From: To:	(b)(6)
Cc:	
Subject: Date:	FW: [Non-DoD Source] Dauphin Island and Good news Thursday, February 1, 2018 7:59:00 AM

All: FYI. The trailer for the Sierra Club Documentary is at vimeo.com/248802675



From:	(b)(6)	
Sent: Wednesday, Ja	anuary 31, 2018 3:35 PM	
To:	(b)(6)	

Subject: [Non-DoD Source] Dauphin Island and Good news

Unbelievable good news about Dauphin Island.

1. Finally, someone is listening to Dauphin Island.

For years, a group of us has been sending information to the Sierra Club to explain the Corps' erosion to Dauphin Island.

As a result, the Sierra Club, Alabama Chapter is sponsoring a documentary film about the erosion of Dauphin Island caused by the Corps' dredging of the Mobile Harbor and Outer Bar Channel.

I am asking each owner on Dauphin Island to donate money to the documentary, which will be used to protect the Island. We need to show the Sierra Club our unified effort to save the Island.

The production cost of the film is \$15,000; many thousands have already been donated.

To donate to the film and all information about the Dauphin Island project can be found at Blockedhttps://www.sierraclub.org/alabama/dauphinisland

The trailer to the film can be seen at vimeo.com/248802675 < Blockedhttp://vimeo.com/248802675 >

I am asking each of you to contact Jonathon Meeks of the Sierra Club and thank them for their support and their tremendous effort to save Dauphin Island. jonathonmeeks@gmail.com <<u>mailto:jonathonmeeks@gmail.com</u>>

Next, Unbelievable good news about Dauphin Island.

2. Corps put the FOIA document about Dauphin island on their website.

Thank you for sending in the FOIA requests to the Corps of Engineers. Because of all of you, the Corps had to answer the questions and put the answers to my FOIA request on their website for the public to see.

This shows what can happen, if all of the property owners stand together and dispute the Corps' false statements about Dauphin island.

Some of these are documents that the owners have been asking the Corps to provide for the last 38 years, about the erosion of Dauphin Island.

The documents can be found under Dauphin Island Request (2017)

Blockedhttp://www.sam.usace.army.mil/Business-With-Us/FOIA/Frequently-Requested-Records/

Of course, the Mobile District did not answer all of the questions, but I have filed an appeal and I will let you know the results.

The Corps has made a conscious effort to deliberately hide the truth from the people of Dauphin Island, that the Corps' maintenance dredging is the cause to the erosion to the shoreline for the past 38 years

We have to show the Corps that their tactics will not be tolerated any more and keep demanding the answers to our questions.

With warmest regards,

(b)(6)

From: To:	(b)(6)
Subject:	Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR
Date:	Thursday, February 1, 2018 9:05:00 AM
Attachments:	<u>Econ Slide 29 Jan 2018 .pptx</u>

Let me know if you have any comments before I send to (b)(6)

(b)(6) Attached are the current estimated costs and benefits for the Mobile Harbor Study. We intend to proceed with Alternative 2 (49' depth, 3 mile, 100' widener) as the Tentatively Selected Plan to be presented to the vertical team March 28, 2018. This plan would require the standard cost share. Please confirm that the ASPA has no intentions at this time to proceed with a Locally Preferred Plan (LPP) for additional deepening or length of widening. The ASPA could still choose to proceed with an LPP after the TSP milestone but this would likely delay study completion and cost.

Upon your confirmation, we will request a categorical exemption from the NED Plan (51' depth, no widening) through our Division Office.



From: To:	(b)(6)
Subject:	RE: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR
Date:	Thursday, February 1, 2018 9:31:00 AM

I'll use your updated table.

(b)(6)		
Original Message From: (b)(6) Sent: Thursday, February 01, 2018 9:27 AM To:	(b)(6)	
	(b)(6)	

Subject: RE: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR

(b)(6) for the intent of your email it's fine, but there was a reduction in net benefits for deepening in the latest update. I've updated your slide to reflect the updated net benefits.

(b)(6)			
Original Message From: (b)(Sent: Thursday, February 01, 201			
То		(b)(6)	
	(b)	(6)	

Subject: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR

Let me know if you have any comments before I send to (b)(6)

(b)(6) ttached are the current estimated costs and benefits for the Mobile Harbor Study. We intend to proceed with Alternative 2 (49' depth, 3 mile, 100' widener) as the Tentatively Selected Plan to be presented to the vertical team March 28, 2018. This plan would require the standard cost share. Please confirm that the ASPA has no intentions at this time to proceed with a Locally Preferred Plan (LPP) for additional deepening or length of widening. The ASPA could still choose to proceed with an LPP after the TSP milestone but this would likely delay study completion and cost.

Upon your confirmation, we will request a categorical exemption from the NED Plan (51' depth, no widening) through our Division Office.

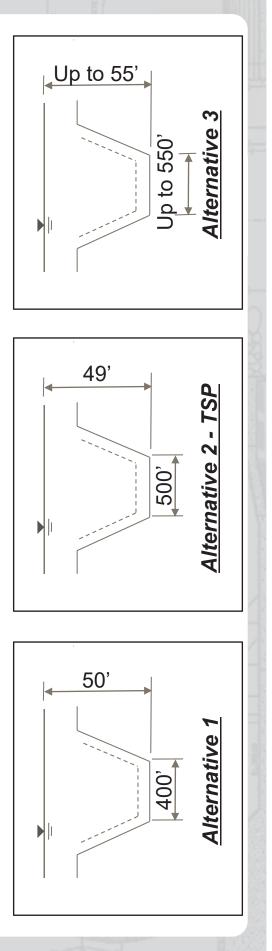


PRELIMINARY COSTS AND NET BENEFITS **MOBILE HARBOR GRR**

Mobile Ha	Irbor GRR Pre	eliminary Proj	Harbor GRR Preliminary Project Cost Estimate (\$M)	ate (ŞM)		
		Depth				
7	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	\$27.90	\$195.69	\$271.8 4	\$347.32	\$429.74	\$561.45
Alternative 2 - 100' widening for 3 miles	\$33.50	\$204.39	\$282.0 4	\$359.42	\$444.34	\$577.85
Alternative 3 - 100' widening for 5 miles	\$35.50	\$207.89	\$286.34	\$365.22	\$450.34	\$584.75

	Mobile Harb	Mobile Harbor GRR Alternatives Matrix	atives Matrix			
		Net Benefits				
	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	AA	\$17.1M	\$26.8M	\$36.5M	\$44.5M	\$49.7M
Alternative 2 - 100' widening for 3 miles	\$265,000	\$185,200	\$127,800	\$56,800	(\$33,800)	
Alternative 3 - 100' widening for 5 miles			ГРР	e -	,	

Note: Preliminary results shown in the tables are as of January 29, 2018



From: To: Cc:	(b)(6)
Subject:	FW: Starting Point for Public Engagement
Date:	Thursday, February 1, 2018 12:37:00 PM
Attachments:	Mobile Harbor Public Engagement 22Feb Draft.pptx

(b)(6) Just realized that we are going to need an EJ/Noise/Air Slide. Also, please place the schedule (with bubbles on the attached format slide (I could not get that to work).

If possible, get me draft by tomorrow morning at 9am (they're due to Col. DeLapp by tomorrow at 11am). Need at least schedule slide (we can hold off on EJ slide).

(b)(6)	

Original Message-				
From:	(b)(6)			
Sent: Wednesday, Jan	uary 31, 2018 10:26 AM			
To:	(b)(6)			
Cc:		(b)(6)		
	(b)(6)			

Subject: Starting Point for Public Engagement

(b)(6) here's a starting point for the slides for COL DeLapp's presentation. At slide 13, we transition to the Mobile GRR...where we need to add new material, the things we discussed yesterday. Also, some of these slides are dated and the info needs to be updated.

(b)(6)



Pages 2 through 17 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	22 Feb 2018 Public Meeting v2.pptx
Date:	Thursday, February 1, 2018 2:26:00 PM
Attachments:	22 Feb 2018 Public Meeting v2.pptx

(b)(6) Please provide photos in slide 2 and 3 of the attached. Use any photos from the past that you see fit to use.



Pages 2 through 5 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	RE: Mobile Harbor Rehearsal
Date:	Thursday, February 1, 2018 2:57:00 PM

(b)(6) Most of us will be in the Mobile Harbor GRR Agency Meeting that day over at the ASPA Offices. I will be able to come back over, but not sure if some of the other will be able to attend.



Original Appointment		
From (b)(6))	
Sent: Thursday, February 01, 2018 2:55 PM		
To: (b)(6)		
Subject: Accepted: Mobile Hart	oor Rehearsal	

When: Thursday, February 15, 2018 1:30 PM-3:00 PM (UTC-06:00) Central Time (US & Canada). Where: Executive Office Conf Room

From: To:	(b)(6)
Subject:	Current Presentation Format
Date:	Thursday, February 1, 2018 4:22:00 PM

Placed it in planning drive mobile harbor grr/slides folder.

(b)(6)	

From: To: Cc:	(b)(6)
Subject:	RE: Mobile Harbor GRR Q&A (UNCLASSIFIED)
Date:	Friday, February 2, 2018 10:09:00 AM

Thank you!

Original Message
From: (b)(6)
Sent: Friday, February 02, 2018 9:50 AM
To: (b)(6)
Cc: (b)(6)
Subject: FW: Mobile Harbor GRR Q&A (UNCLASSIFIED)
(b)(6)
I accepted (b)(6) hanges. The final version is attached.
(b)(6)
Original Message
From: (b)(6)
Sent: Friday, February 02, 2018 9:43 AM
To:(b)(6)
Cc: (b)(6)
Subject: DE: Mobile Harbor CDD O&A (UNCLASSIFIED)

Subject: RE: Mobile Harbor GRR Q&A (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

See my attached revisions. Nothing major. Thanks for taking the first shot at this.

(b)(6) -----Original Message-----From: Sent: Wednesday, January 31, 2018 2:37 PM To: Cc: Subject: RE: Mobile Harbor GRR Q&A

Hey,

Can you provide any additions/revisions on these to me and David by COB Friday? This came up during our meeting going on right now and (b)(6) needs them by the end of the week to give to the COL.

Original Message			
From: (b)(6)			
Sent: Monday, January 29, 2018 4:38 PM		•	
To:	(b)(6)		
Cc:	(b)(6)		
Subject: FW: Mobile Harbor GRR Q&A			

(b)(6)

My proposed responses to the questions below are shown in the attached word document. Please revise/expand as you see fit and send it back to me sometime tomorrow, if possible.

	(b)(6)	
Original Message		
From: (b)(6)		
Sent: Friday, January 26, 2018 3:00 PM		
To:	(b)(6)	
Subject: Mobile Harbor GRR Q&A		

(b)(6) When you get a moment, please provide responses to the following q&a's...

Q26: The Mobile District has been regularly using the Sand Island Beneficial Use Area (SIBUA) for the last 18 years. Will the GRR investigate "from a quantitative standpoint" if the SIBUA actually contributes substantial quantities of dredged "beach quality" sands to the littoral drift system on the west side of the Mobile Pass ebb-tidal delta?

Q30: How will data from the Alabama Barrier Island Restoration Assessment (ABIRA) be used in the GRR Study? The ABIRA Comprehensive Report is scheduled for completion in March 2019, yet the DRAFT GRR and SEIS for the Mobile Harbor GRR is scheduled to be released in June of 2018.

Q33: In what way does the current GRR rely on the 2008 and 2010 Byrnes Study?



CLASSIFICATION: UNCLASSIFIED

From: To: Cc:	(b)(6)	
Subject:	Mobile Harbor GRR CommPlan_02.02.18.docx	
Date:	Friday, February 2, 2018 10:41:00 AM	
Attachments:	Mobile Harbor GRR CommPlan 02.02.18.docx	

(b)(6) Attached are the updated Q&A's in preparation for the Public Meeting. Still refining responses and still have a few questions to answer but thought it may be good for the Colonel to begin to prep for the questions.

Will send updated slides shortly.



Pages 2 through 13 redacted for the following reasons: (b)(5)

From:(b)(6)To:Vol 1 Public Meeting SlidesSubject:Vol 1 Public Meeting SlidesDate:Friday, February 2, 2018 10:45:00 AMAttachments:22 Feb 2018 Public Meeting v1.pptx

Volume 1 of Public Meeting Slides Attached.



Pages 2 through 41 redacted for the following reasons: (b)(5)

From: To:	(b)(6)	
Subject:	Vol 1 Public Meeting Slides	
Date:	Friday, February 2, 2018 11:08:00 AM	
Attachments:	22 Feb 2018 Public Meeting v2 - vol 1.pptx	

Volume 1 of public meeting slides attached.



Pages 2 through 13 redacted for the following reasons: (b)(5)

From: To: Cc:	(b)(6)
Subject:	FW: Vol 2 Public Meeting Slides
Date:	Friday, February 2, 2018 11:40:00 AM
Attachments:	22 Feb 2018 Public Meeting v2 - vol 1.pptx

Volume 2 of public meeting slides attached.

(b)(6)

Pages 2 through 13 redacted for the following reasons: (b)(5)

From: To: Cc:	(b)(6)
Subject:	Mobile Harbor Public Meeting Slides
Date:	Friday, February 2, 2018 11:59:00 AM

(b)(6) I sent the e-mails with the slides (4 volumes). The network appears to be extremely slow so I also uploaded the compiled files onto the PM Network drive at PM-C/Newell/Mobile Harbor GRR/Slides.



From: To:	(b)(6)
Cc:	
Subject: Date:	Latest slide set for the Feb 22 Public Meeting Friday, February 2, 2018 12:43:00 PM

All: The latest slides for the February 22 Public Meeting have been placed on the planning drive in the Mobile Harbor GRR/Slides directory.



From: To:	(b)(6)	
Subject: Date:	RE: Latest slide set for the Feb 22 Public Meeting (L Friday, February 2, 2018 12:52:00 PM	JNCLASSIFIED)

Thank you, (b)(6) In regards to comments on the other slides, would prefer to get those during the rehearsals. I am having a tough time dealing with those huge files and comments only further frustrate me.



Original	Message	
From:	(b)(6)	
Sent: Friday	, February 02, 2018 12:45 PM	
To:	(b)(6)	

Subject: RE: Latest slide set for the Feb 22 Public Meeting (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Thanks (b)(6) Hope to be up and running and get our engineering slides added as soon as possible.

Would you like a review and feedback from the team on any of the other slides?

(b)	$\langle \alpha \rangle$	
LO I	61	
(\sim)	(\mathbf{v})	

Original Message	
From (b)(6)	
Sent: Friday, February 2, 2018 12:43 PM	
To:	(b)(6)
	(b)(6)



All: The latest slides for the February 22 Public Meeting have been placed on the planning drive in the Mobile Harbor GRR/Slides directory.

(b)(6)	

CLASSIFICATION: UNCLASSIFIED

From: To: Cc:	(b)(6)
Subject:	Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR
Date:	Friday, February 2, 2018 2:50:00 PM
Attachments:	Econ Slide 01 Feb 2018.pptx

(b)(6) Attached are the current estimated costs and benefits for the Mobile Harbor Study. We will continue to refine the costs and benefits, but based on our previous discussions, we intend to proceed with Alternative 2 (49' depth, 3 mile, 100' widener) as the Tentatively Selected Plan. This plan will require the standard cost share. Please confirm that the ASPA has no intentions at this time to proceed with a Locally Preferred Plan (LPP) for additional deepening or length of widening. The ASPA could still choose to proceed with an LPP after the TSP milestone but this would likely delay study completion and require additional funds.

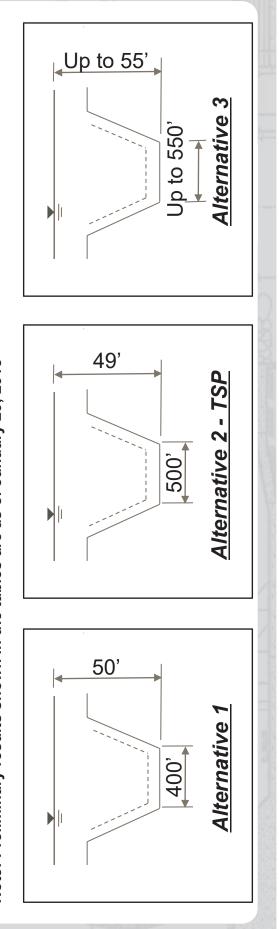
Upon your confirmation, we will request a categorical exemption from the NED Plan (51' depth, no widening) through our Division Office.



PRELIMINARY COSTS AND NET BENEFITS MOBILE HARBOR GRR

Mobile F	Harbor GRR Pr	eliminary Proj	Harbor GRR Preliminary Project Cost Estimate (\$M)	ate (ŞM)		
		Depth				
	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	\$27.90	\$195.69	\$271.8 4	\$347.32	\$429.74	\$561.45
Alternative 2 - 100' widening for 3 miles	\$33.50	\$204.39	\$282.04	\$359.42	\$444.34	\$577.85
Alternative 3 - 100' widening for 5 miles	\$35.50	\$207.89	\$286.34	\$365.22	\$450.34	\$584.75

	Mobile Harb	Mobile Harbor GRR Alternatives Matrix	atives Matrix			
		Net Benefits				
	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	NA	\$13.7M	\$21.2M	\$28.7M	\$34.0M	\$37.8M
Alternative 2 - 100' widening for 3 miles	\$265,000	\$185,200	\$127,800	\$56,800	(\$33,800)	
Alternative 3 - 100' widening for 5 miles			ГРР	с.		
Note: Preliminary results shown in the tables are as of January 29, 2018	tables are a	as of January	29, 2018			



From: To:	(b)(6)
Subject:	Sediment Testing
Date:	Monday, February 5, 2018 9:13:00 AM

Let me know if I said this okay ...

(b)(6)

In order to ensure that the Mobile Harbor GRR Study remains within the \$7.8M total budget, we have decided to delay the sediment testing until the Preconstruction Engineering and Design (PED) phase of the project. Costs for the Environmental data collection and analysis that will be used to address the impacts of modifications to the channel have been greater than anticipated in our original budget. Because of the depth of the new work material that will be removed, we do not anticipate unexpected construction cost increases to the project for remediation due to contaminated soils. As a result, we felt that it was a reasonable risk to delay sediment testing to the PED phase to ensure the project remains on budget.

By delaying the sediment testing to the PED phase, we anticipate reaching the TSP milestone on budget and schedule (although we will have depleted all contingency funds received to that point).

Please let me know if you have any questions.



From: To:	(b)(6)
Subject:	RE: Sediment Testing
Date:	Monday, February 5, 2018 9:32:00 AM

Thanks, (b)(6) I will also add something about the additional cost of public involvement.

Original Message	
From: (b)(6)	
Sent: Monday, February 05, 2018 9:31 AM	
To:	(b)(6)
(b)(6)	
Subject: RE: Sediment Testing	

A minor change to the 3rd sentence

Because of the depth and the new work material to be removed has not been exposed to modern-day conditions, we do not anticipate unexpected construction cost increases to the project for remediation due to contaminated soils.

(b)(6)	
Original Message	
From: (b)(6) Sent: Monday, February 5, 2018 9:13 AM	
To:	(b)(6 <u>)</u>
(b)(6)	
Subject Codiment Testing	

Subject: Sediment Testing

Let me know if I said this okay...

(b)(6)

In order to ensure that the Mobile Harbor GRR Study remains within the \$7.8M total budget, we have decided to delay the sediment testing until the Preconstruction Engineering and Design (PED) phase of the project. Costs for the Environmental data collection and analysis that will be used to address the impacts of modifications to the channel have been greater than anticipated in our original budget. Because of the depth of the new work material that will be removed, we do not anticipate unexpected construction cost increases to the project for remediation due to contaminated soils. As a result, we felt that it was a reasonable risk to delay sediment testing to the PED phase to ensure the project remains on budget.

By delaying the sediment testing to the PED phase, we anticipate reaching the TSP milestone on budget and schedule (although we will have depleted all contingency funds received to that point).

Please let me know if you have any questions.



b)(6)

From: To:	(b)(6)
Cc:	
Subject: Date: Attachments:	Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting Monday, February 5, 2018 9:48:00 AM Draft public notice for town hall meeting 01.22.18.docx Meeting Attendees 22 Feb 2018.docx

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.



U.S. Army Corps of Engineers hosts Mobile Harbor improvement town hall meeting, Feb. 22

The U.S. Army Corps of Engineers, Mobile District, will host a town hall meeting to update all interested parties on the ongoing study to evaluate impacts of widening and/or deepening the Mobile Harbor Federal Navigation Channel.

The meeting is open to the interested public and will be held at the Mobile Convention Center, 1 South Water Street, Mobile, Ala., on Feb. 22 from 6 to 8 p.m. Free parking is available in the parking lot just south of the Mobile Convention Center on Water Street, between Church and Government Streets, adjacent to Cooper Riverside Park. Free parking is available for persons/vehicles with a handicapped permit in the underground parking lot of the Convention Center.

The Mobile District commander will provide an overview of the District and the ongoing studies for the proposed harbor improvements project. After the Corps presentation, members of the public will have the opportunity to ask the commander and team questions, make comments and share concerns related to possible impacts associated with the potential project.

The town hall meeting is one opportunity to share comments that will become part of the preparation of a Draft Supplemental Environmental Impact Statement for the proposed project. In addition to the meeting, members of the public may submit comments by email to MobileHarborGRR@usace.army.mil or by mail to U.S. Army Corps of Engineers, Mobile District, 109 Saint Joseph Street, Mobile, AL 36602.

For more information, on the proposed Mobile Harbor Federal Navigation Channel project, visit http://www.sam.usace.army.mil/.

February 22, 2018 Mobile Harbor GRR Town Hall Meeting Attendees:

Greeters:	Economics:
AECOM	(b)(6)
	1
Due e e ute ue e	
Presenters: COL James DeLapp	Environmental:
COL James DeLapp	(b)(6)
(b)(6)	
	•
Port Authority:	Engineering:
Jimmy Lyons	
Judith Adams	(b)(6)
Bob Harris	
Project Management:	Legislative Liason:
	Pat Robbins
(b)(6)	
Diamina	Office of Coursel
Planning:	Office of Counsel:
	(b)(6)
(b)(6)	
Operations:	Public Affairs:
	(6.10)
(b)(c)	(b)(6)
(b)(6)	

From: To:	(b)(6)
Cc:	
Subject:	Q&As for the Feb 22 Public Meeting
Date:	Monday, February 5, 2018 10:01:00 AM
Attachments:	Mobile Harbor GRR CommPlan 02.02.18.docx

All: Latest Q&A's for the Mobile Harbor GRR Public Meeting are attached. We still have a few to which we need to provide answers (questions 25, 31, and 32). Please let me know if you have any issues with the proposed responses.





Subject: Latest slide set for the Feb 22 Public Meeting

All: The latest slides for the February 22 Public Meeting have been placed on the planning drive in the Mobile Harbor GRR/Slides directory.



Pages 3 through 13 redacted for the following reasons: (b)(5)

From: To:	(b)(5)
Subject:	RE: Parking for meeting
Date:	Monday, February 5, 2018 12:53:00 PM
Attachments:	RE Non-DoD Source GRREIS Public Meeting vs Town of Dauphin Island"s Public Meeting.msg

I delayed securing venue in order to work out date/time conflict with Dauphin Island FEMA Flood Elevation Meeting that same night (See attached e-mail). During that short delay, we lost parking directly beneath the convention center to another meeting.



Original Message		
From:	(b)(5)	
Sent: Monday, February 05, 201	18 12:45 PM	-
To:	(b)(5)	
Subject: Parking for meeting		

(b)(5)

Colonel ask me to check and see why contractor isn't providing parking in the Convention Center rather than outside. Can you explain?



From:	Mobile Harbor GRR
To: Cc:	(b)(5)
Subject: Date:	Mobile Harbor GRR RE: [Non-DoD Source] GRR/EIS Public Meeting vs Town of Dauphin Island"s Public Meeting Monday, January 29, 2018 2:49:00 PM

(b)(5)

We are not able to change the date of our meeting. We can adjust the time. Is it possible that the date of the county meeting be moved or the time adjusted to accommodate both meetings on this date?

(b)(5)	

Original Message		
From: (b)(5)		
Sent: Sunday, January 28, 2018 11:28 AM		
To:	(b)(5)	
(b)(5)		
Cc	(b)(5)	
	(b)(5)	Mobile

Harbor GRR <MobileHarborGRR@usace.army.mil>

Subject: [Non-DoD Source] GRR/EIS Public Meeting vs Town of Dauphin Island's Public Meeting

I have just learned that The Town of Dauphin Island has announced, in the Town of Dauphin Island's Town Crier, a Public meeting on February 22, 2018 to update the property owners of Dauphin Island about changes to the Flood Maps that affect Dauphin Island. The "FIRM" reflect a number of changes to the current risk zones and Base Flood Elevations (BFEs). These changes as proposed (the preliminary FIRMs are expected to become effective in mid-2019) can impact insurance premiums, new construction elevation requirements and more. This public meeting is to help Dauphin Island property owners better understand what all this means to them and their property.

