waters of the Gulf of Mexico in accordance with all provisions of Federal law. Since that time, 1994 and 1996 WRDA Authorizations included language that allowed placement options of suitable material in the SIBUA as well as open water (thin layer) placement within the bay adjacent to the channel. The majority of dredged material from the proposed channel modifications, an estimated 27MCY, will be placed in the ODMDS. The existing Mobile ODMDS is 4.75 square nautical miles (nmi^2). The Mobile District is pursuing a modification to expand the ODMDS to 24 nmi^2 to meet the future needs of O&M and new work material. Coordination with EPA on the expansion is in progress pending a USACE determination on cultural resource survey requirements. Once the expansion is finalized, Section 106 consultation will be conducted and a modification of the WQC will be pursued to include the updated ODMDS.

12.1 Systems/Watershed Context

The Mobile Harbor is contained primarily in Mobile Bay with portion into the Gulf of Mexico and the Mobile River. Mobile Bay has been recognized as a nationally significant estuary of the United States since 1995, with the designation as one of 28 National Estuary Programs established by the EPA. The Mobile Bay watershed is the sixth largest river basin in the United States and the fourth largest in terms of streamflow. It drains water from three-fourths of Alabama as well as portions of Georgia, Tennessee and Mississippi into Mobile Bay. Both the Mobile River and Tensaw River empty into the northern end of the Bay. Several smaller rivers: Dog River, Deer River, and Fowl River, on the western side of the Bay and the Fish River on the eastern side also empty into the Bay, making it an estuary. A feature of all estuaries is a transition zone, where the freshwater from the rivers mixes with the tidally-influenced salt water of the Gulf of Mexico.

It was within this context that as this study began that the District met with interested agencies in a charrette to discuss issues and concerns that needed to be considered as the study progressed to insure that impact to resources were avoided, minimized or mitigated. Follow-up meetings have been held periodically as data was being collected, as models were being developed, and as results of the impact assessment became available. Participating agencies are:

- Alabama State Port Authority (ASPA)
- Alabama Dept. of Environmental Management (ADEM), Mobile Field Office
- ADEM, Water Quality Branch
- Alabama Dept. of Conservation and Natural Resources (ADCNR), Marine Resources Division (MRD)
- Geological Survey of Alabama (GSA)
- U.S. Fish and Wildlife Service (FWS)
- National Marine Fisheries Service (NMFS), Habitat Conservation Division (HCD)
- Environmental Protection Agency (EPA Region 4)
- Mobile Bay National Estuary Program (MBNEP)
- U.S. Geological Survey (USGS)

12.2 Environmental Operating Principles

The general environmental criteria for projects of this nature are identified in Federal environmental statutes, executive orders, planning guidelines, and the U.S. Army Corps of Engineers Environmental Operating Principles (EOP). It is the national policy that ecosystem restoration, particularly that which results in conservation of fish and wildlife resources, be given equal consideration with other study purposes in the formulation and evaluation of alternative plans. The basic guidance during planning studies is to assure that care is taken to preserve and protect significant ecological and cultural resources, and to conserve natural resources. These efforts also should provide the means to maintain and restore, as applicable, the desirable qualities of the human and natural environment. Formulation of alternative plans should avoid damaging the environment to the extent practicable and contain measures to minimize or mitigate unavoidable environmental damages. Consistent with laws and policy, alternative plans formulated should avoid damaging the environment to the extent practicable and contain measures to minimize or mitigate unavoidable environmental impacts.
EOPs have been established for evaluation of water resource projects and have been implemented throughout the study process to ensure conservation, environmental preservation, and restoration is considered at the same level as economic issues. These principles are: 1) Strive to achieve environmental sustainability, 2) Consider environmental consequences, 3) Seek balance and synergy, 4) Accept responsibility, 5) Mitigate impacts, 6) Understand the environment, and 7) Respect other views. The following criteria were used to address environmental impacts during the evaluation of alternatives:

- Protection, preservation, and improvement of the existing fish and wildlife resources along with the protection and preservation of coastal and offshore habitat and water quality;
- Consideration in the project design of the least disruptive construction techniques and methods;
- Protection and preservation of endangered and/or threatened species, critical habitat, and essential fish habitat (EFH); and
- Preservation of significant historical and archeological resources through avoidance, if possible, or data recordation if destruction of the resources is necessary.

13.0 Key Social and Environmental Factors and Mitigation Actions

The intent of the environmental component is to assess the potential impacts within the study area considering the aquatic resources throughout the area. These resources consist of wetlands, submerged aquatic vegetation, oysters, benthic invertebrates, and fish. The baseline of the resources were determine and mapped using historical and current information obtained from the state resource agencies and field data collection efforts. Salinity tolerances for each

of the resources were derived using information gathered from accepted research literature. Hydrodynamic, water quality, and sediment transport models were utilized to predict changes in currents, water quality parameters, and sedimentation are key components to predict and provide the basis to conduct accurate habitat impacts assessments. Outputs from the models were then used to assess the potential impacts to the aquatic resources comparing existing conditions to post-project conditions. A sea level rise scenario of 0.5 meters was also considered in the impact analysis. Potential impacts resulting from the actions are used as a means to determine any necessary mitigation requirements.

The results of the resource assessments indicate that after comparing the baseline conditions and water quality thresholds across the five aquatic resources, there are no major impacts anticipated considering the post-project conditions. Project impacts remain negligible under 0.5 meter sea level rise scenario.