It is also important that the Mobile District understand that the Town of Dauphin Island is partnering with Mobile County to present the FIRM update and this particular date was the best fit for Mobile County. Mobile County is also hosting other similar meetings throughout the county. It would be important for the Mobile District to understand that these important updates are taking place and should consider their date accordingly.

Since the Mobile District only recently announced, in its January 16th Biweekly update, that it will hold a Public meeting on February 22nd about the Mobile Harbor Widening and Deepening GRR.EIS, I respectfully request that the Corps of Engineers, Mobile District, select a different date to hold its Public Meeting. The Town of Dauphin Island "FIRMS" public meeting and the Mobile District's GRR/EIS are both extremely important public meetings competing for time of the same public on the same day. The Town of Dauphin island has announced its meeting in a very public newsletter, to its on Island property owners of over 1200 and to its wider distribution that could reach over 3000 member of the Dauphin Island Property Owners Association, while the Mobile District's announcement, as best I can determine, is reaching a limited number of people and only if they have gone to the website and read

the Biweekly update.

I hope the above information is helpful and that due consideration is given for a change in the date for the GRR/EIS update.

I look forward to your reply to this concern and request.

Sincerely,

(b)(5)

From: To: Cc:	(b)(5)
Subject:	RE: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR
Date:	Monday, February 5, 2018 1:02:00 PM

(b)(5) Thank you! We will proceed with the categorical exemption.

(b)(5)		
Original Message From (b)(5) Sent: Monday, February 05, 2018 10:39 AM To: (b))(5)	
Cc:	(5) (b)(5)	
	(b)(5)	

Subject: [Non-DoD Source] RE: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR

(b)(5)

The Alabama State Port Authority concurs with the Tentatively Selected Plan of Alternative 2 (49' depth, 3 mile, 100' widener). The Alabama State Port Authority has not intentions at this time to proceed with a Locally Preferred Plan.

(b)(5) -----Original Message-----From: (b)(5) Sent: Friday, February 02, 2018 3:00 PM To: (b)(5) Cc: (b)(5)

Subject: Selection of Tentative Selected Plan (TSP) - Mobile Harbor GRR

(b)(5) Attached are the current estimated costs and benefits for the Mobile Harbor Study. We will continue to refine the costs and benefits, but based on our previous discussions, we intend to proceed with Alternative 2 (49' depth, 3 mile, 100' widener) as the Tentatively Selected Plan. This plan will require the standard cost share. Please confirm that the ASPA has no intentions at this time to proceed with a Locally Preferred Plan (LPP) for additional deepening or length of widening. The ASPA could still choose to proceed with an LPP after the TSP milestone but this would likely delay study completion and require additional funds.

Upon your confirmation, we will request a categorical exemption from the NED Plan (51' depth, no widening) through our Division Office.



From: To: Cc:	(b)(6)
Subject:	FW: Vol 2 Public Meeting Slides
Date:	Monday, February 5, 2018 1:08:00 PM
Attachments:	22 Feb 2018 Public Meeting v2 - vol 2.pptx

(b)(6) Can you send slide showing layout of the space for the February 22 Meeting. As far as speakers, I anticipate we will need space for Col. DeLapp, (b)(6)

front. Please include rough dimensions of the room and show location of the media area.



Or	iginal Message	
From:	(b)(6)	
Sent: N	Ionday, February 05, 2018 9:49 AM	
To:	(b)(6)	
Subjec	t: FW: Vol 2 Public Meeting Slides	

Sorry, Vol 2 attached.



Origin	al Message	
From:	(b)(6)	
Sent: Frida	y, February 02, 2018 1:42 PM	
To:	(b)(6)	
Cc:	(b)(6)	
Subject: F	W: Vol 2 Public Meeting Slides	

Volume 2 of public meeting slides attached.



(b)(6)

Pages 3 through 12 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	Emailing: CG Briefing June 2016v2.pptx
Date:	Monday, February 5, 2018 1:21:00 PM
Attachments:	CG Briefing June 2016v2.pptx

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

CG Briefing June 2016v2.pptx

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.

PANAMA CITY HARBOR IMPROVEMENTS TO BAY HARBOR CHANNEL LRR With Integrated Environmental Assessment

Command Briefing

David Newell

Project Manager Mobile, Alabama June 2016 Trusted Partners Delivering Value, Today and Tomorrow



BUILDING STRONG®



Panama City Harbor LRR Meeting Purpose



BUILDING STRONG

Provide an update of the following items:

- **Project Description**
- Project Scope
- Port Facts
- Master Plan
- Project Costs

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Panama City Harbor LRR Description



BUILDING STRONG

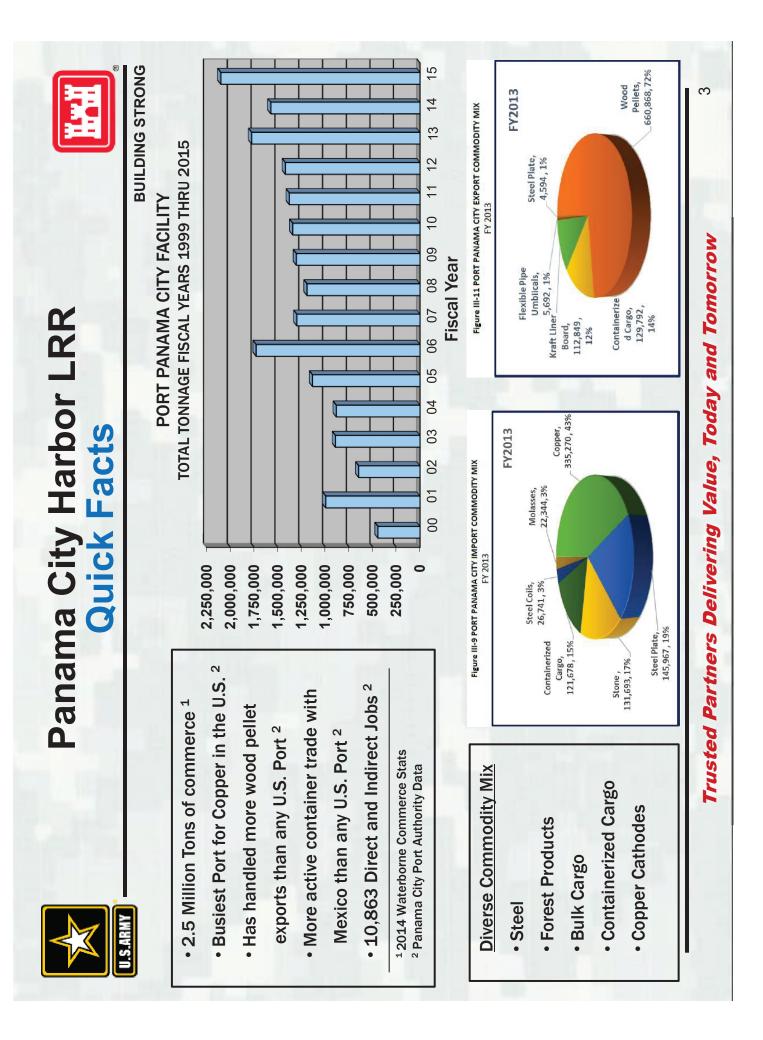
The Panama City Port Authority has outgrown its facilities at the Dyers Point Terminal. The purchase of the Bay Harbor Terminal allows for the expansion of the Port.

The recommended plan for the improved Federal navigation channel at Bay Harbor Terminal will deepen the Bay Harbor channel from the existing depth of -32' to -36'. The final Bay Harbor Channel will be approximately 3.5 miles long with a depth of 36 feet, a width of 300', and a turning basin with a length of 1,700' and a width of 1,100'. Excavation includes an additional 2' for allowable overdepth and will require the removal of approximately 372,000 cy of material. The considered modification is economically justified with a benefit-to-cost ratio of 7.8 to 1 at the current rate (4 to 1 at 7% discount rate), and average annual benefits of \$8,815,000. The estimated project first cost totals \$6,929,000.





N





Panama City Harbor LRR Authorization



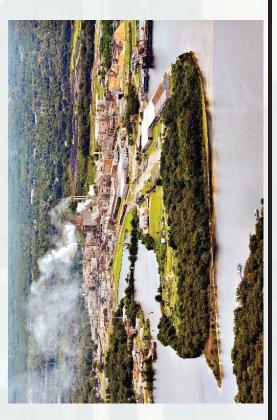
BUILDING STRONG

As Authorized by the River and Harbor Act of 1948; project improvements by Section 201 of the Flood Control Act of 1965; resolutions of the House Public Works Committee on June 14, 1972; and the Senate Public Works Committee on June 21, 1972, the major components of the project are: a.) Deepen and widen channel from deep water in St. Andrew Bay across Lands End to the Gulf of Mexico to 40 by 300 feet, a distance of about 3.7 miles (Currently 36 by 300 feet). b.) Deepen and widen approach channel, protected by two rubble jetties, 42 by 450 feet, a distance of about 1.1 miles (Currently 36 by 450 feet).

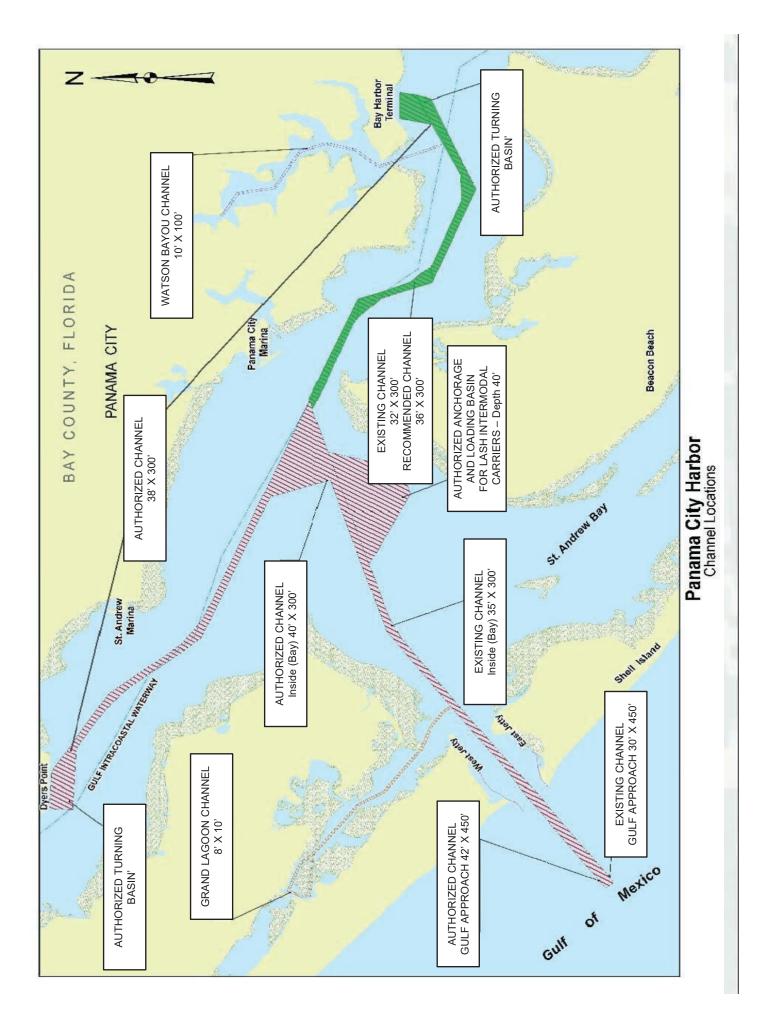
c.) Deepen and widen branch channels leading from the inner end of the main entrance channel westward to the PCPA terminal at Dyers Point and eastward to the Bay Harbor Terminal, 38 by 300 feet, about 3.4 and 3.6 miles, respectively (Currently 36 by 300 to Dyers Point, 32 by 300 to Bay Harbor). d.) Provide a 38-foot deep turning and maneuvering areas comprising about 55 acres opposite Dyers Point, and 42 acres opposite Bay Harbor (36 foot deep turning basin constructed at Dyers Point).

e.) Provide a 42-foot deep anchorage and loading basin for LASH Type intermodal carriers containing about 177 acres (Currently 40 feet).





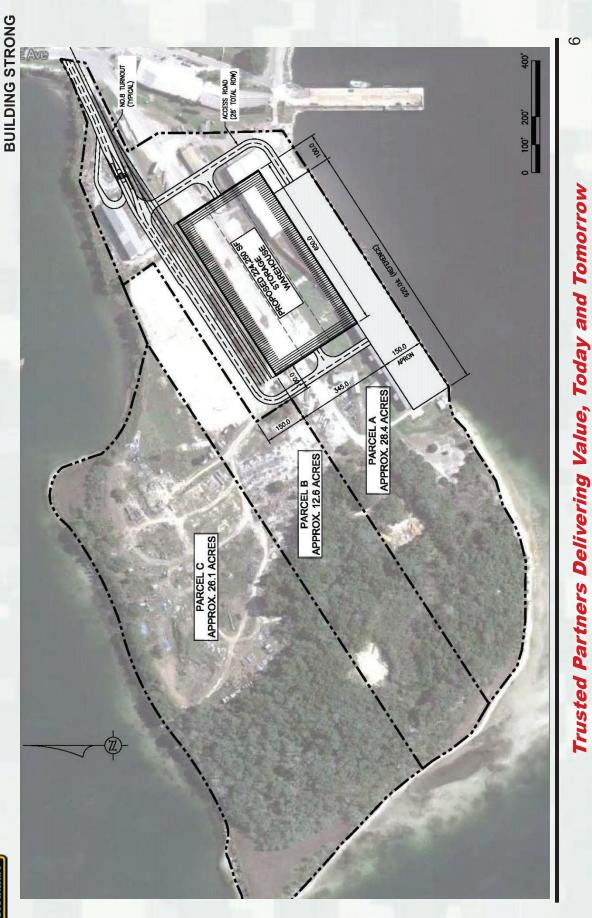
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Panama City Harbor LRR Master Plan







Panama City Harbor LRR Cost



BUILDING STRONG

Estimate Fully Fun	Estimated Cost Sharing Apportionment Fully Funded Total Project Cost (x1,000)	pportion Cost (x1	ment ,000)		
Feature Description	Fully-Funded Cost	Non- Federal Share	Non- Federal Total	Federal Share	Federal Total
Dredging, Mobilization & Demobilization	\$5,152	25%	\$ 25% 1,288	75%	75% \$ 3,864
LERR (RE admin)	\$17	25%	\$ 4	75%	\$ 13
Preconstruction Engineering & Design	\$701	25%	\$ 175	75%	\$ 526
Construction Management	\$209	25%	\$ 52	75%	75% \$ 157
Total Project Cost and Distribution	\$6,079	25%	25% \$ 1,519	75%	75% \$ 4,588

***An additional 10% of the GNF will be paid be the non-Federal sponsor over a period of time *Berthing Area and ATON costs are excluded from table

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~



PANAMA CITY HARBOR LRR Areas of Concern



BUILDING STRONG

- Neither PED or Construction funding are included in the FY17 President's budget.
- **Construction were included in Mobile** above the SAD preliminary cut line. **District's FY18 President's Budget** submittal. Neither package ranked Packages for both PED and



PANAMA CITY HARBOR LRR



BUILDING STRONG

QUESTIONS?

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6

From: To:	(b)(6)
Subject:	Emailing: COL DeLapp Briefing Sept 2017v2.pptx
Date:	Monday, February 5, 2018 2:46:00 PM
Attachments:	COL DeLapp Briefing Sept 2017v2.pptx

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

COL DeLapp Briefing Sept 2017v2.pptx

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PANAMA CITY HARBOR IMPROVEMENTS TO BAY HARBOR CHANNEL LRR With Integrated Environmental Assessment

COL DeLapp Briefing

David Newell, P.E.

Project Manager Mobile, Alabama September 14, 2017 Trusted Partners Delivering Value, Today and Tomorrow



BUILDING STRONG®



Panama City Harbor LRR Meeting Purpose

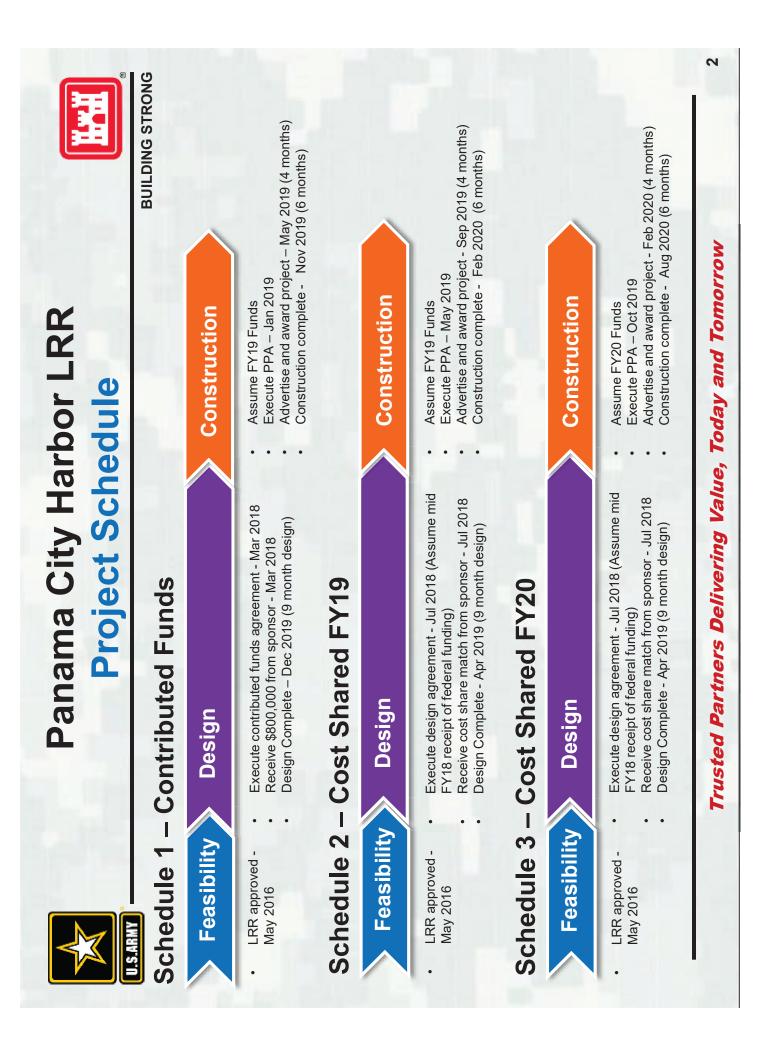


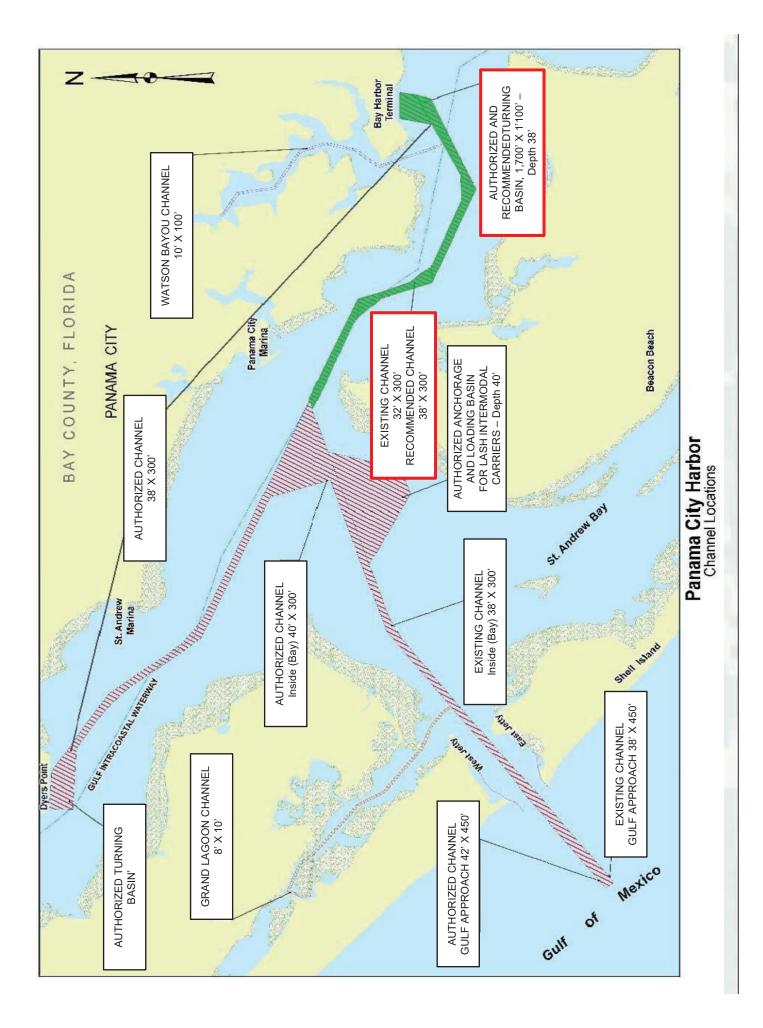
BUILDING STRONG

Provide an update of the following items:

- **Project Schedule**
- Project Description
- Authorized Project
- Quick Facts
- Environmental
- Bay Harbor Master Plan
- Project Costs
- Areas of Concern

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Panama City Harbor LRR Description



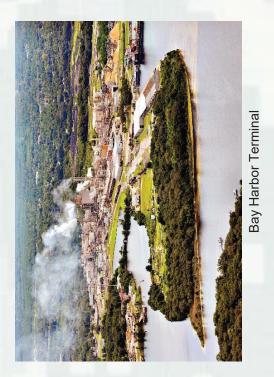
BUILDING STRONG

The Panama City Port Authority (PCPA) has outgrown its facilities at the Dyers Point Terminal. The purchase of the Bay Harbor Terminal by the PCPA allows for the expansion of the Port. The recommended plan for the improved Federal navigation channel at Bay Harbor Terminal will deepen the Bay Harbor channel from the existing depth of -32' to -36'. The final Bay Harbor Channel will be approximately 3.5 miles long with a depth of 36 feet, a width of 300', and a turning basin with a length of 1,700' and a width of 1,100'. Excavation includes an additional 2' for allowable overdepth and will require the removal of approximately 372,000 cy of material.

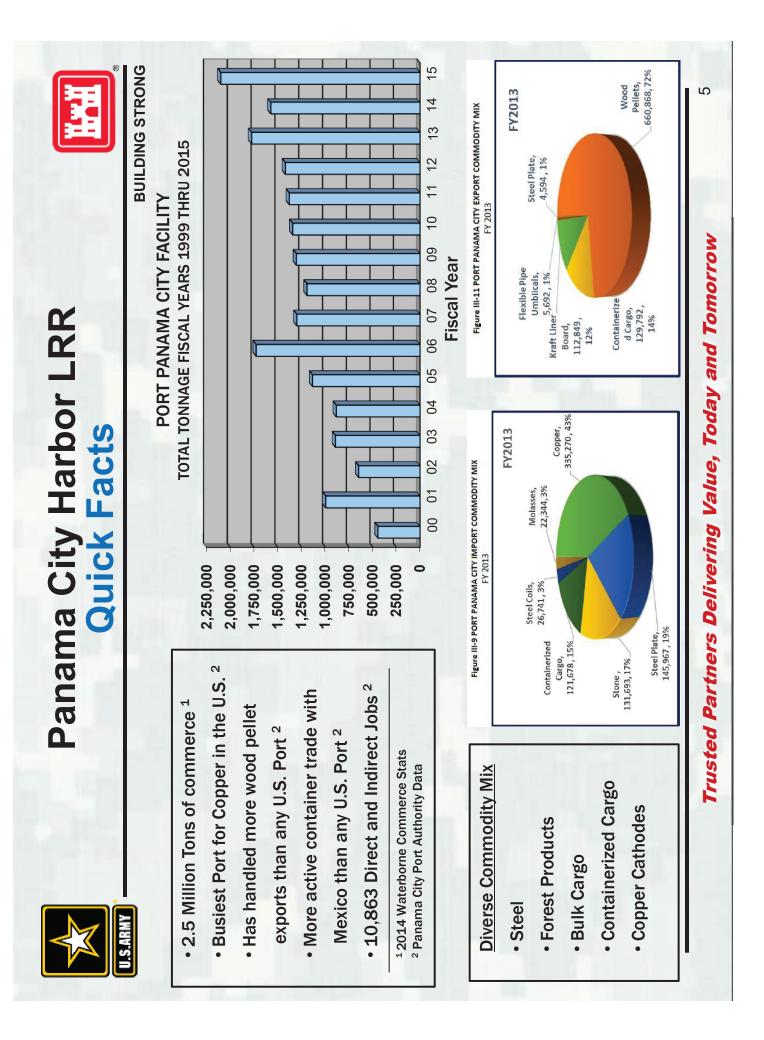
The considered modification is economically justified with a benefit-to-cost ratio of 7.8 to 1 at the current rate (4.4 to 1 at 7% discount rate), and average annual benefits of \$8,815,000. The estimated project first cost totals \$6,929,000.



Dyers Point Terminal



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Panama City Harbor LRR Environmental



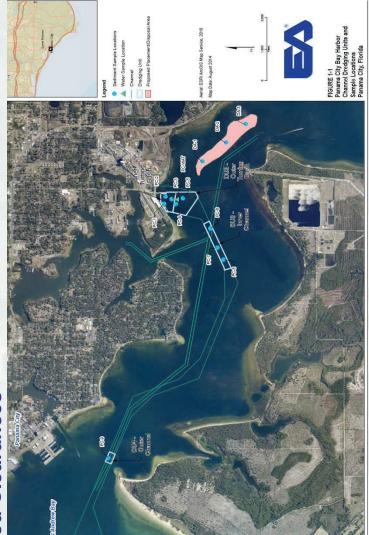
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Environmental Consideration & Obtained Clearances

- Integrated EA with FONSI
- Fish and Wildlife Coordination Act
 - Essential Fish Habitat
- Section 7 of Endangered Species Act
- Water Quality Certification
- Coastal Zone Consistency
- Section 106 of National Historic Preservation Act

Open-water Placement Analysis

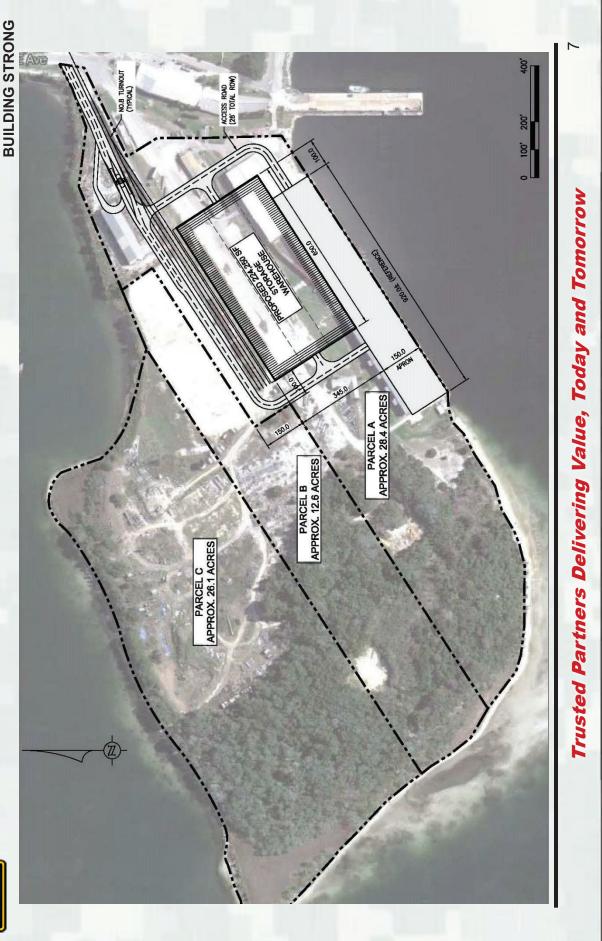
- Open-water disposal of 372,000 cys from deepening Bay Harbor Channel from -32 feet MLLW to -36 feet MLLW
 - Future O&M of 30,000 cys/4 years
 Sediment Analysis & Results of dredged material and disposal site's
- dredged material and disposal site's physical and chemical parameters coordinated with FDEP, EPA & USFWS.
- Flushing characteristics evaluated by Hydro-dynamic modeling





Panama City Harbor LRR Bay Harbor Terminal Master Plan







Panama City Harbor LRR Project Costs



BUILDING STRONG

Estimated Fully Fund	Estimated Cost Sharing Apportionment Fully Funded Total Project Cost (x1,000)	pportion Cost (x1	ment ,000)		
Feature Description	Fullv-Funded Cost	Non- Federal Share	Non- Federal Total	Federal Share	Federal Total
Dredging, Mobilization & Demobilization	\$5,152	25%	\$ 25% 1,288	75%	75% \$ 3,864
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Construction Management	\$209	25%	\$ 52	75%	75% \$ 157
Total Project Cost and Distribution	\$6,079	25%	25% \$ 1,519	75%	75% \$ 4,588
***An additional 10% of the GNF will be paid be the non-Federal sponsor over a period of 30yrs	be paid be the non-	Federal sp	onsor over	a period	of 30yrs

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*Berthing Area and ATON costs are excluded from table



PANAMA CITY HARBOR LRR Areas of Concern



BUILDING STRONG

- Neither PED nor Construction funding is included in the FY18 President's budget.
- Packages for both PED and Construction were included in Mobile District's FY19 President's Budget submittal. Neither package ranked above the SAD preliminary cut line. **
- Federal Sponsor Contributed Funds Package. Panama City Port Authority will fund 100% of Currently working with Division on Non-PED costs (\$800K).



PANAMA CITY HARBOR LRR



BUILDING STRONG

QUESTIONS?

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10

From: To:	(b)(6)	
Subject:	RE: Vol 2 Public Meeting Slides	
Date:	Monday, February 5, 2018 3:53:00 PM	

Thanks, (b)(6) I felt like we should probably revise the note on the Mobile Harbor Deepening and Widening Slide that states: "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."

Do you have a recommendation?

0	riginal Message	
From	(b)(6)	
Sent:	Monday, February 05, 2018 3:48 PM	
To:	(b)(6)	
Subje	ct: [Non-DoD Source] RE: Vol 2 Public Me	eting Slides

Hi. My comments are as follows:

Slide 2: Spacing between the 3rd and fourth bullet

Slide 4: Concepts box:	(b)(5)
	(b)(5)
Slide 4 Concepts box: 4th Bullet. Recommend we res	tate as follows: (b)(5)
Slide 5: Setting for Mobile Bay box: Recommend	(b)(5)
(b)(5)	
Slide 5: Setting for Mobile Bay box: Last bullet. Slide 5: Coastal Barrier Islands: Erosion Impacts?	(b)(5) (b)(5)
	(b)(5)
Slide 9 - What's Next: Assessments is misspelled	
Slide 10: Why is USA JOBS or usajobs.gov mentione advertise federal jobs during an environmental impact	
(b)(5)	study process. (b)(5)
(b)(6)	
Original Message	
From (b)(6)	
Sent: Monday, February 05, 2018 10:11 AM To: (b)(6)	
Subject: FW: Vol 2 Public Meeting Slides	
-	

Sorry, Vol 2 attached.

(b)(6)	

-----Original Message-----From: Newell, David P CIV CESAM CESAD (US) Sent: Friday, February 02, 2018 1:42 PM

To:	(b)(6)
Cc: '	(b)(6)
Subject	: FW: Vol 2 Public Meeting Slides

Volume 2 of public meeting slides attached.



From: To: Cc:	(b)(6)
Subject:	RE: [Non-DoD Source] Corp"s Public Meeting
Date:	Tuesday, February 6, 2018 8:05:00 AM

(b)(6)

Unfortunately, we have now already set the time as 6-8pm. The presentation should begin close to the 6pm start. Per our discussion, I did confirm that we will have a court reporter at the meeting.



Original Message			
From: (b)	(6)		
Sent: Monday, February 05, 2	018 8:38 PM	-	
То:	(b)(6)		
Cc:	((b)(6)	
(b)(6)			

Subject: [Non-DoD Source] Corp's Public Meeting

(b)(6)

I went to the Town of Dauphin Island Town Council Agenda Meeting. Mayor Jeff Collier explained that Mobile County and The Town of Dauphin Island are hosting the meeting on Dauphin Island concerning the changes in the Flood maps (FIRM) that deals specifically with Dauphin Island. I learned that the public meeting will be 5 - 7 p.m. and not later as I initially thought. At one time you indicated that it may be possible to adjust the time for the Corps meeting. Presently, the Corps time is set for 6 p.m. -8 p.m. Is it possible to delay the meeting start time to 7:00 p.m.? This would allow the property owners to go to the Dauphin Island meeting earlier, and then to the Mobile District Public meeting and be there for Col DeLapp's presentation. The Towns meeting will be set up similar to the past two Corps of Engineers meetings. So it is very possible people can go to the Dauphin Island meeting get their information and then go to the Mobile District's meeting.

(b)(6)

From: To:	(b)(6)
Subject: Date:	FW: Mobile Harbor GRR - Concurrence on widener and passing rules Tuesday, February 6, 2018 1:55:00 PM
Attachments:	PassingRulesforWideningAnalysis 15Dec2017.docx

Original Message	
From: (b)(6)	
Sent: Friday, December 15, 2017 4:23 PM	•
To: (b)(6)	
Cc:	(b)(6)
	(b)(6)

Subject: Mobile Harbor GRR - Concurrence on widener and passing rules

(b)(6)

We need your concurrence that the attached passing rules for a 500' wide channel, 3 miles in length plus bend easing are reasonable and would allow for passing of vessels that are in accordance with these rules for our on-going analysis. Please note that a 3 mile long widener plus the bend easing at a depth of 49' is the maximum project that is economically justified at this time. This justification assumes that the 3 mile long passing lane and attached passing rules are sufficient. We developed Rules 1 - 3 from the ship simulation conducted 23 - 26 May 2017. They reflect the combined beam, single beam, and combined LOA of the largest vessel (or combination of vessels) that successfully passed in a 500 ft channel (i.e., 100 ft widener scenario) during the simulation. Rules 4 and 5 were developed by multiplying the current rules by the ratio of the future channel vs current channel dimensions (e.g., 50 ft / 45 ft or 500 ft / 450 ft).

Please let us know if you have any questions.



Mobile Harbor GRR Proposed Passing Rules for Economic Evaluations December 13, 2017

Rule 1: Combined beam can't exceed 256 ft (Combined beam of 256 ft / channel width of 500 ft = 51.2 % of the channel).

Explanation: The 256 ft value reflects the largest combined beam from the vessels that successfully passed in the 500 ft channel widener from the ship simulation study. Those vessels were the Humber Bridge (150.3 ft x 1102.4 ft) and the Zim Piraeus (105.6 ft x 964.9 ft). As documented in the ship simulation report, the pilots indicated passing these two vessels would be feasible with environmental and draft restrictions; however, those restrictions were never specified.

• **Rule 2**: Channel will be restricted to one-way traffic for any single vessel beam that exceeds 150.3 ft (Single beam of 150.3 ft / channel width of 500 ft = 30% of the channel).

Explanation: The 150.3 ft value is the beam width of the Humber Bridge, which was the largest vessel that could successfully pass another vessel in the 500 ft channel. Therefore, it was assumed the channel would be restricted to one-way traffic for any vessel with a beam width exceeding that of the Humber Bridge.

• Rule 3: Combined LOA can't exceed 2165 ft.

Explanation: The longest vessels that successfully passed in the 2017 ship simulation study for the 500 ft channel were the Humber Bridge (150.3 ft x 1102.4 ft) and the Zim Pireaus (105.6 ft x 964.9 ft) (same scenario that's described in the explanation for Rule 1 above). However, as documented in simulation report, Chris Brock indicated in a follow-up discussion that the passing Sovereign Maersk (140.4 ft x 1138.5 ft) and the Zim Pireaus would also be feasible in a 500 ft channel, with draft restrictions. The combined LOA of the Sovereign Maersk and Zim Pireaus is 2103.4 ft.

Although we did not specifically evaluate passing a longer containership (due to not having a vessel of that size particular size in the current ship simulation inventory), we decided to relax the combined LOA rule slightly (to 2165 ft) for the economic analysis to allow for passing of a Panamax vessel such as the KMSS Dainty (105.7 ft x 964.9 ft) and a post-Panamax vessel such as the Maersk (140 ft x 1200 ft). These two vessels passing with 2 degrees of drift would consume approximately 49% (321.3 ft) of the 500 ft channel. If you add an additional 90 ft to count for a minimum steel to steel clearance between the vessels, in accordance with the requirement evaluated in a desktop analysis done by LOCUS LLC, approximately 89 ft of channel remains available for clearance between the vessels and channel toes (or 44.5 ft on the outside of each vessel). We deemed this to be appropriate for use in our Harborsim evaluations, with the understanding that there could be additional draft or environmental restrictions needed in the future.

• Rule 4: Maximum draft of two meeting vessels shall not exceed 94.4 ft. (94.4 = 85 ft x 50 ft / 45 ft).

Explanation: Per a phone conversation with Chris Brock in November 2017, it was agreed to increase the current combined draft restriction rule (i.e., maximum combined draft of two meeting vessels shall not exceed 85 ft) by the ratio of the future proposed channel depth to the current channel depth (i.e., 50 ft to 45 ft). The result of that calculation (85 x 50/45) is 94.4 ft.

• Rule 5: Any two vessels with a combined LOA of 2062.5 ft (2062.5 ft = 1650 ft x 500 ft / 400 ft) or greater will not be allowed to meet in the channel if the combined draft is greater than 83.33 ft (83.33 ft = 75 ft x 50 ft / 45 ft).

Explanation: Per a phone conversation with Chris Brock in November 2017, it was agreed to increase the current combined LOA and draft restriction rule (i.e., any two vessels with a combined LOA of 1650 ft or greater will not be allowed to meet in the channel if the combined draft is greater than 75 ft) by the ratio of the future proposed channel width and depth (i.e., 500 ft and 50 ft) to the current channel width and depth (i.e., 400 ft and 45 ft). The results of those calculations (1650 x 500/400 and 75 x 50/45) are 2062.5 ft and 83.33 ft, respectively.

From:	(b)(6)
To:	DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Cc:	(b)(6)
Subject:	Mobile Harbor GRR CommPlan_02.06.18.docx
Date:	Tuesday, February 6, 2018 2:22:00 PM
Attachments:	Mobile Harbor GRR CommPlan 02.06.18.docx

Col. DeLapp: Attached are the proposed responses to Q&As that we developed for Mobile Harbor. Responses are still under refinement but are pretty much complete.



Pages 2 through 13 redacted for the following reasons: (b)(5)

From: To: Cc:	(b)(6)
Subject:	FW: Vol 1 Public Meeting Slides
Date:	Wednesday, February 7, 2018 9:44:00 AM

(b)(6) Just FYI (b)(6) wasn't aware that this was a first draft that we put together, but there may be helpful suggestions here for Col D.



Subject: [Non-DoD Source] RE: Vol 1 Public Meeting Slides

Vol 1 - I assume these are the slides the Col will present addressing "who the Corps is." I would offer this comment (b)(5)

	(b)(5)	
I get the history slide		(b)(5)
	(b)(5)	

Keep slides 8, 9, 10 -



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

From:	(b)(6)
Sent: Friday, February 02, 2018 1:42 PM	
To: (b)(6)	
Cc: (b)(6)	
Subject: FW: Vol 1 Public Meeting Slides	
Early drafts	
Original Message	
From (b)(6)	
Sent: Friday, February 02, 2018 12:56 PM	
To: (b)(6)	
Subject: FW: Vol 1 Public Meeting Slides	

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

From:	(b)(6)	
Sent: Friday	, February 02, 2018 12:45 PM	
To:	(b)(6)	
Subject: FW	· Vol 1 Public Meeting Slides	

Subject: FW: Vol 1 Public Meeting Slides

-----Original Message-----From: (b)(6) Sent: Friday, February 02, 2018 11:08 AM To: (b)(6) Subject: Vol 1 Public Meeting Slides

Volume 1 of public meeting slides attached.



From: To:	(b)(6)	
Subject:	Emailing: Dredging Discussion.pptx	
Date: Attachments:	Wednesday, February 7, 2018 10:06:00 AM Dredging Discussion.pptx	

These are the laws, regs, etc that we use for Mobile Harbor...

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

Dredging Discussion.pptx

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.

MOBILE HARBOR GRR

With Integrated Supplemental Environmental Impact Statement

Material Placement Discussion Prepared by David Newell, P.E. 23 January 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."







33 CFR 335.7

alternative or alternatives identified by the Corps which Federal standard means the dredged material disposal environmental standards established by the 404(b)(1) represent the least costly alternatives consistent with evaluation process or ocean dumping criteria. sound engineering practices and meeting the





MOBILE HARBOR GRR	ERIAL PLACEMENT DISCUSSION
Σ	NATERI

ന

25 JUL 1978 Maintenance Dredging Provisions of the Clean Water Act of 1977 (P.L. 95-217)

material uses as permit conditions, any additional expense associated nourishment, should be realized where possible, consistent with Maximum beneficial use of dredged material, such as for beach with such provisions will be the responsibility of local interests. existing policy. However, if States impose beneficial dredged

EM 1110-2-5025 Dredging and Dredged Material Management

beneficial use of dredged material for such projects as wetland creation, **beach nourishment**, and development projects **must be** Dredged material is a resource, and environmentally sound encouraged.



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4

ER 1105-2-100, App E Missions and Evaluation Procedures

Section II Navigation, E-14. Special Considerations.

the additional placement costs when: (1) requested by the state; (2) the Secretary of the to the project and cost shared accordingly. In cases were placement of dredged material Reduction. When placement of dredged material (beach quality sand) on a beach is the on a beach is more costly than the least costly alternative, the Corps may participate in Army considers it in the public interest; and (3) the added cost of disposal is justified by least costly acceptable means for disposal, then such placement is considered integral hurricane and storm damage benefits (see Section IV of this appendix). When all local costs for placement of the dredged material is not justified, the Corps may still cooperation requirements are met the Corps may cost share the additional costs 50 percent (Section 933, WRDA 1986, as amended). In cases where the additional h. Placement of Dredged Material on Beaches for Hurricane and Storm Damage perform the work if the State requests it, and the state or other sponsor contributes 100 percent of the added cost.



US Army Corps of Engineers [®]

ER 1105-2-100, App E Missions and Evaluation Procedures (Cont.)

Section II Navigation, E-15. Dredged Material Management Plans.

continued viability of the project and the availability of dredged material disposal capacity sufficient to accommodate 20 years of maintenance dredging. If the preliminary assessment determines that there is not sufficient capacity to accommodate maintenance dredging for the next 20 years, E-15. Dredged Material Management Plans. All Federally maintained navigation projects must demonstrate that there is sufficient dredged material disposal capacity for a minimum of 20 years. A preliminary assessment is required for all Federal navigation projects to document the then a dredged material management study must be performed

a. Policy.

(1) (c) ... It is the policy of the Corps that all dredged material management studies include an assessment of potential beneficial uses for environmental purposes including fish and wildlife understand the valuable contributions that beneficial uses can make to management plans and will habitat creation, ecosystem restoration and enhancement and/or hurricane and storm damage reduction. Districts and MSCs will make every effort to ensure that sponsors and other interests maximize use of regional forums to share experiences of opportunities for beneficial uses.



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Term of Settlement Agreement from the 2000 DIPOA Lawsuit:

scheduled dredging cycle occurs; (ii) the absence of competitive bid proposals alternate disposal areas (i.e., where disposal in these alternate disposal areas material in these two disposal areas; or (v) identification and authorization by certifications, authorizations, or regulations that prohibits the deposit of such The Corps would continue to conduct its maintenance dredging practices to (iii) currently unforeseen negative consequences from repeated use of would thus violate the "least costly" restriction imposed by applicable laws); these alternate disposal areas are discovered; (iv) a change in the law, 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, deposit material dredged from the Bar Channel in the SIBUA and/or the from operators owning equipment capable of disposing material in the the Corps of a more beneficial area for Dauphin Island.



US Army Corps of Engineers *

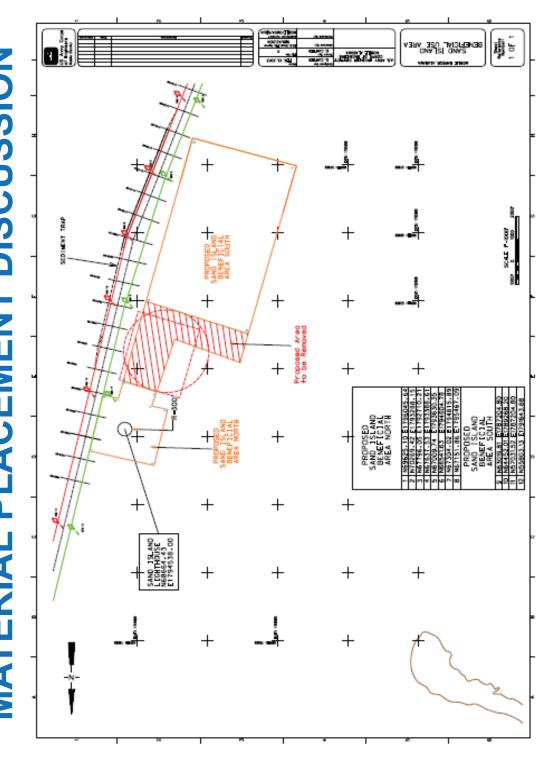
9





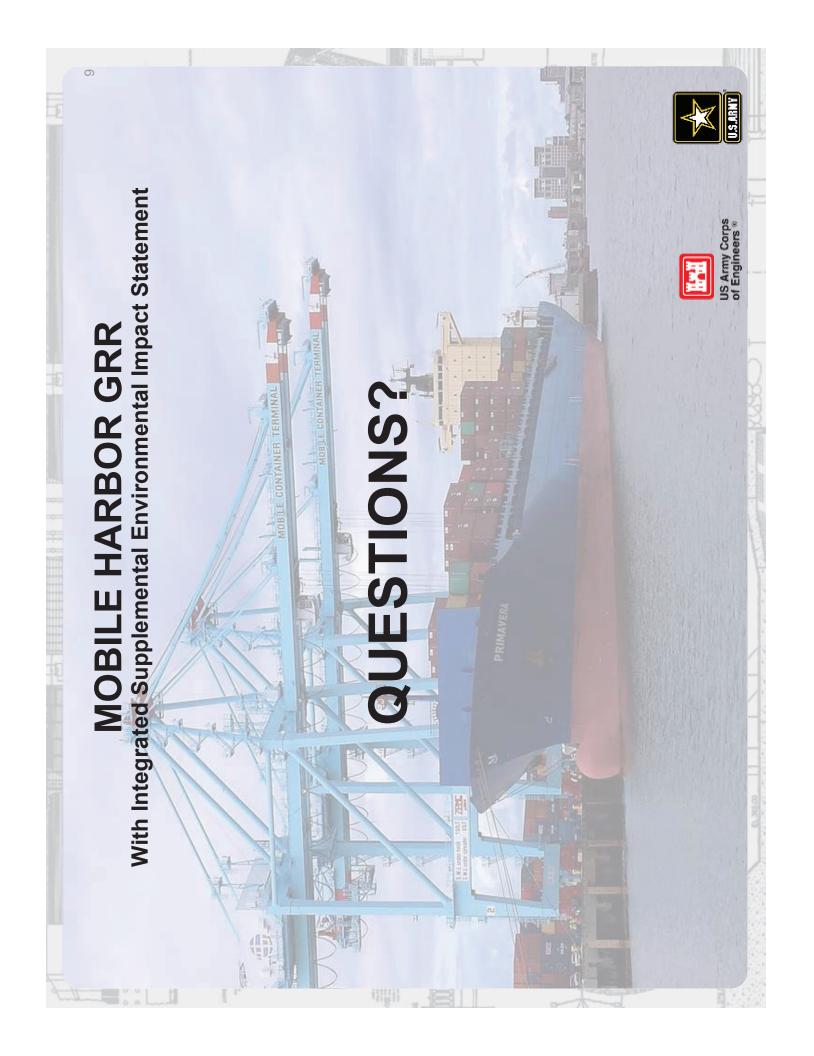


US Army Corps of Engineers * MATERIAL PLACEMENT DISCUSSION





US Army Corps of Engineers [®]



From: To:	(b)(6)	
Subject: Date:	RE: Q&As for the Feb 22 Public Meeting Wednesday, February 7, 2018 4:49:00 PM	_
Thanks <mark>, (b)(6)</mark>		
Original Mes	sage	
From:	(b)(6)	

Sent: Wednesday, February 07, 2018 3:4	1 PM
To:	(b)(6)
Subject: RE: Q&As for the Feb 22 Public	e Meeting

Q25: Will the GRR include consideration of a "beneficial uses" alternative that would place maintenance dredged beach quality sands from the Outer Bar Channel at a more appropriate location to facilitate their re-incorporation into the littoral drift system to assist in the "restoration" of Dauphin Island's eroding Gulf shoreline, to include the surficial reconstitution of the Sand/Pelican Island complex of the Mobile Pass ebb-tidal delta? A25: The Corps is in the process of determining if there is sufficient disposal capacity in the Sand Island Beneficial Use Area for current and future maintenance material of the Bar Channel. If not, an evaluation will be made to consider expanding the SIBUA along the ebb tidal shoal towards Dauphin Island while staying within the Federal Standard cost.