13.1 Stakeholder Perspectives and Differences

An initial agency scoping meeting was held December 9, 2015 with the cooperation Federal and state support agencies to develop the issues of concern to be considered during the environmental impact analysis process. Subsequent follow up meetings were conducted with the agencies to provide an overview of the study approach being applied for modeling and aquatic resources assessments for the study. These meetings provided opportunities for the agencies to identify and discuss their concerns during the course of the study. As the study progressed the PDT presented the deepening and widening alternative that was selected in which the initial modeling would be conducted as well as updates on the progress of the modeling and aquatic resources assessments. The latest agency meeting presented preliminary results for the modeling efforts and aquatic resources impact assessments. Based on the minor predicted impacts on the aquatic resources of consideration relating to changes in the hydrodynamics, water quality, and sediment transport, the cooperating agencies in attendance felt that mitigation measures would not be necessary. However, the group recommended that the results of the ship wake analysis currently underway be fully considered for potential effects on shorelines and resources before a final determination is made on mitigation requirements.

In additional to the agency scoping meeting, two meeting were held with the support agencies specifically addressing beneficial use (BU) opportunities associated with the disposal of the new work material. The meetings were instrumental in the process of identifying realistic beneficial use opportunities associated with the proposed widening and deepening activities. Through these meetings, the agencies provided their input and support for the potential placement options that factor into the least cost options, specifically placement in the relic oyster shell

mining areas and the Sand Island/Pelican Island complex. Both of which are now included as the placement areas for the project.

As required by the NEPA guidelines, a public scoping process was conducted at the initiation of the GRR study. The scoping process allowed public input into the development of issues and alternatives to be considered during the NEPA analysis. Minutes compiled from the initial scoping process has been made available to the public and used as guidance for the NEPA analyses. In addition to the scoping process, two other public meetings were held to keep the public informed on the study's progress and provide the opportunity for the public to express their concerns. Several focus group meetings were held with the environmental justice communities, seafood industry, and environmental organizations. These meetings allowed those groups to provide their specific concerns outside of a public forum. An additional public meeting will be scheduled upon the release of the draft GRR for public review. These meetings are being conducted in efforts to ensure that activities associated with the study will be compatible to other Federal programs and plans.

13.2 Environmental Compliance

An integrated SEIS is being prepared to meet NEPA requirements. In support of this effort, the USEPA, NMFS, USFWS, ADEM, ADCNR, ASPA, and other appropriate Federal and state agencies have been asked to be cooperating agencies and are actively participating in the NEPA process.

In addition to conducting impact assessments, coordination with the appropriate resource agencies are being initiated for threatened and endangered species, essential fish habit, and cultural resources. Testing of the new work material will conducting during PED to ensure that the sediment meets the ocean disposal criteria.

The study is gathering and analyzing local and regional information for use in the preparation of the Environmental Justice, Air Quality and Noise sections of the SEIS and Cumulative Impacts. Cumulative impacts are the results of those incremental past, present and foreseeable future actions that individually may be minor but collectively are significant. Thus, environmental conditions to consider include, but are not limited to: biological resources (water & sediment quality, flora/fauna, etc.), physical resources, sediment transport processes, air quality, sea level & climate changes, noise, socio-economic impacts and environmental justice.

14.0 Project Implementation

Project sponsor is the Alabama State Port Authority.

15.0 Timeline

The schedule for the Mobile Harbor GRR is as follows.

Amended Design Agreement Signed	09 NOV 2015
Alternatives Milestone	17 FEB 2016
Intermediate Review and Screening of Alternatives	18 APR 2017
Tentatively Selected Plan Milestone	28 MAR 2018
Release Draft SEIS for Review	12 JUN 2018
Agency Decision Milestone	16 NOV 2018
Division Engineer Transmittal	21 MAY 2019
Release Final SEIS for Review	08 JUN 2019
GRR Approval	04 NOV 2019

From: (b)(6)
To:
Subject: RE: Mobile Harbor (UNCLASSIFIED)
Date: Monday, April 30, 2018 4:58:00 PM

(b)(6) is about to update the economics to try to get the 50'. This will likely buy us a little time on the schedule. I will update the team on the new schedule for the ATR in the next day or two.

(b)(6)

-----Original Message-----
From: (b)(6)
Sent: Monday, April 30, 2018 4:07 PM
To: (b)(6)
(b)(6)
Subject: RE: Mobile Harbor (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

(b)(6) I think it may be up in the air....It was previously the 49', but there are some updates that may change it to 50'

(b)(6), how do you want us to proceed with report writing regarding the TSP?

-----Original Message-----
From: (b)(6)
Sent: Monday, April 30, 2018 3:41 PM
To: (b)(6)
Subject: RE: Mobile Harbor (UNCLASSIFIED)

I was still waiting for EN language to use...I've still don't have any language from main report saying what the TSP is.

-----Original Message-----
From: (b)(6)
Sent: Monday, April 30, 2018 11:05 AM
To: (b)(6)
Subject: Mobile Harbor (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

I really hate to be a bother, but curious if you've put together your REP for the pipelines or lack of pipelines? I typically add some of your language to my section so I'm not stating anything incorrectly.

(b)(6)

(b)(6)

CLASSIFICATION: UNCLASSIFIED
CLASSIFICATION: UNCLASSIFIED