Comment on Q20 - I would mention the funding restrictions of \$300K or 25% of the project cost, whichever is less, anything more than that would have to be paid by a non-fed sponsor.

Comment on Q22 - This answer just states what the regulation is and doesn't say yes or no if we're complying with it or not.

Original Message	
From: (b)(6) Sent: Monday, February 05, 2018 10:01 AM	
To:	(b)(6)
	(b)(6)

(b)(6)

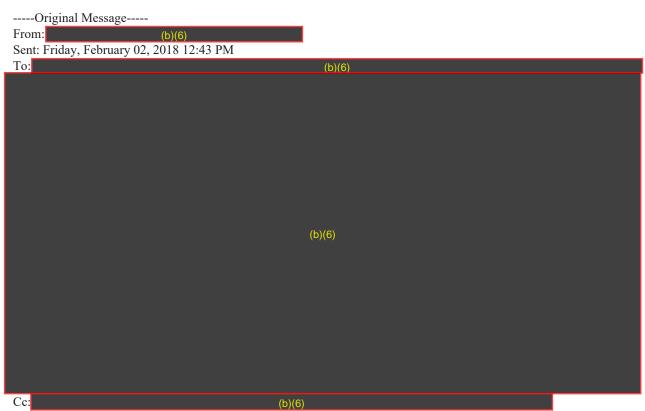
Subject: Q&As for the Feb 22 Public Meeting

Cc:

All: Latest Q&A's for the Mobile Harbor GRR Public Meeting are attached. We still have a few to which we need to provide answers (questions 25, 31, and 32). Please let me know if you have any issues with the proposed responses.

(b)(6)





Subject: Latest slide set for the Feb 22 Public Meeting

All: The latest slides for the February 22 Public Meeting have been placed on the planning drive in the Mobile Harbor GRR/Slides directory.



From: To:	(b)(6)
Subject:	FY 18_Sen Shelby_Project Issue_Mobile Harbor.do
Date:	Thursday, February 8, 2018 8:54:00 AM
Attachments:	FY 18 Sen Shelby Project Issue Mobile Harbor.doc

MEMBER PROJECT ISSUE PAPER

<u>CONGRESSIONAL INTERESTS</u>: **SEN Richard Shelby (R-AL),** SEN Doug Jones (D-AL), and REP Bradley Byrne (R-AL-1)

PROJECT (ACCOUNT): Mobile Harbor Deepening and Widening, AL (Investigations - Navigation)

PROJECT ISSUE: Scope, cost and schedule of the General Reevaluation Report (GRR)

<u>KEY MESSAGE(S)</u>: Future of Planning and Construction Programs in a Constrained Funding Environment

QUESTIONS AND ANSWERS:

- 1) What is the status of the Mobile Harbor Deepening and Widening GRR?
 - The Corps is preparing a GRR to address the economic, engineering, and environmental requirements to determine potential widening and deepening within the authorized limits of the Mobile Harbor Project. Currently, the alternatives are being screened to identify the depth and width to be carried forward as the Tentatively Selected Plan. The GRR is scheduled for HQUSACE approval November 2019.
- 2) Is there local opposition to the project?
 - There is a small group whose primary issue is to require placement of sand dredged material directly on or close to Dauphin Island. They believe harbor dredging is the primary cause of erosion to the island.
- 3) Why can't this study be completed as an Limited Re-evaluation Report (LRR) rather than a General Re-evaluation Report (GRR)?
 - The Alabama State Port Authority initially requested the Corps investigate widening the Mobile Harbor channel, which was being conducted as an LRR. They then modified their request to investigate the modification of the channel to its fully authorized depth and width. A GRR is required to fully evaluate the environmental and economic impacts of this modification.
- 4) Why is the study taking 48 months to complete?
 - The Mobile Harbor 38-mile channel impacts an extremely large and environmentally complex area. Furthermore due to lack of available data an extensive data collection and modeling effort is required. In particular, hydrodynamic, water quality and sediment transfer modeling is being performed which is necessary to address the concerns about impacts on the environment voiced by State and Federal resource agencies during the charrette. A 3x3x3 exemption waiver was granted in October 2015.

5) Given that the language in Section 110 of the Consolidated and Further Continuing Appropriations Act, 2015 provides that the investigation be cost shared at the same percentage as in the design agreement (75%/25%) executed on August 14, 2012, how do you intend to budget for the project?

• The study is being budgeted for in accordance with the generally applicable cost-sharing policy for Corps feasibility studies of 50/50. In FY2015, FY2016, and FY2017 funds were appropriated and executed in accordance with Section 110 of the FY2015 Appropriations Act at a cost share of 75/25.

6) Why wasn't the Mobile Harbor GRR included in the FY18 Budget?

• The Mobile Harbor GRR was not included in the FY18 Budget since the study reached 50% Federal funding with its FY17 allocation. The FY17 allocation of \$1,742,231 funded the Federal share of the GRR to 50 percent of the total study cost which is typical for studies of this type, per the cost sharing policy of WRDA 1986 as amended. FY 18 allocation (reprogramming) is \$32,268. Remaining Federal funds under the 75/25 cost sharing agreement will compete along with other national civil works priorities in future budgets and work plans.

MEMBER PROJECT ISSUE PAPER

ASA(CW) and/or CG COMMITMENT(S) MADE TO STAKEHOLDERS: N/A

ADMINISTRATION POSITION: The Administration supports this GRR.

FY18 FUNDING DATA HIGHLIGHTS

FY17 Allocation FY18 Budget Balance to Complete after FY18 Benefit to Cost Ratio (at 7%) \$1,742,231 0 2,046,876 TBD

From: To: Cc:	(b)(6)
Subject:	RE: Meeting name for Convention signage
Date:	Thursday, February 8, 2018 8:58:00 AM

(b)(6) I would think Mobile Harbor Public Meeting for the signage.



Original Message	
From: (b)(6)	
Sent: Wednesday, February 07, 2018 2:28 PM	
To:	(b)(6)
(b)(6)	

Subject: [Non-DoD Source] FW: Meeting name for Convention signage

Room 201AB

Will you need a press room, we have already doubled the costs, an additional press area will be even more ... and it turns out we will have to pay for parking ... but the attendees will not

For purposes of signage, the Convention Center will have signage ... what do you prefer:-

Mobile Harbor Town Hall

Mobile Harbor Public Meeting

U.S. Army Corps of Engineers Mobile District Public Meeting

From: To: Cc:	(b)(6)	
Subject:	FW: Draft Letter Response to (b)(6)	
Date:	Thursday, February 8, 2018 10:46:00 AM	_
Attachments:	(b)(6) Feb 2018.docx (b)(6) - Mobile Harbor - 27 Dec 17.pdf	

(b)(6) reviewed the letter and are okay with it.



Original Message	
From: (b)(6)	
Sent: Thursday, February 08, 2018 9:52 AM	
To:	(b)(6)
	(b)(6)
Subject: Draft Letter Response to (b)(6)	

All, I drafted the attached response to (b)(6) most recent letter to BG Holland 27 Dec 2017 (also attached).

Before I place in GEARS and formally route for the Commander's signature (likely COL Hogeboom would sign), I would appreciate you first look and suggested revisions. Please use "track changes" so I can see your suggested revisions.

Thanks,





DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS, SOUTH ATLANTIC DIVISION 60 FORSYTH STREET SW, ROOM 10M15 ATLANTA, GA 30303-8801

REPLY TO ATTENTION OF



(b)(5)

Sincerely,

Diana M. Holland Brigadier General, US Army Commanding December 27, 2917

Brigadier General Diana M. Holland, Commander U.S. Army Corps of Engineers, South Atlantic Division, Room 10M15 60 Forsyth St. S.W. Atlanta, GA 30303-8801

Dear Brigadier General Holland,

Enclosed is a letter and attachments that were mailed to Curtis Flakes, Chief of the Corps of Engineers' Mobile District Planning & Environmental Division. This letter follows-up a December 12 meeting in which I participated to seek answers to questions asked of the Corps. After reviewing the meeting discussions, I came away with 2 specific concerns that are detailed in my letter.

I am sending you a copy of the letter, because your help is needed to reverse the Mobile District's intentional plans to completely ignore a significant flaw in the original1980 EIS that failed to comply with Section 5 of the 1935 Rivers and Harbor Act which required the Corps to evaluate the effects of deepening and widening the channel on the shorelines occurring for a distance of at least 10 miles on both sides of Mobile Pass. If the Corps had complied with the 1935 law, the 1980 report would have included an investigation of the effects of enlarging the channel on Dauphin Island's shoreline, instead of ignoring the island as the report did.

The Mobile District also plans to ignore the provisions of paragraph 4.1b (1) on page 4-2 of the Corps' ER 1105-2-100 that specifically requires a GRR study to evaluate "changed conditions" in the study area that have occurred since the 1980 report was completed. In doing so, the Mobile District intends to only evaluate the effects of the disposal alternatives considered in the GRR on the Dauphin Island shoreline as it exists today. A consequence of that significant plan formulation decision is the GRR will completely ignore the "changed conditions" that have occurred in Dauphin Island's shoreline that have occurred during the 38 years since the 1980 report was completed as required by Corps agency regulations. It is obvious that the Corps' planned approach is clearly intended to ignore completely the extensive erosion of the Mobile Pass ebb-tidal delta and Dauphin Island that has occurred over the 38-year timeframe because of maintenance of the Outer Bar Channel that regularly intercepted and robbed the littoral drift system of over 29 million cubic yards of beach quality sands that were wastefully disposed in deep Gulf waters or placed in the non-effective euphemistically named Sand Island Beneficial Use Area.

Timing is of the utmost importance, because the Corps schedule is moving forward to produce a draft GRR/SEIS for release and public review in June 2018. It is this reason that I am writing this urgent request that you intervene on behalf of all interests having a concern over the continued well-being of Dauphin Island and the important contribution the island makes to sustaining the important ecological processes and benefits to Alabama's entire western coastline. Specifically, this is to request that you direct the Corps to assure the Mobile Harbor GRR Study fully comply with the requirements of:

(1) Section 5 of the 1935 Rivers and Harbor Act and all applicable Corps agency policy and guidance regulations and design manuals pertaining to that relevant federal statute; and

(2) Paragraph 4.1b (1) on page 4-2 of the Corps' ER 1105-2-100 regarding a full and honest investigation and disclosure of the "changed conditions" in the Gulf shoreline of Dauphin Island that have occurred during the 38 years since the original 1980 Mobile Harbor Survey Report was completed.

The two above specific evaluations not only are required by statute and Corps guidance, respectively, they are mandatory to ensure the GRR Study corrects a significant pertinent failure in the Corps' original 1980 report by addressing the historic loss of over 29,000,000 cubic yards of beach quality sands from the nearshore littoral drift sand transport system due to maintenance dredging that has contributed to present sand-starved condition of Dauphin Island and the significant erosion the island has experienced during the last almost four decades. Your urgent action would be greatly appreciated. I and others await your response on this critical matter before the Corps issues the Draft GRR and Supplement to the 1980 Environmental Impact Statement in the summer of 2018 as currently scheduled.

Sincerely.		
	(b)(6)	
Enclosures		

(b)(6)

December 26, 2017

Mr. Curtis M. Flakes, Chief, Planning & Environmental Division U.S. Army Corps of Engineers Mobile District P.O. Box 2288 Mobile, Alabama 36628

Dear Mr. Flakes,

I want to thank you for arranging the December 11 meeting to discuss the Mobile Harbor GRR Study. This was an important meeting for us to obtain answers to questions we have had for some time.

This letter addresses specific concerns I have. One important issue deals with how data from the Alabama Barrier Island Restoration Assessment (ABIRA) will be used in the GRR Study. Though David Newell provided some information, I am still concerned how this can happen since the ABIRA Comprehensive Report is scheduled for completion in March 2019, while the Draft GRR and SEIS is scheduled to be released in June of 2018 for a public review. Since these two separate report products have incompatible completion schedules, I would appreciate you elaborating in detail how data from the ABIRA will be used to produce the Draft GRR.

My greatest concern is associated with statements made by Justin MacDonald about the Mobile Harbor GRR Study. I strongly disagree with the Mobile District's position that the GRR will only evaluate the effects of the disposal alternatives considered on the Dauphin Island shoreline as it exists today. Such a position represents a travesty, completely disregarding paragraph 4.1b (1) on page 4-2 of the Corps' ER 1105-2-100 that requires a GRR study evaluate changed conditions in the study area that have occurred since the previous report was completed. It is obvious to the public that the Corps is taking the position that Justin stated in order to avoid having to admit the 1980 Survey Report was flawed because it failed to comply with Section 5 of the 1935 Rivers and Harbor Act. It is also obvious the Corps position is based upon your agency's clear intent to ignore completely the extensive erosion of the Mobile Pass ebb-tidal delta and Dauphin Island that occurred in the intervening 38 years as maintenance of the Outer Bar Channel continued to intercept and rob the littoral drift system of over 29 million cubic yards of beach quality sands that were wastefully disposed in deep Gulf waters and the non-effective Sand Beneficial Use Area (SIBUA). See attached USACE Mobile Harbor Outer Bar Channel Dredging History.

That institutionally accepted wasting of critically needed sands has left Dauphin Island in an extremely weakened condition is a fact. Now, minor storms regularly overwash the island, causing unnatural flooding of areas that once had higher elevations and were buffered by sand dunes. As a recent example, Hurricane Nate (barely a Category 1) caused extensive flooding, depositing sand on Bienville Blvd up to 6 feet deep that had to be removed at an estimated cost of over \$8 million. A document provided by the Town of Dauphin Island states:

"....contractors will have screened and deposited more than 50,000 cubic yards of sand along the island's south shoreline on the west end. As much as several hundred thousand yards of beach quality *sand* remains piled and scattered within town rights-of-way which could take another 45-60 days to remove. However, sand removal *is* only one part of the Hurricane Nate repairs facing our *island* community. For example, many of the side streets will require a new layer of crushed stone, road shoulders will need to be shaped to support drainage, numerous road signs and

1

posts must be replaced, the extreme west end of Bienville Blvd. will require substantial work to protect it from wave action, accommodate traffic and provide access to West End Beach, water & *sewer* infrastructure *is* damaged and the West End Beach/parking lot sustained significant storm impact"

Such damages and costs would not have occurred from Nate if the Corps had regularly placed the 29 million cubic yards of sand dredged from the channel in the shallow waters of the Mobile Pass ebb-tidal delta as proposed by the public and coastal engineers and scientists.

Further, the position stated by Justin is **CONTRARY** to the testimony Dr. Susan Rees (the Corps' sole expert witness) gave at the September 15, 2009 Fairness Hearing held to settle the Corps vs the Dauphin Island Property Owners Association lawsuit. Excerpts of specific comments made by Dr. Rees' in her sworn testimony is attached. I want to highlight here the important essence of her testimony which was intended to convince the presiding judge that the Class members should not be concerned with settling the lawsuit because prior to the Corps ever deciding to implement the 1986 authorized Mobile Harbor project, the Corps would do a thorough restudy of the original report. In doing so, Dr. Rees correctly referred to Corps policy and guidance that because of the amount of time that has passed since the original 1980 Survey Report was completed, a new report [the GRR] would have to consider "... whether conditions have changed since that original report was done". In that connection, Dr. Rees testified "... the placement of dredged material has changed significantly, and the environment has changed..." since the 1980 Survey Report was completed. Lastly, Dr. Rees stated the new report [the GRR] "...would definitely examine the impacts to the coastal processes of the entire region, not just Dauphin Island". Based on the present approach the Corps plans to pursue in the GRR, as described by Mr. McDonald, this leads one to ask two important questions;

- First, was Dr. Rees honest in the testimony she gave at the Fairness Hearing if she had knowledge the Corps never intended to address "changed conditions" in the study area since the original 1980 report was prepared?
- Second, since Dr Rees' sworn testimony is consistent with the requirements of paragraph 4.1b(1) on page 4-2 of the Corps' ER 1105-2-100, how does the Corps now justify its plans to ignore significant aspects of your agency's policy and guidance relevant to the GRR that is at odds with what she told the Court.

Curtis, you and the entire Mobile District staff engaged in the GRR Study, **KNOW** the 1980 Survey Report and EIS did not investigate the potential for a deepened and widened Outer Bar Channel to influence the erosion of Dauphin Island as COL Drake Wilson committed would occur in his July 9, 1975 letter (see attached). Despite that clear and unquestionable fact with which the Corps staff does not disagree, I find it extremely disconcerting, both as a federal taxpayer and a stakeholder having a direct interest in the outcome of the GRR Study, to have heard at the December 11 meeting, Corps attorney Michael Creswell say the GRR and Integrated SEIS will not honestly state for the record that the 1980 Survey Report and EIS failed to comply with Section 5 of the 1935 Rivers and Harbors Act by not investigating the potential for the recommended project to affect the configuration of Dauphin Island's Gulf shoreline. Thus, by refusing to be open and honest about that significant deficiency in the original 1980 report, which is directly relevant to the current GRR effort, that means the Mobile District is satisfied with hiding that important and cogent fact from the public, agencies, and its own upward reporting hierarchy. For that reason alone, I think it would be very prudent for the Mobile District to think long and hard before deciding to continue to pursue its current path on the GRR, and instead it should be imperative that the Mobile District include a comprehensive evaluation of the changes that have occurred in Dauphin Island's shoreline between the 1980 report and the baseline year considered in the GRR Study.

As you will note, I am sending a copy of this correspondence to Col DeLapp, our Congressional representatives, State Legislators, Corps' Division and Headquarters offices, and others.

I look forward hearing from you about these significant concerns and how the Mobile District will address them.



Cc: Honorable Richard Shelby, Senator Honorable Bradley Burn, Congressman Honorable Doug Jones, Senator-Elect Lieutenant General Todd T. Semonite, Commanding General & Chief of Engineers Brig. General Diana M. Holland, Commander South Atlantic Division Col. James A. DeLapp, Mobile District Jimmy Lyons, Alabama State Port Authority Mr. Christopher Militacher, EPA Region 4, NEPA Div. Director State Senator Bill Hightower State Representative David Sessions Jeff Collier, Mayor – Town of Dauphin Island Jason Johnson, Lagniappe Glen Coffee, Sierra Club Caroline Graves, Property Owner & DIPOA member

Enclosures

List of attendees December 12. 2017 meeting Excerpts Sworn Testimony Dr. Susan Rees Corps Lawsuit Mobile Harbor Outer Bard Channel Dredging History (1980-2016) 9 July 1975 Letter Col Drake Wilson to Congressman Jack Edwards Excerpt 1978 Corps Beach Erosion Control & Hurricane Protection (Including Dauphin Island) Photograph Dauphin Island 1950's

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1	IN THE UNITED STATES COURT OF FEDERAL CLAIMS
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3	COPY
4	
5	DAUPHIN ISLAND PROPERTY
6	OWNERS' ASSOCIATION, INC.,
7	a non-profit corporation;
8	and JAMES W. HARTMAN, ET. AL., NO. 00-115L
9	PLAINTIFFS,
10	vs.
11	THE UNITED STATES OF AMERICA,
12	DEFENDANT.
13	
14	EXCERPT TESTIMONY
15	OBJECTION STATED BY DR. SUSAN IVESTER REES
16	FAIRNESS HEARING
17	
18	Whereupon, the Fairness Hearing was held
19	before the Honorable Bohdan A. Futey, Senior
20	Federal Judge, at the United States District Court
21	House, 113 St. Joseph Street, Second Floor, Mobile,
22	Alabama, 36602, on Tuesday, the 15th day of
23	September, 2009, at 1:00 p.m.
L	

	2
1	(APPEARANCES)
2	THE HONORABLE BOHDAN A. FUTEY'S LAW CLERK: AMY HOGAN-BURNEY
3	AMI HUGAN-BURNET
4	(ATTORNEYS FOR THE PLAINTIFFS, DAUPHIN ISLAND PROPERTY OWNERS ASSOCIATION AND JAMES HARTMAN, ET.
5	AL.)
6	
7	RICHARD E. DAVIS, ESQUIRE JOSEPH D. STEADMAN, ESQUIRE
8	27180 POLLARD ROAD 205 ST. EMANUEL STREET
9	POST OFFICE BOX 2925 Mobile, Alabama 36602
10	DAPHNE, ALABAMA 36526 251-690-9300
11	rdavis@davis-fields.com 251-621-1555
12	LEWIS S. WIENER, ESQUIRE
13	SUTHERLAND ASBIU & BRENNAN 1275 PENNSYLVANIA AVENUE, N.W. WASHINGTON, D.C. 20004
14 15	lewis.wiener@sutherland.com 202-383-0140
16	DANIEL G. BLACKBURN, ESQUIRE
17	BLACKBURN & CONNER, PC POST OFFICE BOX 458
18	BAY MINETTE, ALABAMA 36507 dblackburn@blackburnpc.com
19	251-937-1750
20	
21	
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23	
	DEANNA WICICH_CON CEPTIETED COURT REPORTER

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1	(APPEARANCES CONTINUED)	
2	(ATTORNEYS FOR DEFENDANT, THE UNITED STATES OF AMERICA)	
3	WELLS D. BURGESS, ESQUIRE	
	NATURAL RESOURCES SECTION	
4	ENVIRONMENTAL AND NATURAL RESOURCE DIVISION	
. 5	U.S. DEPARTMENT OF JUSTICE POST OFFICE BOX 663	
8	WASHINGTON, D.C. 20044-0663	
6		
7	MARK S. BARRON, TRIAL ATTORNEY	
	ENVIRONMENTAL AND NATURAL RESOURCES DIVISION NATURAL RESOURCES SECTION	
8	601 D. STREET, N.W.	
	WASHINGTON, D.C. 20004	
9	POST OFFICE BOX 663	
10	WASHINGTON, D.C. 20044-0663 mark.barron@usdoj.gov	
10	202-305-0490	
11		
10	WILLIAM D. LITTLE, ASSISTANT ATTORNEY GENERAL	
12	OFFICE OF ATTORNEY GENERAL STATE OF ALABAMA	
13	500 DEXTER AVENUE	
	MONTGOMERY, ALABAMA 36130-0152	
14	blittle@ago.state.al.us	
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1	(APPEARANCES CONTINUED)	
2	I CALLED LOR THE DEFENDANT, UNITED STATES OF	
3		
4	DISTRICT COUNSEL	
5	1 332 /	
6	joseph.p.givhan.jr@sam.usace.army.mil 251-690-3295	
7	GARY A. MOORE, ASSISTANT UNITED STATES ATTORNEY	
8	RIVERVIEW PLAZA, SUITE 600 63 SOUTH ROYAL STREET	
9	MOBILE, ALABAMA 36602 gary.moore2@usdoj.gov	
10	251-415-7104	
11		
12	ð.	
13	2	
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15	DEANNA VICICH COX, CCR 367	
16	1 SAINT CHARLES PLACE DAPHNE, ALABAMA 36526	
17	dvccourtreporter@gmail.com 251-680-2605	
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EXAMINATION OF DR. SUSAN IVESTER REES (Excerpts):

Fairness Hearing Corps Lawsuit: Below are Excerpts of the Testimony of Dr. Susan Ivester Rees: September 15, 2009 Fairness Hearing, Mobile, Alabama; Questioned by Wells D. Burgess, US Department of Justice. Dr. Rees was an expert witness for the Corps of Engineers.

Q = Question. A = Answer

Q. And could you briefly state your employment history?

A. I have been employed with the Mobile District Corps of Engineers since 1981. Since that time I've held a number of positions with the Corps. Primarily in what is called the Coastal Environment Section of the Planning Division. The **duties** of that section are **to ensure** the environmental compliance of all of the federally authorized projects and military activities that are undertaken by the district.

Q. What are your current responsibilities?

A. Currently, I'm the program manager for the Mississippi Coastal Improvements Program.

Q. Are you familiar with the Corps' dredging operations on what we call the outer bar channel? A. Yes, I am. The Mobile Harbor Project was one of the projects that I was responsible for.

Q. So I and the Court and everybody else understands this, are you telling us, then, if you increase the channel over what it's currently maintained, the State is going to have to pick up half the footing – half the bill?

A. That's correct

Q. And that includes construction and maintenance?

A. That's correct.

Q. Okay. And do you have any estimation as to how much money is involved?

A. I think ten years ago the estimate of construction was somewhere in the range of \$200 million, but based on recent experience that estimate is no longer valid.

Q. Thank you, Dr. Rees. I'm going to ask you now that are going to basically – there's been some suggestion here that the Corps already has the funds to do this and it can just go out and basically start digging. And I need you to take the Court and also the class members here through the process that you believe needs to happen or that you know needs to happen based on your knowledge of the regulations and your experience and your current position before this additional dredging could occur.

A. Engineering regulation 1105-2-100, Chapter 4, dictates that for post-authorization projects -- and in this case if we were to try to deepen Mobile Harbor, that would be considered post-authorization -- that we have to do a re-evaluation report utilizing current planning criteria and current policy and regulations.

There are two types of reports that you can do. And basically the period of time that has elapsed since the original report was done and a consideration of whether conditions have changed since that original report was done, those two factors drive the level of reporting that is required.

For the case of Mobile Harbor, we would have to do what is called a general re-evaluation report. That basically brings all up to current condition. It looks project is still justified or not.

If you take Mobile Harbor specifically, it was originally authorized on the coal trade and the use of the McDuffie Coal Terminal. Today, the through-port and the port is vastly different from what it was in the late '80s, so there's **different economics** obviously, the cost of dredging and the placement of

dredge material has changed significantly and the environment has changed. And so we would have to take into consideration all of those aspects in preparing that general re-evaluation report. And as far as the environmental compliance goes, because of the age of the original EIS we would have to do a supplement to that EIS.

Q. And I had asked you before, did I not, obviously you have years of experience with the National Environmental Policy Act compliance; is that correct?

A. Yes, I do.

Q. Now, would that also take into account engineering feasibility?

A. Yes.

Q. And economic benefit?

A. That's correct.

Q. And the cost benefit ratio?

A. Yes.

Q. I understand has that changed?

A. The cost benefit ration for a budgetable project changed last year.

Q. Now, how about would you have to have a new project agreement with the State? A. If the findings of the general re-evaluation report were in the affirmative, prior to any construction activities, we would have to have a new partnership agreement with the State and the State Port

Authority that would detail their costs for the initial construction and for the future maintenance as well as their other responsibilities.

Q. And is it correct to say -- I'll probably let the State speak to this, but the State would have to figure out how -- whether they could shoulder this additional expense; is that correct? A. Well, they would have to figure out that and then they would also have to work with the

Congressional delegation to get the Corps the money as well.

Q. You mentioned that an environmental impact statement would be issued if there was any expansion over the current -- currently maintained dredging depths and width. Would that environmental impact statement examine the impact on Dauphin Island of any expansion? A. It would definitely examine the impacts to the coastal processes of the entire region, not just Dauphin Island.

Q. But including Dauphin Island? A. Definitely.

Mobile Harbor Outer Bar Channel Dredging History (1980-2016)

Dredging Date	Gross Quantity Dredged (yd ³)	Disposal Area Used ^{1/}
Feb-Dec 1980	1,129,337	Ocean DA
Jan-Mar 1981	610,623	Ocean DA
Dec 1982-Jan 1983	312,408	
Jan-Nov 1984	559,607	Ocean DA
Aug-Oct 1985	1,386,536	
Jan-Feb 1987	656,089	Nearshore Feeder Berm
Feb 1989-May 1990	^{2/} 6,755,352	Ocean DA
Aug-Sep 1992	466,607	Ocean DA
Nov-Dec 1995	621,172	and the second se
Aug-Dec 1997	710,996	Ocean DA
Sep-Oct 1998	1,279,780	Ocean DA
Aug-Sep 1999	71,380	Ocean DA
	54,600	SIBUA
May-Sep 1999	^{3/} 3,061,598	SIBUA
Apr-Jul 2000	758,280	Ocean DA
Mar 2002-May 2002	92,820	SIBUA
Jun 2004	230,110	SIBUA
Oct 2004-Nov 2004	1,184,817	SIBUA
Oct 2004-Jan 2005	1,808,765	SIBUA and at Lighthouse
Aug 2005	67,555	SIBUA
Apr-Jun 2006	487,975	SIBUA
Aug 2007	1,083,860	SIBUA
Nov-Dec 2008	585,430	SIBUA
Sept-Nov 2009	942,817	SIBUA
2010-2016 (estimated)	3,523,698	SIBUA
Total Dredged from Outer Bar Channel	29,442,209	For 30 years 1980-2016
Total Placed in Ocean DA	14,672,078	For 30 years 1980-2016
Total Placed at Nearshore Feeder Berm	656,089	For 1987 only
Total Placed in SIBUA or at Lighthouse	9,600,347	For 30 years 1980-2016
Average annual maintenance dredging quantity	503,385	For 37 years 1980-2016

(Source: USACE for the period 1980-2009 and estimated for the period 2010-2016 based on the average annual maintenance quantities reported for the preceding 30 years)

- ^{3/} New work deepening from 47 to 49 feet.
- 4/ Excludes new work deepening in 1989-1990 and 1999

Method used to estimate maintenance dredging quantities 2010-2016 and total dredged 1980-2016:

Step 1: 24,918,514 - (6,755,352 + 3,061,598) = 15,101,564 (O&M dredging only for 1980 through 2009) Step 2: 15,101,564 \div 30 = 503,385 yd³/year average OM for 30-year period between 1980 and 2009 Step 3: 503,385 × 7 = $\frac{3,523,695 \text{ yd}^3}{3,523,695 \text{ yd}^3}$ estimated as being dredged for 7-year period between 2010 and 2016 Step 4: 24,918,514 + 3,523,695 = $\frac{29,442,209 \text{ yd}^3}{29,442,209 \text{ yd}^3}$ estimated dredged from Outer Bar Channel (1980 to 2016)

¹ Ocean DA – EPA approved open water disposal site in the offshore Gulf of Mexico SIBUA – Sand Island Beneficial Use Area

^{2/} New work deepening from 42 to 47 feet

SAMPD-N

9 July 1975

Honorable Jack Edwards House of Representatives Weshington, DC 20515

Dear Mr. Edwards:

For your information I am inclosing a copy of the transcript of the Workshop Meeting on Beach Erosion Control and Eurricane Protection for Mobile County held at Bayley's Ranch on 31 March 1975. I appreciate your attendance at the meeting and interest you have demonstraced in this study.

As you recall, little interest was exhibited at the meeting for structural plans that could be implemented under existing Federal authorities for beach erosion control. These authorities require the establishment of public property and public access to the shoreline as a condition for any significant Federal financial participation in a beach erosion control project. As indicated at the meeting, the establishment of public shoreline property would be strongly opposed by existing waterfront property owners. Furthermore, preliminary studies indicate that protection of the sparsely developed shoreline would not result in the necessary economic benefits to justify the construction of costly structures for beach erosion control and hurricane protection.

While structural measures specifically for beach erosion control are indicated to be economically unjustified and to have unacceptable social and community impacts, the need for protection of the shoreline was emphasized. Substantial interest was indicated in the concept of deposition of unconfined dredged material from the ship channel along the west bay shoreline and Dauphin Island for the abatement of erosion.

The prospect for satisfactorily alleviating erosion problems on Dauphin Island by depositing the sandy material dredged from the Mobile Bay entrance channel upon the Gulf shoreline of the island appears promising and will be pursued. The viability of depositing future "new work" material dredged from the ship channel within Mobile Bay upon the western shoreline cannot be determined without estuarian and other environmental impact studies but is considered meritorious of further consideration. Under the above concepts the eroding shorelines would be nourished by the

> Appendix B 1

SAMPD-N Honorable Jack Edwards

9 July 1975

tradged material primarily as disposal areas in support of the maintenance and modification of the Mobile Harbor navigation project. This plan would preserve any accreted land as the property of adjoining land owners and limit local costs resulting from the accreted land, to the amount required for necessary stabilization and a portion of the cost allocated to land enhancement. Therefore, the options for nourishment of the eroding shorelines with material dredged from the ship channel would be more appropriately considered under our ongoing study of navigation modifications for Mobile Harbor rather than under the study for beach erosion control and hurricane protection.

In view of the indications of the workshop meeting, further consideration for deposition of the dredged materia. from the ship channel along the eroding shorelines under the ongoing survey study for modification of the existing Federal project for Mobile Harbor is indicated to be warranted in lieu of the authorized beach erosion control and hurricane protection study. Since our study has not indicated any other likely structural alternatives for beach erosion control and hurricane protection, and in accordance with Corps' policy to apply our limited study funds where they can be most productive, I am proposing to conclude our beach erosion and hurricane protection study for Mobile County. A concise report which will address the foregoing considerations along with the finding that no additional Federal structural improvements are warranted at this time in the interest of beach erosion control and hurricane protection can be completed with programmed fiscal 1976 study funds. Any remaining surplus funds could be transferred to other studies. In lieu of this option, deferral of future studies into an inactive study category is indicated.

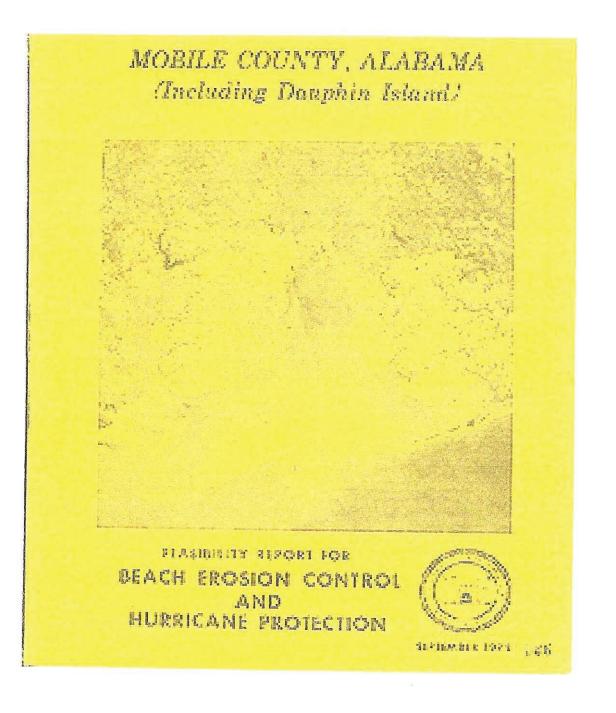
I plan to notify the Mobile City and County Commissions of our proposal to terminate the study in the near future, but, in the interim, would appreciate any views or comments you may have regarding the study and proposed course of action.

Sincerely yours,

l Incl As stated

DRAKE WILSON Colonel, CE District Engineer

Appendix B 2 2



1978 Corps study about Dauphin Island

204, Studies *herein* indicate that the only acceptable measures that would be economically feasible that would partially resolve any of the flooding or erosion problems of the area would be the nearshore Nourishment Plan defined herein as The Selected Plan. This plan would produce net economic benefits, is considered environmentally acceptable and subject to EPA approval of the disposal site designation, could be implemented under the authority of the Chief of Engineers for operation and maintenance of Mobile Harbor without additional authority tram the Congress. Accordingly, the District Engineer recommends Chat the Chief of Engineers modify the present maintenance dredging practice for the entrance channel to Mobile Harbor to conform to the procedures outlined herein for the Selected Plan as soon as practical with such other modifications as he may deem appropriate.

ZU IL

CHARLIE L. BLALOCK Colonel, CE District Engineer

183. The principal causes of shore erosion along the westernmost 11 miles of Dauphin Island are attributable to rise in *sea* level and maintenance dredging of the Mobile Bay entrance channel. Based on sea level stages recorded at Biloxi, Miaaissippi, the rates of rise of sea level between 1896 and 1972 and between 1940 and 1972 were .009 feet per year and .012 feet per year respectively. These data are shown on Place II. Per Brunn, in the reference, Sea-Level Rise *as a* <u>Cause of shore Erosion</u>, proposed the following formula for computing the rate of shoreline recession from the rate of sea level *rise*:

108. By letter, dated 21 July 1975, the Mobile County Commission, it was proposed that, in view of the indications from the workshop meeting, the ongoing beach erosion and hurricane study for Mobile County should be terminated. The Commission was also advised that the feasibility of placing dredged material from the Mobile ship channel onto the eroding shore would be pursued as part of the ongoing survey study for modifications of the existing Federal Navigation Project for Mobile Harbor. By letter, dated 1 October 1975, the Mobile Commission advised the District Engineer that the Commission concurred with the action stated in the 21 July 1975 letter. 110. In a letter dated 11 February 1977, the Mayor of Mobile requested that the Corps of Engineers investigate the feasibility of providing hurricane protection for the City of Mobile and shoreline erosion protection for the western shoreline of Mobile Bay. It was suggested that hurricane protection could be provided by construction seawalls or a series of ungated barriers strategically positioned in the Bay.

169. Effect assessment identifies the effects of all considered plans to determine the impacts that can he expected. Further. Section 122 of Public Law 91-611 supplements end extends the requirement of the National Environmental Policy Act of 1969 (PL 91-190) by requiring that the effect assessment identify the economic, social, and environmental factors associated with plans under consideration. Section 404 of Public Law 92-500 and Section 103 of Public Law 532 also requires that certain impacts on water quality be investigated and quantified before undertaking any action involving the discharge of dredged material into waters of the United Staten or ocean waters. Further criteria are eatablished by Executive Orders. 11990 and 11988 which direct that all Federal water resource planning minimize destruction, loss or degradation of wetlands and development in the flood plain. Therefore, the effect assessment process is carried out to assure that all significant effects have been identified and their impacts evaluated. A summary of the effects of the considered plans is given in the following paragraphs.

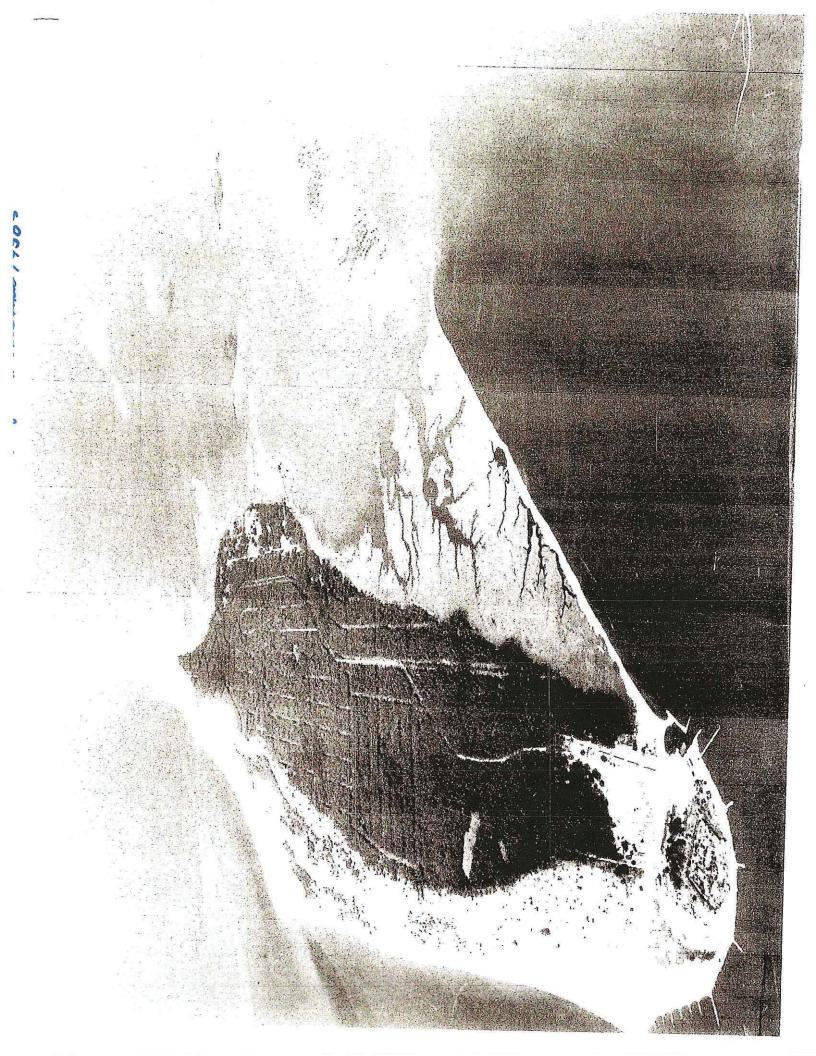
116. Socioeconomic and Environment Criteria - The criteria for socioeconomic and environment consideration in water resource planning are prescribed by the National Environmental Policy Act of 1969 (PL 91-190), section 122 of the River and Harbor and Flood Control Act of 1970, (PL-611), and Section 404b of the Federal Water Pollution Control Act Amendments of 1972. The criteria prescribed that all significant adverse and beneficial economic, social and environmental effects of planned developments be considered and evaluated during formulation.

175. The No Action Alternative perceives a continuation of present conditions and practices without any provisions to reduce potential hurricane flooding or occurring beach erosion. Under this alternative 2

dredged material would continue to *be* deposited in the closest suitable area to the entrance channel. No monetary or other resources would be expended to transfer the dredged material to Dauphin Island's littoral system, and erosion along the western end of the island could be expected to continue at its present pace. Erosion would continue to claim valuable property on the island, ultimately causing hard-ships for island property owners and a lessening of the area's attractiveness for recreational activities.

176. The Nearshore Nourishment Plan should significantly reduce the present rate of erosion along the western 11 miles of bauphin Island producing a net savings in land values over the additional coat for implementing the plan, While not eliminating, it would delay the ultimate effects of the No Action Plan. The savings realized from the Nearshore Nourishment Plan should beneficially of National economic development; local property values, employment, business activities, tax revenues, and general economic growth; public services and facilities; natural and manmade resources; recreation and aesthetic values; and community and regional cohesion and growth. The plan should have no effects on air quality, noise, known archaeological remains, municipal water supply. or threatened or endangered species. As previously noted the Nearshore Nourishment Plan would have temporary, adverse effects on water quality, benthic life, fisheries, and other marine life similar to the present (No Action Plan) method of operations. No known vegetation or wetlands other than submerged bottoms would be affected. The plan is considered acceptable to local interests and would be completely reversible. It is reasonably certain that benefits for the considered plan will be achieved; however, the effectiveness of the considered plan cannot be fully documented. The area of geographical impact would be limited to the southern shoreline of Dauphin Island and adjoining offshore waters.

3



From: To:	(b)(6)	
Subject: Date:	FW: Cumulative Effects Discussion - Mobile Harbor GRR Thursday, February 8, 2018 2:48:00 PM	

As discussed.

(b)(6)	
Original Message	
From: (b)(6)	
Sent: Monday, September 11, 2017 10:32 AM	
To:	(b)(6)
	(b)(6)

Subject: RE: Cumulative Effects Discussion - Mobile Harbor GRR

All: Following are the minutes from today's Cumulative Impacts discussion:

1.) Definition of cumulative impacts is outlined in CFR, Title 40, Chapter V, Part 1508, Section 1508.7

2.) Cumulative impacts will include all other projects permitted or currently under construction within the study area.

3.) Corps of Engineers takes position that 2008 and 2010 Byrnes Report addresses the cumulative impacts of the channel modifications up to the current dimensions on sediment transport.

4.) For the Mobile Harbor GRR SEIS, impacts to the aquatic resources will be measured against the data included in the EIS which was part of the 1980 Survey Report for Mobile Harbor. Other previous documentation in regards to the aquatic resources may be considered if it is adequately measured and described.

5.) Other "historic" impacts will be mentioned in the cumulative impacts such as dams, causeway, pollutants, and channelization of creeks. However, since the results of these impacts cannot be accurately measured in relation to the current proposed deepening and widening, no further analysis will be included.

6.) Cumulative impacts section will be modelled on what was done on MsCIP and Charleston Harbor.

7.) The cumulative impacts section of the SEIS is currently planned to be performed by AECOM. It will be funded with funds anticipated to be received in October 2017.

Please let me know if you have any additions/revisions.



Original Message	
From (b)(6)	
Sent: Monday, September 11, 2017 8:16 AM	
То	(b)(6)
	(b)(6)

Subject: RE: Cumulative Effects Discussion - Mobile Harbor GRR

Attached is a draft cumulative impacts outline that we put together for coordination with EPA several months ago.

Original Appointment	
From (b)(6)	
Sent: Friday, September 8, 2017 12:36 PM	
To:	(b)(6)
	(b)(6)

Subject: Cumulative Effects Discussion - Mobile Harbor GRR When: Monday, September 11, 2017 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada). Where: Small PM-C Conference Room

All: Please plan on attending a meeting Monday, September 11 at 0900hrs in the small PM-C Conference Room to discuss how we will address the cumulative effects of Mobile Harbor Channel.

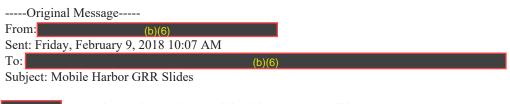


From: To:	(b)(6)
Subject:	Mobile Harbor GRR Slides
Date:	Friday, February 9, 2018 10:06:00 AM

(b)(6) Do you know about when you'll be able to get your slides to me?



From: To:	(b)(6)	
Subject:	RE: Mobile Harbor GRR Slides (UNCLASSIFIED)	
Date:	Friday, February 9, 2018 10:09:00 AM	
Okaythank you,	(b)(6)	
ondy minimit you,		
Original Mess	age	
From:	(b)(6)	
Sent: Friday, Febru	uary 09, 2018 10:09 AM	
To:	(b)(6)	
Subject: RE: Mobi	le Harbor GRR Slides (UNCLASSIFIED)	
CLASSIFICATIO	N: UNCLASSIFIED	
I am working to w	rap them up right now. I guess ~ 1 hour if	ArcGIS will hang in with me. It will have a place
holder for (b)(6) st	uff in the bay as we are are working to get	Monday. Simulations are still running



(b)(6) Do you know about when you'll be able to get your slides to me?



CLASSIFICATION: UNCLASSIFIED

From: To: Cc:	(b)(6)
c: Subject:	Mobile Harbor GRR Update - Plan Selection
Date:	Friday, February 9, 2018 11:03:00 AM
Attachments:	Econ Slide 01 Feb 2018.pptx

Does the language in this e-mail look okay to send to the full vertical team as an update?

All: Attached are the current estimated costs and benefits for the Mobile Harbor Study. Based on discussions with the Alabama State Port Authority (ASPA) and the Mobile Bar Pilots, we intend to further develop Alternative 2 (49' depth, 3 mile, 100' widener) while working towards the Tentatively Selected Plan. The ASPA does not intend to proceed with a Locally Preferred Plan (LPP) for additional deepening or length of widening at this time. We are preparing the paperwork for a categorical exemption to the NED plan (deepening only of 51-foot).

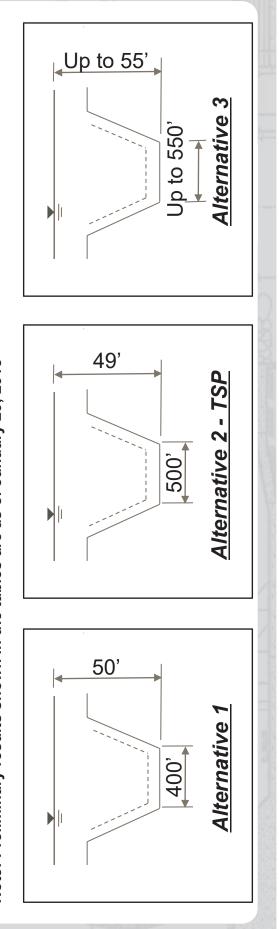
We have an Agency Meeting scheduled for February 15, 2018 to discuss the environmental impacts and initiate discussion on the mitigation analysis. As requested in the November 28 In-Progress Review, we will provide an update on the status of the environmental impact and mitigation analysis at the end of this month.



PRELIMINARY COSTS AND NET BENEFITS MOBILE HARBOR GRR

Mobile F	Harbor GRR Pr	eliminary Proj	Harbor GRR Preliminary Project Cost Estimate (\$M)	ate (ŞM)		
		Depth				
	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	\$27.90	\$195.69	\$271.8 4	\$347.32	\$429.74	\$561. 4 5
Alternative 2 - 100' widening for 3 miles	\$33.50	\$204.39	\$282.04	\$359.42	\$444.34	\$577.85
Alternative 3 - 100' widening for 5 miles	\$35.50	\$207.89	\$286.34	\$365.22	\$450.34	\$584.75

	Mobile Harb	Mobile Harbor GRR Alternatives Matrix	atives Matrix			
		Net Benefits				
	45'	47'	48'	49'	50'	51'
Alternative 1 - Deepening Only	NA	\$13.7M	\$21.2M	\$28.7M	\$34.0M	\$37.8M
Alternative 2 - 100' widening for 3 miles	\$265,000	\$185,200	\$127,800	\$56,800	(\$33,800)	
Alternative 3 - 100' widening for 5 miles			ГЪР	с.		
Note: Preliminary results shown in the tables are as of January 29, 2018	tables are a	as of January	29, 2018			



From: To: Cc:	(b)(6)
Subject:	Version 4 Public Meeting Slides - Mobile Harbor GRR
Date:	Friday, February 9, 2018 1:59:00 PM
Attachments:	22 Feb 2018 Public Meeting v4 - compiled.pptx

All,

Attached is Version 4 of the public meeting slides.



Pages 2 through 24 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	Fw: Mobile Harbor GRR Public Meeting Slides Version 5
Date:	Tuesday, February 13, 2018 4:15:15 PM
Attachments:	22 Feb 2018 Public Meeting v5 - compiled.pptx

Fyi...

Sent from my BlackBerry 10 smartphone. Original Message From: DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil> Sent: Monday, February 12, 2018 1:52 PM To: (b)(6) Cc: (b)(6)

Subject: RE: Mobile Harbor GRR Public Meeting Slides Version 5

Here is Version 5 - I made several changes to format and others. PLEASE use this version going forward and make future changes to this. We need to still work on the last few slides.

Thanks

COL D

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

From: (b)(6) Sent: Friday, February 09, 2018 2:16 PM

To: DeLapp, James Andrew (Jim) COL USARMY CESAM (US) <James.A.Delapp@usace.army.mil> Subject: Fwd: Mobile Harbor GRR Public Meeting Slides Version 4

From:	(b)(6)	
Date: February 9, 2018 at 2:	06:31 PM CST	
То:	(b)(6)	
Cc:	(b)(6)	

Subject: Mobile Harbor GRR Public Meeting Slides Version 4

(b)(6)

Attached is version 4 of the Mobile Harbor GRR Public Meeting Slides. I have also uploaded this document to the PM Drive PM-C/Newell/Mobile Harbor GRR/Slides.



Pages 2 through 24 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	RE: Version 4 Public Meeting Slides - Mobile Harbor GRR
Date:	Wednesday, February 14, 2018 8:01:00 AM

(b)(6) Thank you. We should get the missing graphic today, will add reference to it being "maintenance" material on the summary slide, and will tell them construction costs are estimated to be roughly \$300-\$450M depending on the final selected depth.

(b)(6)	

-----Original Message-----From: (b)(6) Sent: Friday, February 09, 2018 3:31 PM To (b)(6) Subject: RE: Version 4 Public Meeting Slides - Mobile Harbor GRR

The slides look nearly perfect! Excellent job!

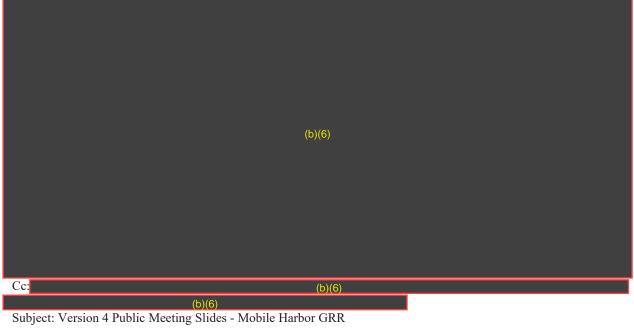
My comments....

- 1. The slides may need a footer page number as a reference for the audience.
- 2. Slide 6: 2nd line has too many spaces.
- 3. Slide 7: "2/3rds" looks awkward...may be correct, but I'm uncertain
- 3. Slide 9: SIBUA isn't labeled on the map.
- 4. Slide 19: Is there a graphic missing to the right?

5. Slide 22: States that	(b)(5)	
	(b)(5)	

...hopefully it doesn't rain on all the parades- Happy Mardi Gras!

Original Message	
From: (b)(6)	
Sent: Friday, February 09, 2018 2:02 PM	
To:	(b)(6)
	(1)(0)
	(b)(6)



All,

Attached is Version 4 of the public meeting slides.



From: To:	(b)(6)
ıbject:	FW: Mobile Harbor meeting
ate:	Wednesday, February 14, 2018 8:02:00 AM

FYI

From:	(b)(6)			
Sent: Wednesday, Februar	y 14, 2018 8:02 AM			
To:		(b)(6)		
	(b)(6)			

Subject: RE: Mobile Harbor meeting

Yes, will have a short bi-weekly meeting this afternoon and then move on to the agency dry-run (b)(6) are on their way here.



Original Message		
From: (b)(6)		
Sent: Monday, February 12, 2018 4:44 PM		
To:	(b)(6)	
(b)(6)		
Subject: Mobile Harbor meeting		

Is there a dry run of the Thursday agency meeting set for Wednesday?

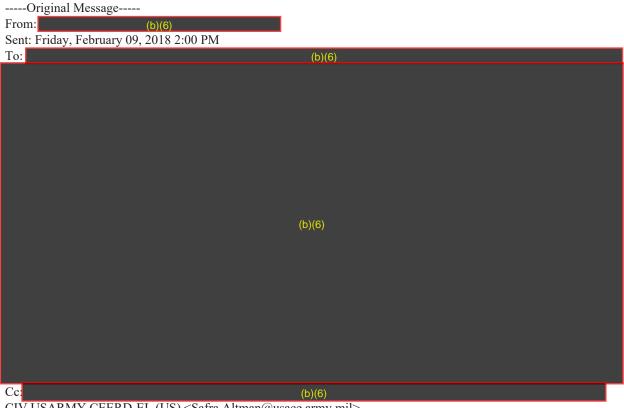
Respectfully,



From: To:	(b)(6)
Cc:	
Subject: Date: Attachments:	RE: Version 5 Public Meeting Slides - Mobile Harbor GRR Wednesday, February 14, 2018 8:08:00 AM 22 Feb 2018 Public Meeting v5 - compiled.pptx

All: Colonel DeLapp made revisions to the slides over the holiday. Attached is the latest (Version 5).





CIV USARMY CEERD-EL (US) <Safra.Altman@usace.army.mil> Subject: Version 4 Public Meeting Slides - Mobile Harbor GRR

Attached is Version 4 of the public meeting slides.



Pages 3 through 25 redacted for the following reasons: (b)(5)

From: To:	(b)(6)	
Cc:		
Subject: Date: Attachments:	RE: Version 5 Public Meeting Slides - Mobile Harbor GRR Wednesday, February 14, 2018 9:30:00 AM February 2018 Public Meeting Slides.pdf	

All: Please review the attached boards for the Public Meeting and let Bobbie know (cc me and Joe Paine) if you have any changes.

(b)(6) Need to update the initial modeling dimension bubble on the first slide to reflect the latest on slide 9 of the presentation slides (title it Current Measures and show 48-50 deepening, 3 mile widener, bend easing, and turning basin modification).



Original Message From (b)(6) Sent: Wednesday, February 14, 2018 8:09 AM	
To:	(b)(6)
	(b)(6)

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

Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

All: Colonel DeLapp made revisions to the slides over the holiday. Attached is the latest (Version 5).





All,

Attached is Version 4 of the public meeting slides.



Pages 3 through 7 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	RE: Version 5 Public Meeting Slides - Mobile Harbor GRR
Date:	Wednesday, February 14, 2018 10:44:00 AM

We do have the old ones...



-----Original Message-----From: Sent: Wednesday, February 14, 2018 8:18 AM To: (b)(6) Subject: [Non-DoD Source] RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

Do we have comments or revisions to the selected posters???

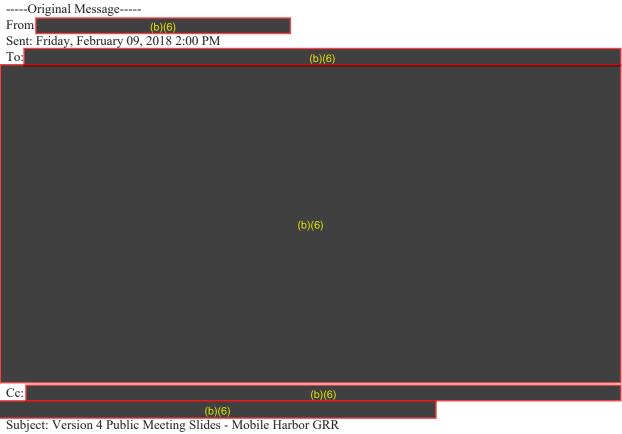
Are the old ones in your office?

Original Message	
From:	(b)(6)
Sent: Wednesday, February 14, 2018 9:10 AM	
To:	(b)(6)
	(b)(6)
Cc	(b)(6)
Subject: RE: Version 5 Public Meeting Slides	Mobile Harbor GPP

Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

All: Colonel DeLapp made revisions to the slides over the holiday. Attached is the latest (Version 5).





All,

Attached is Version 4 of the public meeting slides.



From: To: Cc:	(b)(6)
Subject:	RE: Version 5 Public Meeting Slides - Mobile Harbor GRR
Date:	Wednesday, February 14, 2018 12:57:00 PM

I am making updates for a version 6 right now.

Slide 7: Corrected

Slide 9: Any drawing updates are up to Engineering (b)(6) Not sure if they have the bandwidth to make updates right now.

I don't think we should water-down the wording for the placement at this point in time. The fact is that these are the "Tentatively Proposed Placement Locations." Our goal is to get all the feedback we can from the public on the use of these locations for placement.

Slide 21: I thought so too. Will ask (b)(6) this afternoon.



Original Message		
From: (b)(6)		
Sent: Wednesday, February 14, 2018 12:43 PM		
To: (b)(6)		
Cc: (b)(6)	
Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR		

Slide 7: Ton's should be Tons

Slide 9: In the dwg, Preliminary Plan states 50' Depth Block that states Tentatively Proposed Placement Site:	
(b)(5) It seems	(b)(5)
(b)(5)	
Slide 21: I really like the pictures of the pipeline and h (b)(5)	hopper in the boards that you just sent (b)(5)
Original Message	
From (b)(6)	
Sent: Wednesday, February 14, 2018 8:10 AM	
To:	(b)(6)
	(b)(6)



All: Colonel DeLapp made revisions to the slides over the holiday. Attached is the latest (Version 5).



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

From (b)(6) Sent: Friday, February 09, 2018 2:00 PM	
Sent: Friday, February 09, 2018 2:00 PM	
To:	(b)(6)
	(b)(6)

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

Subject: Version 4 Public Meeting Slides - Mobile Harbor GRR

All,

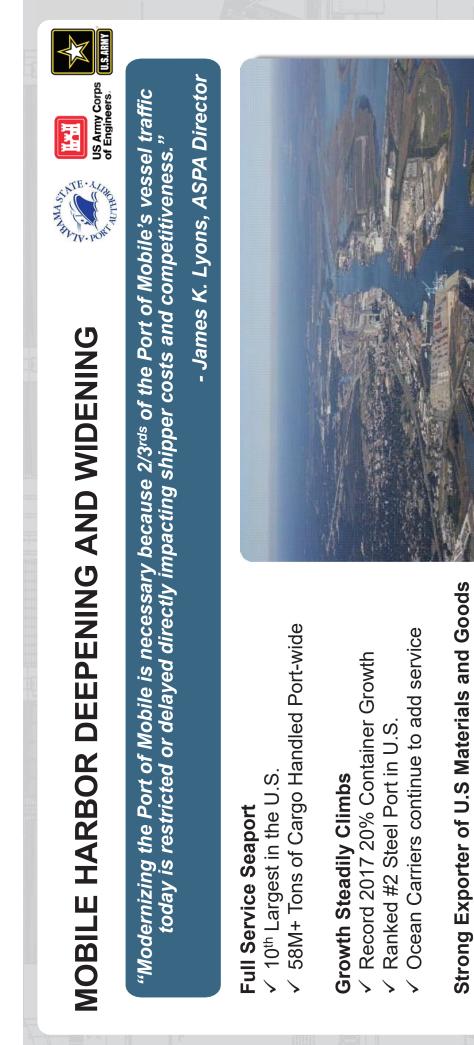
Attached is Version 4 of the public meeting slides.



From: To:	(b)(6)	
Subject:	GRR Agency Meeting - Overview 2-15-18.ppt	X
Date:	Thursday, February 15, 2018 7:54:00 AM	
Attachments:	GRR Agency Meeting - Overview 2-15-18.ppt	<u>X</u>

(b)(6) If not too late, please replace with the attached slides. It has updated numbers.





Contributes Significantly to the Economy 153,000+ Jobs

- / ¢26.18 in according value
- ✓ \$25.1B in economic value

From: To: Cc:	(b)(6)
Subject:	FW: Mobile Harbor PED Budget 01-18-18.xlsx
Date:	Thursday, February 15, 2018 8:42:00 AM

(b)(6) Additional \$2.1M Federal required for completion of the PED Phase. Total PED cost is \$2.5M (\$1.875M Federal).



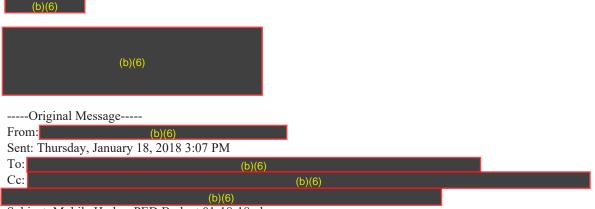
-----Original Message-----

From:	(b)(6)	
Sent: Thursday	y, January 18, 2018 3:19 PM	
To:		(b)(6)
	((b)(6)
Cc:		(b)(6)
	(b)(6)	

Subject: FW: Mobile Harbor PED Budget 01-18-18.xlsx

(b)(6) below is (b)(6) explanation for the difference between the \$2.0M figure and the \$2.5M. Since I cited the \$2M figure yesterday, I called Dayne from Sen Shelby's office to let him know about the revised number...wasn't concerned, appreciated the clarification.

Thanks for the help pulling yesterday together. Let us know if you need anything else.





(b)(6) Attached is the estimated PED Budget for Mobile Harbor. The total cost is about \$2.5M. The previous estimate of \$2.0M did not include the required modifications to the turning basin and additional sediment testing.

This estimate is based on a 49' deep channel and 3 mile 100' widener. The PED estimate does not include additional cultural resource investigations as the need is not expected at this time. About \$325,000 is included in contingency.



From: To:	(b)(6)
Subject:	FW: Version 5 Public Meeting Slides - Mobile Harbor GRR
Date:	Friday, February 16, 2018 7:20:00 AM

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

From		(b)(6)			
Sent: We	dnesday, F	ebruary 14, 2018	11:12 Al	M	
To:			(b)((6)	
G 1		5 D 1 1 3 6 1	011.1	3 6 1 11 3 7 1	GDD

Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

The bay channel placement site map...last page is not legible...I was trying to get an idea of where you are looking to place.



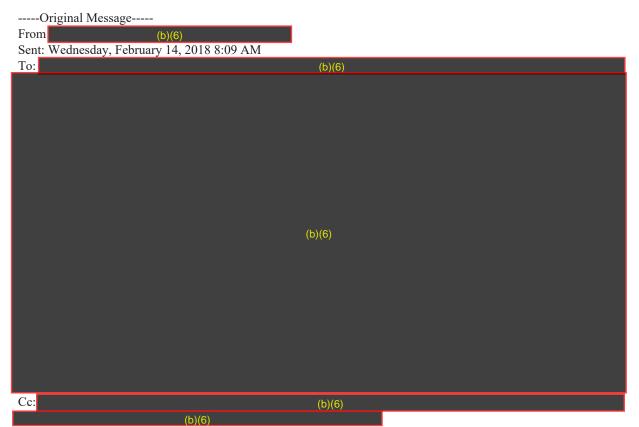
Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

All: Please review the attached boards for the Public Meeting and let (b)(6) know (cc me an (b)(6)) if you have any changes.

(b)(6) eed to update the initial modeling dimension bubble on the first slide to reflect the latest on slide 9 of the presentation slides (title it Current Measures and show 48-50 deepening, 3 mile widener, bend easing, and turning basin modification).



(b)(6)



Subject: RE: Version 5 Public Meeting Slides - Mobile Harbor GRR

All: Colonel DeLapp made revisions to the slides over the holiday. Attached is the latest (Version 5).



Original Message		
From: (b)(6)		
Sent: Friday, February 09, 2018	2:00 PM	
To:	(b)(6)	
	(b)(6)	



All,

Attached is Version 4 of the public meeting slides.



From: To:	(b)(6)
Subject:	RE: FW: Mobile Harbor GRR Town Hall Meeting Rehearsal
Date:	Monday, February 19, 2018 8:56:00 AM
Attachments:	22 Feb 2018 Public Meeting v6 - compiled.pptx MCC Facility Layout.pdf Parking Lot Location.JPG Room Layout.pdf

No, but, I can meet with you and run through everything than I plan to run through with the team. Attached are the latest slides as of last Friday. We are making updates and should have those completed by Wednesday morning.



-----Original Appointment-----

From (b)(6) Sent: Monday, February 19, 2018 8:41 AM

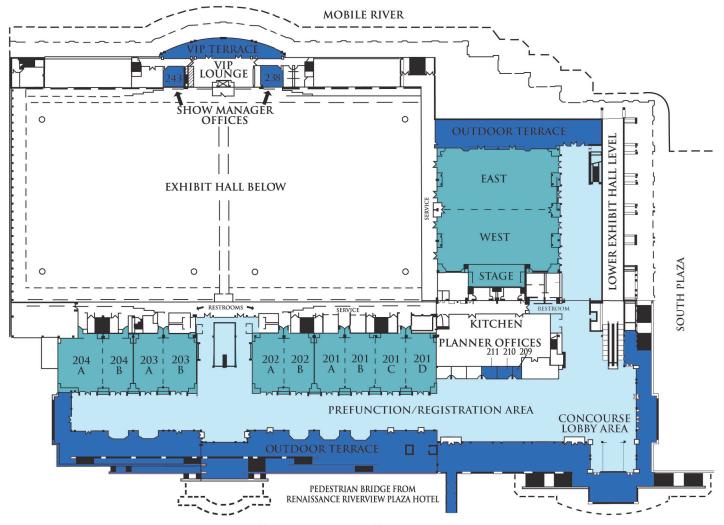
To: (b)(6)

Subject: Declined: FW: Mobile Harbor GRR Town Hall Meeting Rehearsal When: Tuesday, February 20, 2018 1:00 PM-2:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Main PM Conference Room

(b)(6) Neither (b)(6) or I are available. We will be on the road to Montgomery. Any chance this can be held earlier? (b)(6)

Pages 2 through 24 redacted for the following reasons: (b)(5)



<u>concourse level</u>

ROOM	RO	OM DIMENSION	S		ROOM CA	APACITIES		EXHIBITS
Ballroom	Square Feet	Size in Feet	Ceiling Height	Banquet 60" Rounds	Theatre	Classroom 18" Tables	Reception	10' x 10' Booths
East	7,000	105 x 60	22'	450	685	462	737	40
West	7,000	105 x 60	22'	450	735	462	737	40
Combined	*15,508	105 x 120	22'	1000	1,600	924	1,474	80
Meeting Roo	ms							
201 A	1,700	54 x 30	17'	90	172	102	178	
201 B	1,700	54 x 30	17'	90	172	102	178	
201 C	1,700	54 x 30	17'	90	172	102	178	
201 D	1,700	54 x 30	17'	90	172	102	178	
Combined	6,834	54 x 120	17'	360	830	519	712	38
202 A	1,800	54 x 32	17'	90	172	102	189	
202 B	1,700	54 x 30	17'	90	172	102	178	
Combined	3,536	54 x 62	17'	200	397	231	367	20
203 A	1,700	54 x 30	17'	90	172	102	178	
203 B	1,800	54 x 32	17'	90	172	102	189	
Combined	3,536	54 x 62	17'	200	397	231	367	20
204 A	2,500	54 x 43	17'	200	288	168	262	
204 B	1,700	54 x 30	17'	90	172	102	178	
Combined	4,252	54 x 73	17'	300	484	309	440	24
		on & Storage Of	fices					
209	108	9 x 12	9'	N/A	N/A	N/A	N/A	N/A
210,211,212	180	15 x 12	9'	N/A	N/A	N/A	N/A	N/A
Show Manage								
243	440	20 x 22	9'	N/A	N/A	N/A	N/A	N/A
238	440	20 x 22	9'	N/A	N/A	N/A	N/A	N/A
VIP Lounge	1,500	24 x 58		ility via VIP elevato	5.7 · 12			
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*Additional	square footage i	ncludes a 45' x1	5' Stage and ty	wo (2) 12' x 22' Dr	essing Rooms			
Prefunction,	Registration Are	ea = 39,000 sq. ft						
Outdoor/Riv	ver Terraces = 25	5.000 sg. ft.				All areas are A	DA accessible.	

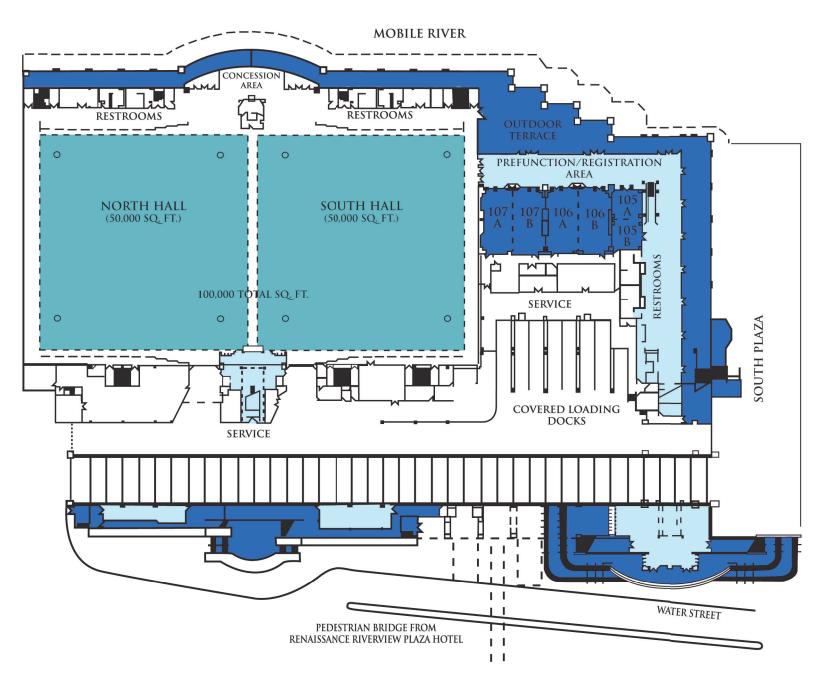
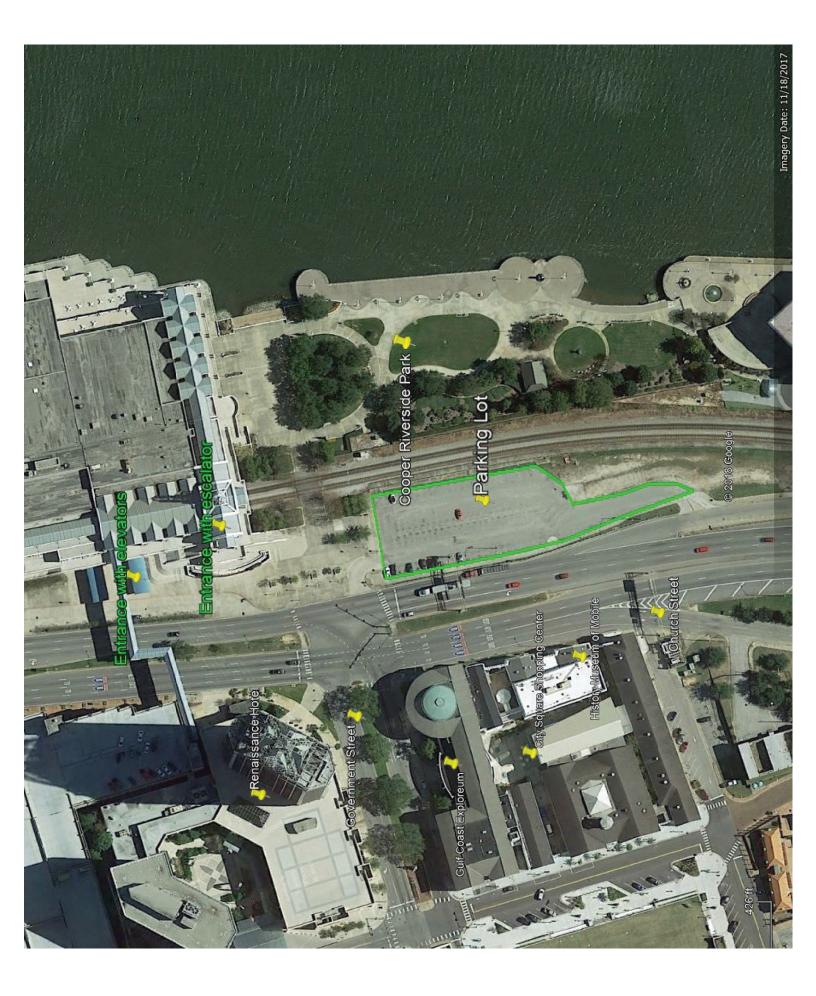
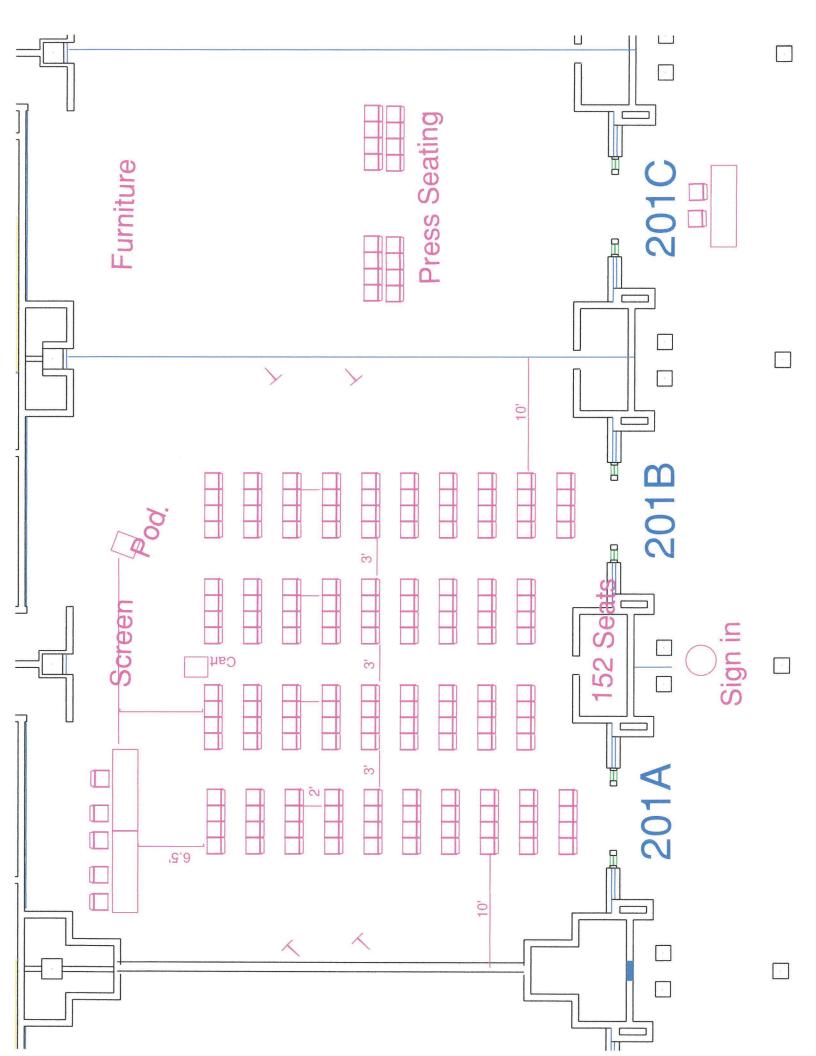


exhibit hall level

ROOM	RO		S		ROOM CA	PACITIES		EXHIBITS
Exhibit Hall	Square Feet	Size in Feet	Ceiling Height	Banquet 60" Rounds	Theatre	Classroom 18" Tables	Reception	10' x 10' Booths
North Hall	50,000	234 x 208	30'	4,140	5,555	4,448	5,286	267
South Hall	50,000	234 x 208	30'	4,140	5,555	4,448	5,286	267
Combined	100,000	234 x 216	30'	8,280	11,110	8,896	10,572	534
Meeting Room	15							
105 Ă	700	27 x 24	12'	40	77	45	72	
105 B	700	27 x 24	12'	40	77	45	72	
Combined	1,400	27 × 48	12*	90	154	90	144	N/A
106 A	1,600	58 x 27	12'	100	177	100	167	
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Combined	3,200	58 x 55	12'	230	354	210	334	18
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From: To:	(b)(6)
Subject:	FW: Mobile Harbor GRR Town Hall Meeting Rehearsal
Date:	Monday, February 19, 2018 8:59:00 AM
Attachments:	Draft February 2018 Public Meeting Slides.pdf

FYI

Original Message	
From: (b)(6) Sent: Monday, February 19, 2018 8:42 AM	
Sent: Monday, February 19, 2018 8:42 AM	
To:	(b)(6)
()	b)(6)

Subject: [Non-DoD Source] RE: Mobile Harbor GRR Town Hall Meeting Rehearsal

Attached please find the poster board slides for the meeting on Thursday. Please let me know if you have any comments or revisions.

From:	(b)(6)	
Sent: Thursday, February 15, 2018 9:15 AM		
To:	(b)(6)	
	(1) (2)	
	(b)(6)	

-----Original Appointment-----

Subject: Mobile Harbor GRR Town Hall Meeting Rehearsal When: Tuesday, February 20, 2018 1:00 PM-2:00 PM (UTC-06:00) Central Time (US & Canada). Where: Main PM Conference Room All: Please plan on attending a rehearsal on Tuesday, 20 February at 1300hrs in the Main PM Conference Room (across from the restrooms) for the Mobile Harbor GRR Town Hall meeting to be held February 22.





MOBILE HARBOR GENERAL REEVALUATION REPORT



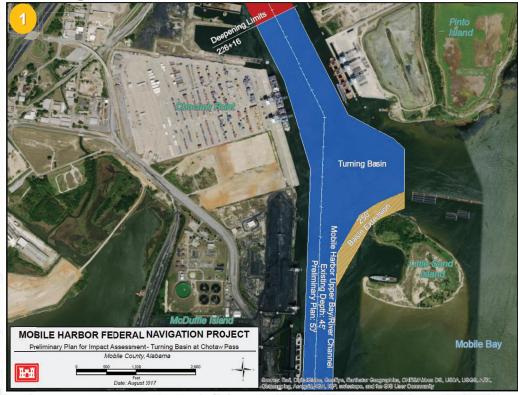




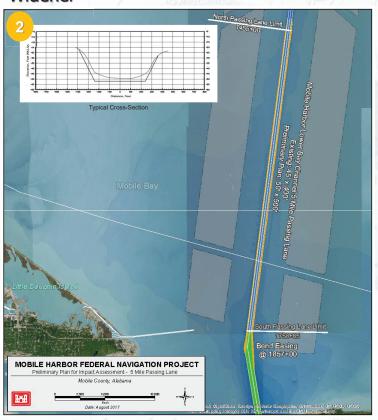
MOBILE HARBOR GENERAL REEVALUATION REPORT



Turning Basin

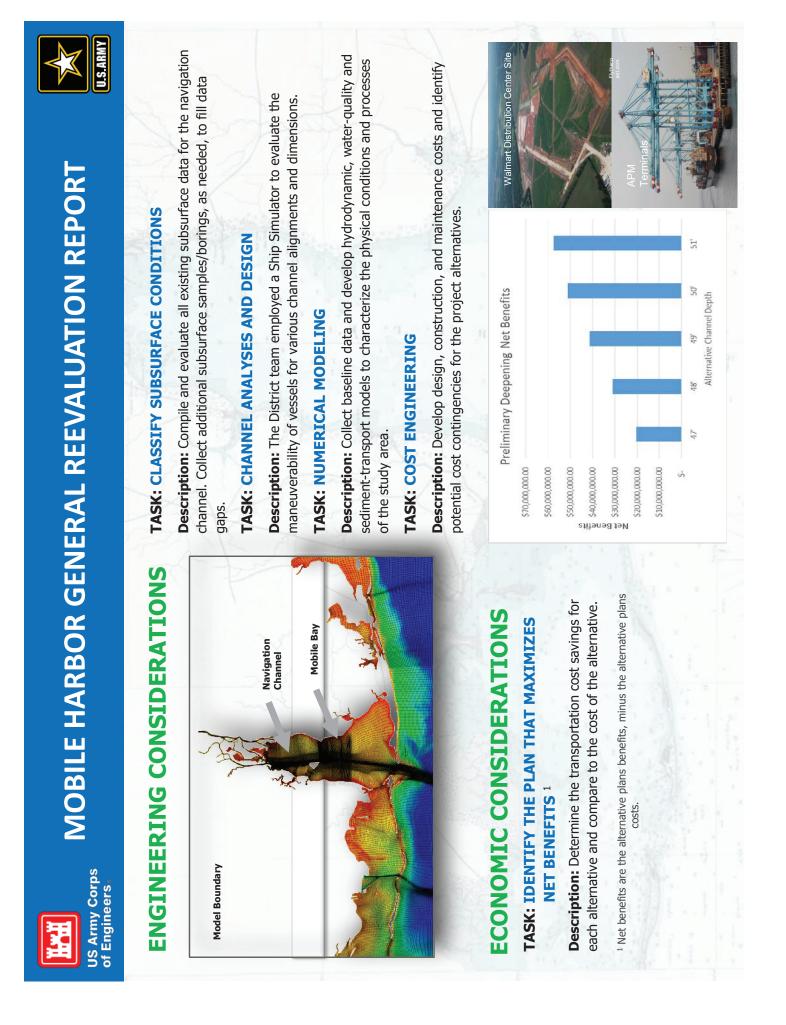


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of Engineers。

MOBILE HARBOR GENERAL REEVALUATION REPORT



ENVIRONMENTAL CONSIDERATIONS



TASK: OYSTER MODELING

Description: Use historical data sets and maps obtained from the State of Alabama to determine distribution of oyster resources in order to evaluate existing adult oyster reefs and determine larvae-distribution patterns throughout the bay.

TASK: WETLAND ASSESSMENT AND MAPPING

Description: Use historical and field-verified data to identify and map the distribution of existing wetland communities and determine water-quality tolerances for wetland vegetation in areas potentially affected by channel modifications.

TASK: SUBMERGED AQUATIC-VEGETATION (SAV) ASSESSMENT AND MAPPING

Description: Use historical and field verified data to identify and map the distribution of existing submerged aquatic vegetation (SAV) and determine water-quality tolerances for SAV species in areas of potential effect associated with channel modifications.

TASK: BENTHIC COMMUNITY ASSESSMENT

Description: Collect sediment-benthic samples in critical ecological zones within the Mobile Bay including sediment and water-quality measurements. Conduct predictive analysis of water-quality changes to benthic invertebrates.

TASK: FISHERIES ASSESSMENT

Description: Conduct fish-populations assessments to evaluate recruitment, growth and spawning of fish within the upper bay and delta.

OTHER ENVIRONMENTAL CONCERNS BEING ADDRESSED

Threatened and Endangered Species

- Gulf sturgeon
- Alabama red-bellied turtle
 - Sea turtles Shore birds
 - Manatees

Shrimp
 Crabs

Essential Fish Habitat

- Red drum
- Migratory species

Cultural Resources

- Rich maritime history
- Coordination according to Natural Historic
 - Preservation Act Dredging and placement areas evaluated
- Known and located resources evaluated for

direct and indirect effects

Further Considerations

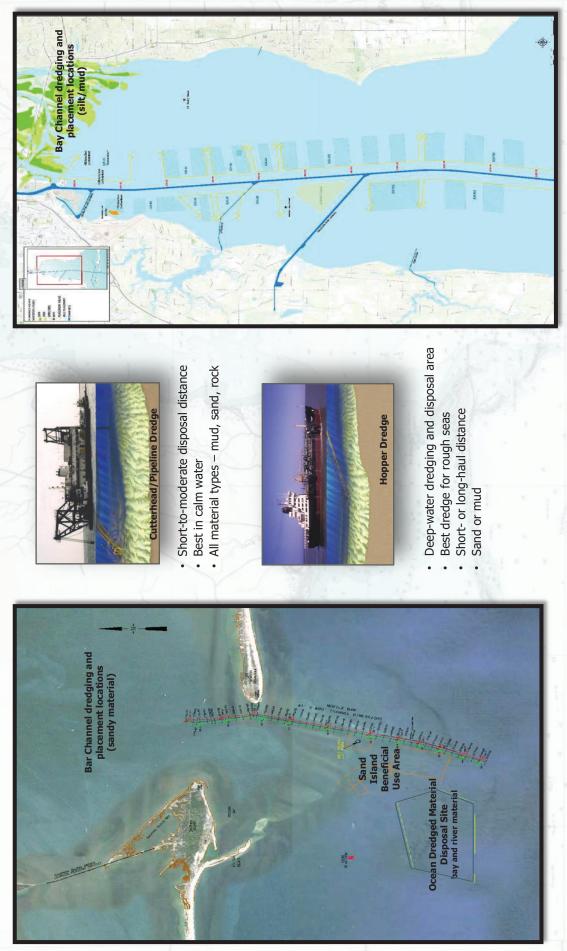
- Air quality Noise
- -
- Environmental justice
 - Cumulative impacts
- Consider comments received during recent public and focus group meetings regarding the effects of dredged material placement



MOBILE HARBOR GENERAL REEVALUATION REPORT



MAINTENANCE DREDGING AND PLACEMENT



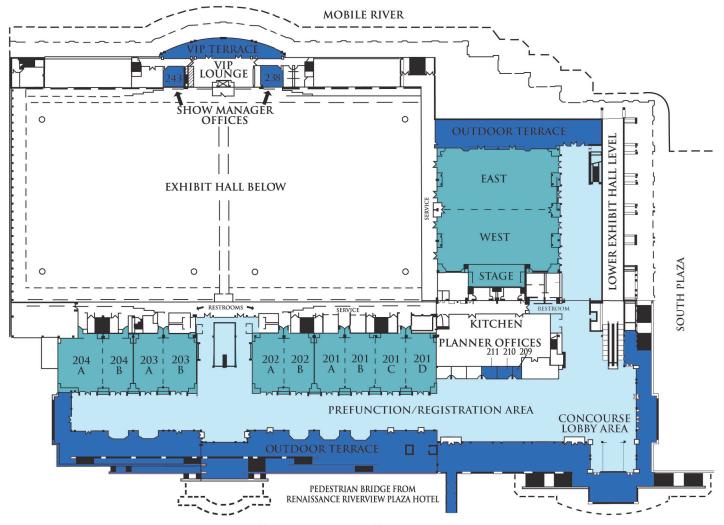
From: To:	(b)(6)
Subject:	FW: FW: Mobile Harbor GRR Town Hall Meeting Rehearsal
Date:	Monday, February 19, 2018 9:01:00 AM
Attachments:	22 Feb 2018 Public Meeting v6 - compiled.pptx
	MCC Facility Layout.pdf
	Parking Lot Location.JPG
	Room Lavout.pdf

(b)(6)

Attached are the latest Slides as of last Friday. Still making a few updates that should be completed by Wednesday morning.

(b)(6)	

Pages 2 through 24 redacted for the following reasons: (b)(5)



<u>concourse level</u>

ROOM	ROOM ROOM DIMENSIONS				EXHIBITS					
Ballroom	Square Feet	Size in Feet	Ceiling Height	Banquet 60" Rounds	Theatre	Classroom 18" Tables	Reception	10' x 10' Booths		
East	7,000	105 x 60	22'	450	685	462	737	40		
West	7,000	105 x 60	22'	450	735	462	737	40		
Combined	*15,508	105 x 120	22'	1000	1,600	924	1,474	80		
Meeting Roo	ms									
201 A	1,700	54 x 30	17'	90	172	102	178			
201 B	1,700	54 x 30	17'	90	172	102	178			
201 C	1,700	54 x 30	17'	90	172	102	178			
201 D	1,700	54 x 30	17'	90	172	102	178			
Combined	6,834	54 x 120	17'	360	830	519	712	38		
202 A	1,800	54 x 32	17'	90	172	102	189			
202 B	1,700	54 x 30	17'	90	172	102	178			
Combined	3,536	54 x 62	17'	200	397	231	367	20		
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Kitchen5,50050 x 110Accessibility to all areas via service corridors.										
*Additional	square footage i	ncludes a 45' x10	5' Stage and ty	wo (2) 12' x 22' Dr	essing Rooms					
Prefunction,	Prefunction/Registration Area = 39,000 sq. ft.									
Outdoor/Riv	ver Terraces = 25	5.000 sg. ft.		All areas are A	DA accessible.					

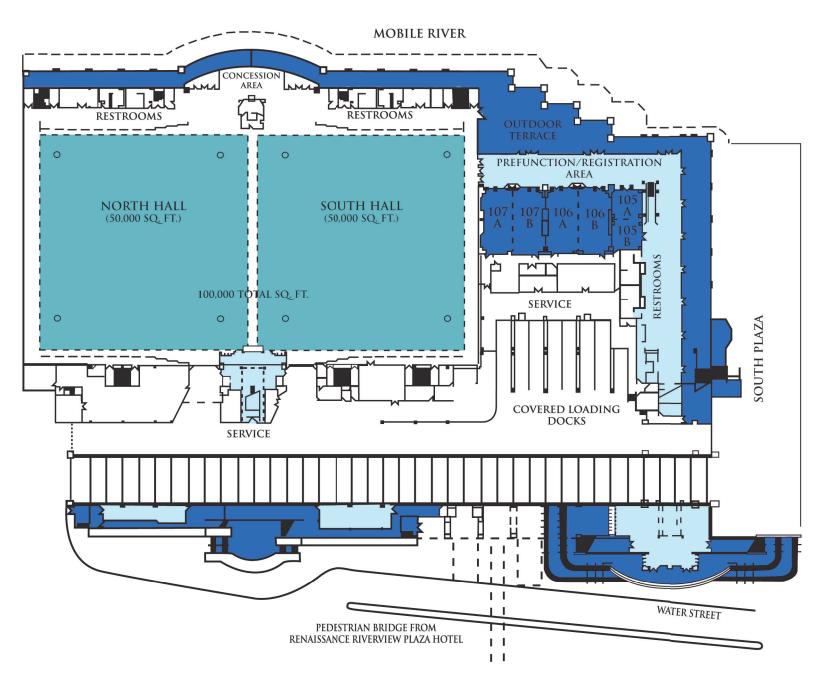
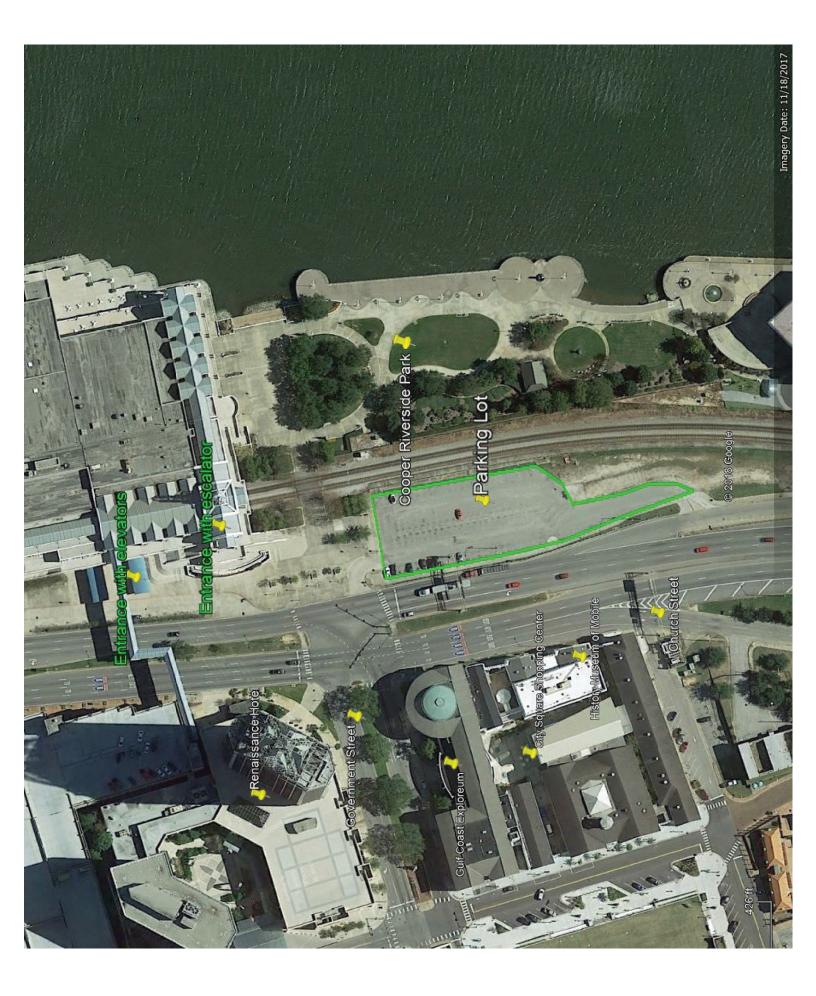
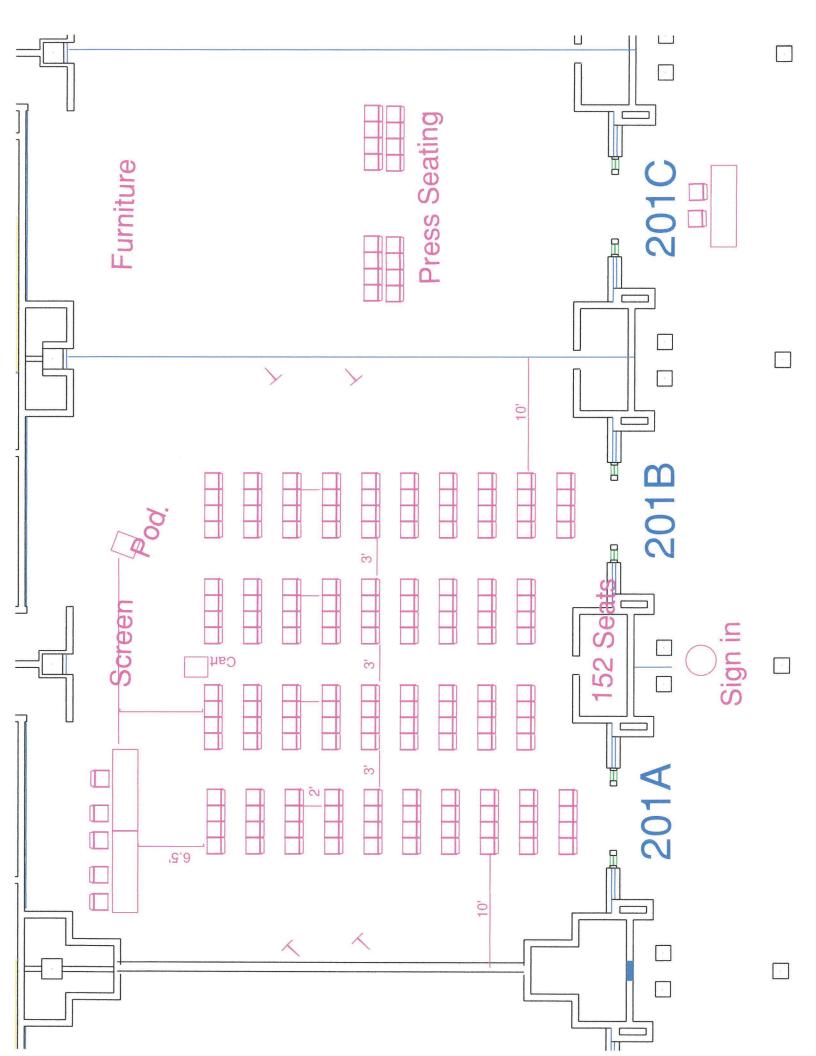


exhibit hall level

ROOM	RO		S	ROOM CAPACITIES				EXHIBITS
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Outdoor/Rive	er Terraces = 20),000 sq. ft.			All dreds	are ADA decess	ine.	





From: To: Cc:	(b)(6)
Subject:	FW: USGS Publication
Date: Attachments:	Monday, February 19, 2018 10:37:00 AM ofr20171112.pdf

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

From: (b))(6)	
Sent: Monday, January 08, 2018	2:35 PM	
То:	(b)(6)	
	(b)(6)	

Subject: USGS Publication





Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015

By James G. Flocks, Nancy T. DeWitt, and Chelsea A. Stalk

Open-File Report 2017–1112

U.S. Department of the Interior U.S. Geological Survey

U.S. Department of the Interior

RYAN ZINKE, Secretary

U.S. Geological Survey

William H. Werkheiser, Acting Director

U.S. Geological Survey, Reston, Virginia: 2017

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Suggested citation:

Flocks, J.G., DeWitt, N.T., and Stalk, C.A., 2017, Analysis of seafloor change around Dauphin Island, Alabama, 1987–2015: U.S. Geological Survey Open-File Report 2017–1112, 19 p., https://doi.org/10.3133/ofr20171112.

ISSN 2331-1258 (online)

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This project is part of a collaborative effort between the U.S. Geological Survey (USGS), U.S. Army Corps of Engineers (USACE), and the State of Alabama, funded by the National Fish and Wildlife Foundation (NFWF) to investigate viable, sustainable restoration options that protect and restore the natural resources of Dauphin Island, Alabama. The authors would like to thank their collaborators at USACE-Mobile District, NFWF, State of Alabama, USGS Wetland and Aquatic Research Center, and the crew of the USACE S/V *Irvington*. We thank William Butler and the USACE Engineer Research and Development Center team that collected and processed the 2015 multibeam data. We would also like to thank the USGS St. Petersburg Coastal and Marine Science Center Seafloor Mapping Group (Julie Bernier, Kyle Kelso, Jake Fredericks, and Max Tuten), and Jeff Collier, Mayor of the town of Dauphin Island for their assistance. Reviews by USGS scientists Soupy Dalyander and Kathryn Smith and edits by Betsy Boynton and Marilyn Billone greatly improved this report.

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Tables

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Conversion Factors

Multiply	Ву	To obtain
	Length	
micron (um)	0.001	millimeter (mm)
centimeter (cm)	0.394	inch (in.)
meter (m)	3.281	foot (ft)
meter (m)	1.094	yard (yd)
kilometer (km)	0.621	mile (mi)
kilometer (km)	0.540	mile, nautical (nmi)
	Area	
square kilometer (km ²)	247.1	acre
square kilometer (km ²)	0.386	square mile (mi ²)
	Volume	
cubic meter (m ³)	1.31	cubic yard (yd ³)
cubic meter (m ³)	35.31	cubic foot (ft ³)
	Flow rate	
cubic meter per year (m^3/yr)	0.000811	acre-foot per year (acre-ft/yr)

International System of Units to U.S. customary units

Datum

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88, GEOID12A), and converted to MLLW for analysis purposes. Units of all vertical measurements are in meters.

Horizontal coordinate information is referenced in the geographic coordinates World Geodetic System of 1984 (WGS 84); however, data were projected into Universal Transverse Mercator (UTM) coordinate system for analysis purposes.

Abbreviations

DEM	digital elevation model
DGPS	Differential Global Positioning System
GMT	Generic Mapping Tools
GPS	Global Positioning System
Lidar	light and detection and ranging
MLLW	mean lower low water
NAVD	North American Vertical Datum
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
WGS	World Geodetic System

Analysis of seafloor change around Dauphin Island, Alabama, 1987–2015

By James G. Flocks, Nancy T. DeWitt, and Chelsea A. Stalk

Introduction

Dauphin Island is a 26 km-long barrier island located southwest of Mobile Bay, Alabama, in the north-central Gulf of Mexico (fig. 1). The island contains sandy beaches, dunes, maritime forests, freshwater ponds and intertidal wetlands, providing habitat for many endangered and threatened species. Dauphin Island also provides protection for and maintains estuarine conditions within Mississippi Sound, supporting oyster habitat and seagrasses. Wetland marshes along the Alabama mainland are protected by the island from wave-induced erosion during storms approaching from the Gulf of Mexico. Over the years, the island has been eroded by storms, most recently by Hurricane Ivan (2004) and Hurricane Katrina (2005) (Ivan/Katrina), which breached the island along its narrowest extent and caused damage to infrastructure (fig. 2). Along with storms producing significant episodic change, long-term beach erosion has exposed numerous pine tree stumps in the shoreface. The stumps are remnants of past maritime forests and reflect the consistent landward retreat of the island (Parker and others, 1997).

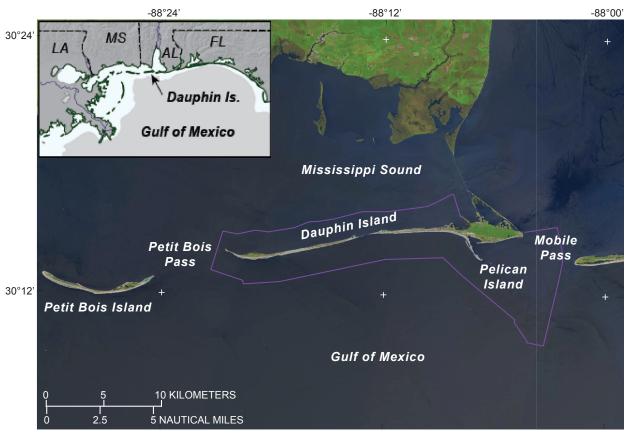


Figure 1. Maps showing the regional location of Dauphin Island (inset), and key features discussed in this study. The polygon (outlined in purple) represents the extent of the 2015 bathymetric survey. The background satellite image is from the 2014 U.S. Geological Survey Landsat 8.



Figure 2. Extensive shoreline erosion, overwash, breaching, and damage to the infrastructure at Dauphin Island during Hurricane Katrina in 2005. The view is of the central portion of the island looking west. The image was taken August 31, 2005, U.S. Geological Survey post-storm aerial oblique photography (https://coastal.er.usgs.gov/hurricanes/katrina/post-storm-photos/obliquephotos.html).

Island change has prompted the State of Alabama to evaluate restoration alternatives to increase island resilience and sustainability by protecting and preserving the natural habitat, and by understanding the processes that influence shoreline change. Under a grant from the National Fish and Wildlife Foundation (NFWF), restoration alternatives are being developed that will allow the State to make decisions on engineering and ecological restoration designs based on scientific analysis of likely outcomes and tradeoffs between impacts to stakeholder interests. Science-based assessment of the coastal zone requires accurate and up-to-date baseline data to provide a valid image of present conditions and to support modeling of coastal processes. Bathymetric elevation measurements are essential to this requirement. In August 2015, the U.S. Army Corps of Engineers (USACE) and the U.S. Geological Survey (USGS) conducted single beam and multibeam bathymetric surveys around Dauphin Island using a variety of shallow draft vessels and equipment. More than 95 square kilometers (km²) of seafloor was imaged. The data were integrated into a seamless digital elevation model (DEM) to provide a highresolution bathymetric map of the seafloor (fig. 3) extending 9.5 km seaward from the island's eastern end and approximately 2 km along the rest of the island on the gulf and sound sides. Water depths range from 0.3–15.0 meters (m), with depths greater than 10.0 m constrained to the Mobile ship channel on the extreme eastern flank of the coverage.

To measure seafloor change, two periods of historic hydrographic survey data were acquired from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information data archive. The two timeframes (1987–1988 and 2005–2007) were selected for their

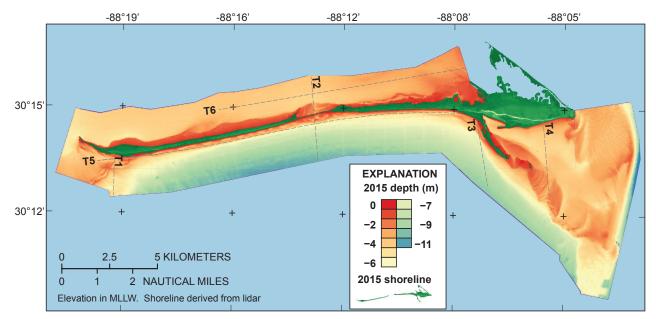


Figure 3. Digital elevation model (DEM) generated from 2015 bathymetric data. Overlain on the DEM are transect locations (T1–T6) used to represent vertical change over time.

completeness of spatial coverage and because they encompass a period of significant storm impacts to the island. These timeframes were compared to each other and with the 2015 dataset to monitor elevation gain (sediment accretion) and elevation loss (sediment erosion) over time. Sediment dynamics is by far the most significant driver of nearshore elevation change in this area. The Mississippi-Alabama inner shelf is a passive margin (Flocks and others, 2011), and other influences on elevation change (for example tectonic adjustment, Holocene subsidence, and eustatic sea-level rise) are neither significant nor variable enough over this time period to have an imprint.

Description of Study Area

Dauphin Island is typically characterized in east and west segments based on geomorphology (fig. 3). The eastern quarter of the island is up to 2 km wide with elevations that exceed 8 m. This part of the island rests on a core of hardened Pleistocene barrier ridge-deposits that became the locus of sediment deposition at the beginning of island evolution (Otvos and Giardino, 2004). In contrast, the western three quarters of the island is narrow (< 500 m) and consists of low-elevation (<4-m) sandy dunes that are subject to frequent overwash and breaching (fig. 2). In the submerged environment, seaward of the eastern end of the island is the highly dynamic Mobile Bay ebb-tidal delta, which extends approximately 10 km seaward of the island (fig. 3). On the western flank of the delta is a region of shoals and ephemeral islands that reflect the net westward transport of sand along the periphery of the ebbtidal delta shield, driven by a prevailing southeast wave approach and tidal-flow dynamics (Byrnes and others, 2008). Pelican Island (fig. 1), also referred to as Sand Island, is a shoal that has been migrating toward and appending to Dauphin Island over the past century. (It is presently appended to Dauphin Island, adjacent to transect T3 in fig. 3.) West of these features, along the length of the island, the shoreface and inner shelf are comparatively featureless, with a gentle (0.6 degree) seaward slope. This morphology is consistent with most of the Mississippi-Alabama inner shelf at water depths less than 20 m (Flocks and others, 2011).

The western end of the island terminates at the Petit Bois Pass (fig. 1) and its ebb-tidal delta. The pass formed as a breach in the island during an unnamed hurricane in the mid-18th century (Otvos and Carter, 2013), separating Petit Bois Island from Dauphin Island (fig. 1). Since this breach, Petit Bois Island has been migrating westward, widening the pass and expanding the ebb-tidal delta deposits seaward (Flocks and others, 2015). As with the inlet at the eastern end of island, tidal dynamics control sediment transport processes within the Petit Bois Pass.

The sound side of Dauphin Island is composed of a narrow (~ 0.5 km) island platform less than 2 m deep that slopes into Mississippi Sound (fig. 3). Water depth within the sound ranges from 2.5 to 4.5 m. The Intracoastal Waterway Ship Channel passes through the sound just beyond the 2015 bathymetric coverage and is not included in this investigation. Flood-tide delta and storm overwash deposits are visible in the bathymetry at the aforementioned breach in the central part of the island (fig. 3). The breach occurred during Hurricane Ivan (2004) and was significantly widened by Hurricane Katrina the following year (fig. 2). In 2011 a rock structure was added to close the breach and, subsequently, longshore transport has begun to build out a beach in front of the structure.

Historical wave climate measured from a buoy approximately 54 km southeast of Dauphin Island (NOAA National Data Buoy Center Station 42012) indicates a predominantly southeast wave approach (Flocks and others, 2015), directing sediment transport from east to west along the island shoreface. Over the past half century, Byrnes and others (2008) estimated that approximately 4.6×10^4 cubic meters per year (m³/yr) of sediment was transported from the Mobile ebb-tidal delta west to Dauphin Island. Over the same time period, 2.4×10^5 m³/yr of sediment was eroded from the middle and western portion of the island (Byrnes and others, 2008). This suggests that five times the amount of sediment is eroded from the island shoreface than is delivered each year. Steady longshore sediment-transport rates and volumes are punctuated by storm impacts which rapidly erode sand from the beach and shoreface. Since 1987, 14 named storms with tropical storm strength or greater passed within 185 km (100 nautical miles) of Dauphin Island (table 1). Storm surges up to 3 m (Hurricane Ivan) caused shoreface erosion, island overwash, and breaching. Since Hurricane Katrina in 2005, only two storms have passed within 185 km of the islands (table 1), in general reflecting a period of low storm activity in the northern Gulf of Mexico in general.

Methods

A bathymetric survey was conducted in 2015 using a suite of acoustic systems and platforms; tracklines of coverage are shown in figure 4. In July 2015, the USGS collected single-beam bathymetry in the shallow waters around the island. For a complete description of the methodology used to collect these data see DeWitt and others (2017). Shallow draft vessels, including personal watercraft equipped with single-beam acoustic systems and Digital Global Positioning System (DGPS), were used to access these areas. Positioning was corrected using DGPS base stations installed over geodetic benchmarks located on the island. Variable sound velocity within the water column was corrected using periodic casts of portable sound-velocity profilers. Boat heave, pitch, and roll were compensated using an internal motion reference system, whereas the personal water craft used a very high GPS sampling rate (0.1 second) and a narrow (4 degree) transducer beam angle to compensate for motion.

In September 2015, the USACE Engineer Research and Development Center completed multibeam surveys in deeper water (up to 6-m water depth) around the Petit Bois Pass and sound-side of the island using a similar methodology (William Butler, oral comm.), while a joint USACE/USGS survey occupied the deeper waters on the gulf side of the island using the USACE survey vessel *Irvington* equipped with a multibeam system. These data, along with 2015 lidar elevations of the shoreline acquired by the USGS, were integrated to generate a DEM of the coastal zone (fig. 3).

Table 1. Tropical storms passing within 185 km (100 nm) of Dauphin Island since 1987, with major impacts highlighted. Dashed line separates the 1987–2006 and 2006–2015 time periods. Storm data extracted from the National Oceanic and Atmospheric Administration Historical Hurricane Track Tools v. 4.0 (https://coast.noaa.gov/hurricanes/). [KM: kilometers; MB: millibars; KTS: knots; M: meters]

Name	Date	Closest distance KM	Category	Central pressure MB	Central wind speed KTS	Wind speed at Dauphin KTS	Surge at Dauphin M*
Ida	Nov 2009	8	TS	998	45	30	0.8
Claudette	Aug 2009	166	TS	1005	40	23	-
Katrina	Aug 2005	136	Н3	925	107	66	2.1
Dennis	Jul 2005	135	Н3	942	110	44	0.9
Cindy	Jul 2005	26	TS	995	45	44	-
Arlene	Jun 2005	74	TS	991	50	34	0.8
Ivan	Sep 2004	34	Н3	946	105	79	2.9
Hanna	Sep 2002	35	TS	1003	50	36	1.1
Georges	Sep 1998	57	H2	964	90	37	1.6
Earl	Sep 1998	176	H2	988	85	45	0.3
Danny	Jul 1997	15	H1	984	70	63	1.8
Opal	Oct 1995	98	H3	940	105	53	0.8
Erin	Aug 1995	110	H2	973	85	36	-
Alberto	Jul 1994	154	TS	993	55	21	-

*Negligible or unknown surge marked as (-).

All of the bathymetric data was processed in the World Geodetic System (WGS84) with elevation control in the North American Vertical Datum NAVD88 (GEOID12A), and converted to Universal Transverse Mercator (UTM) zone 16 and mean lower low water (MLLW) for comparison with legacy bathymetric datasets. The merged DEM extends landward to include the shoreline, a zero-meter elevation contour extracted from a 2015 USGS topographic-lidar survey of Dauphin Island. Once the various datasets were merged, a 5-m running mean was applied across the data to avoid aliasing short wavelengths. The blockmean function in the Generic Mapping Tools (GMT, ver. 5) suite of data manipulation tools was used for this process. The resulting data file was then gridded to 50-m grid cells using the GMT surface algorithm with a search radius of 200 m to initialize the grid and a tension filter of 0.03 to suppress spurious oscillations. A grid mask generated from a polygon digitized around the survey area was applied to the resulting grid to exclude areas of no data using the GMT grdmask and grdmath functions (fig. 4, extent of analysis). The root-mean-square (RMS) error for the grid relative to the soundings across acquisition platforms averaged 0.022 m.

To monitor seafloor change over time, trackline data points from the 1987–1988 and 2005–2007 time periods were downloaded from the NOAA National Centers for Environmental Information website (https://maps.ngdc.noaa.gov/viewers/bathymetry/). Data coverages and identification numbers for these time periods are shown in figures 5 and 6. The data were converted from WGS84 to UTM zone 16 (meters) for volume estimations. Dauphin Island shorelines for 1987 and 2006 were digitized from Landsat satellite imagery (Guy, 2015), assigned a zero elevation, and merged with the bathymetric data. As with the recent dataset, a 5-m running mean was applied to each data merge, which were then gridded using the GMT surface algorithm at the same range and grid spacing as the 2015 DEM. The resulting DEMs are shown in figures 7 and 8. The RMS error comparing the DEM to original data

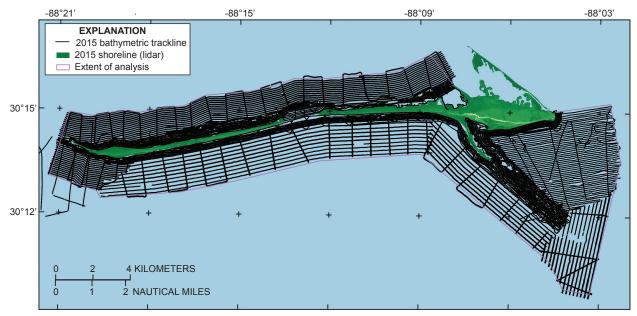


Figure 4. Trackline map showing survey extent and coverage of single beam and multibeam systems collected in July and September, 2015.

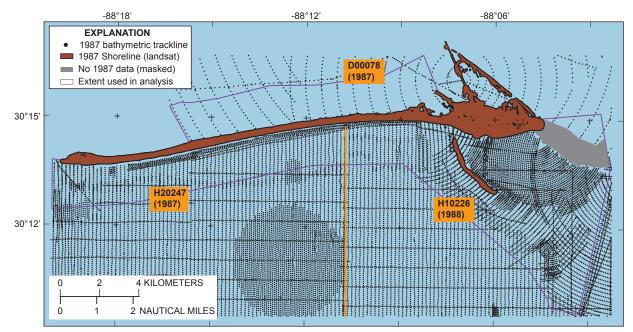


Figure 5. Trackline map showing survey extent, coverage, and survey identification from 1987–1988. National Oceanic and Atmospheric Administration hydrographic survey data (https://maps.ngdc.noaa.gov/viewers/bathymetry/).

is 0.098 m and 0.080 m for the 1987 and 2006 grids, respectively. Areas where bathymetric data were missing from the legacy datasets were masked and assigned NULL values in their respective DEMs. The DEMs were clipped to the extent of the 2015 survey, and certain areas of the legacy grids were masked because of insufficient or no data (gray background in figs. 5 and 6). Once the three DEMs were sampled to the same geographic extents and vertical datum (MLLW), the bathymetric change between each period was determined by subtracting the older period from the more recent period using the

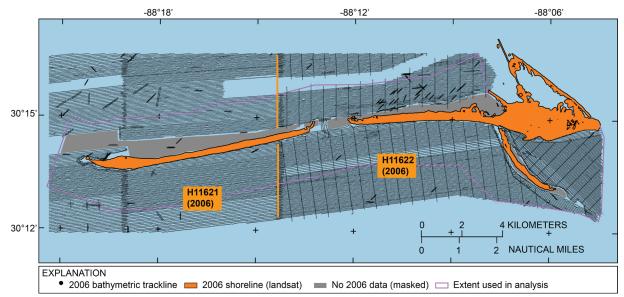


Figure 6. Trackline map showing survey extent, coverage, and survey identification from 2006. National Oceanic and Atmospheric Administration hydrographic survey data (https://maps.ngdc.noaa.gov/viewers/bathymetry/).

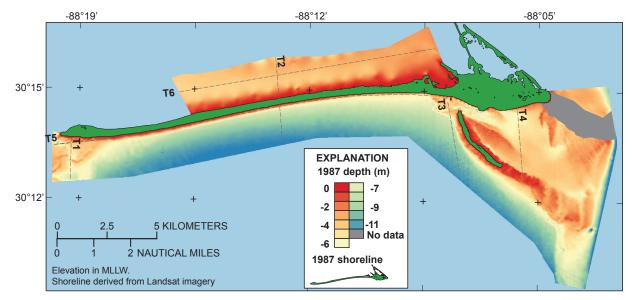


Figure 7. Digital elevation model (DEM) generated from the National Oceanic and Atmospheric Administration 1987–1988 bathymetric data. Overlain on the DEM are transect locations (T1–T6) used to represent vertical change over time.

grdmath function in GMT. This calculation provides an isopach grid of erosion (negative values) and accretion (positive values). To account for measurement uncertainty, isopach differences between -0.25 m and +0.25 m were considered within the error of analysis and set to zero (no change). The resulting time periods (2015–1987, 2006–1987, and 2015–2006) with erosion/accretion isopach maps are shown in figures 9–11. Bathymetric change between time periods can also be directly compared along two-dimensional transects (transects T1–T6 shown in figs. 3, 7, and 8) across the DEMs with stacked results in profile to show relative elevations. These profiles were restricted to the areas of common coverage across time periods and were extracted from the DEMs using the transit plug-in included with the QGIS GIS (ver. 2.18) software.

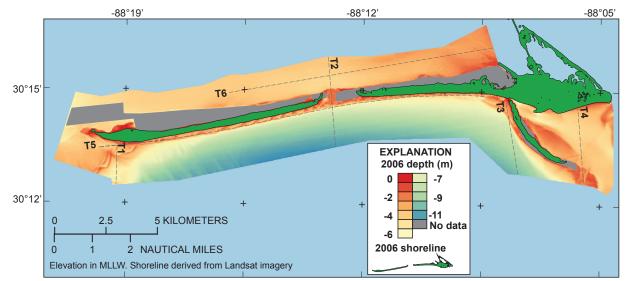


Figure 8. Digital elevation model (DEM) generated from the National Oceanic and Atmospheric Administration 2006 bathymetric data. Overlain on the DEM are transect locations (T1–T6) used to represent vertical change over time.

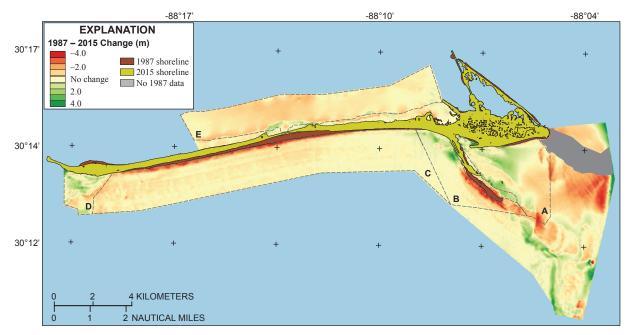


Figure 9. Map showing multidecadal elevation change determined by calculating the difference in digital elevation models (DEMs) between 1987 and 2015. The change is considered to represent accretion (positive change) and erosion (negative change) over the time period. Elevation differences within ± 0.25 meter (m) are considered no change. Overlain onto the DEM are polygons (labeled A–E) that represent morphological cells from which volume change statistics are calculated (table 2).

Area and volume change between the time periods was determined using the grdvolume function in GMT, which calculates area, volume, and volume per unit area for a provided polygon within a DEM. The polygons delineate areas of interest within the study area such as geomorphic features. For this analysis, the Mobile Bay ebb-tidal shoal (A), the Pelican Island shoreface (B), the Dauphin Island gulf shoreface (C), the Petit Bois Pass tidal shoal (D), and the Dauphin Island/Mississippi Sound (E) (figs. 9–11) were selected as important geomorphic features to compare for relative change around the

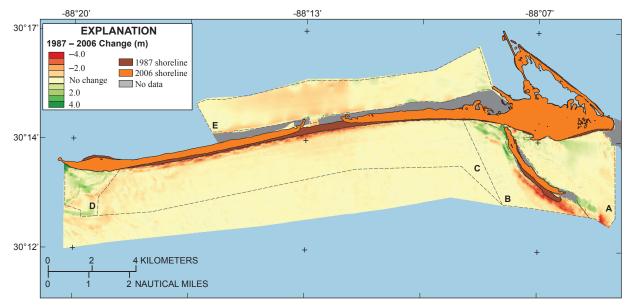


Figure 10. Map showing 19-year elevation change determined by calculating the difference in digital elevation models (DEMs) between 1987 and 2006, referred to as the stormy period. The change is considered to represent accretion (positive change) and erosion (negative change) over the time period. Elevation differences within ± 0.25 meter (m) are considered no change. Overlain onto the DEM are polygons (labeled A–E) that represent morphological cells from which volume change statistics are calculated (table 2).

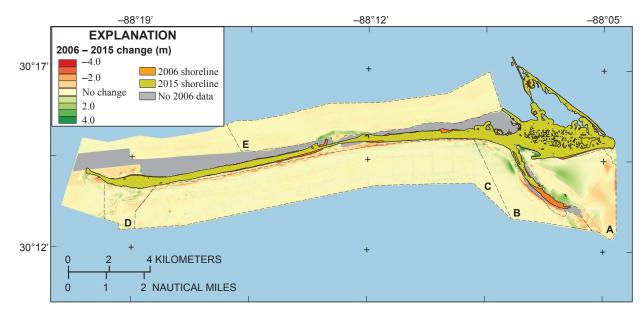


Figure 11. Map showing 9-year elevation change determined by calculating the difference in digital elevation models (DEMs) between 2006 and 2015, referred to as the non-stormy period. The change is considered to represent accretion (positive change) and erosion (negative change) over the time period. Elevation differences within ±0.25 meter (m) are considered no change. Overlain onto the DEM are polygons (labeled A–E) that represent morphological cells from which volume change statistics are calculated (table 2).

island. For effective volumetric change comparisons, only areas that contain bathymetric coverage for all three time periods were considered. The areas encompassed by the polygons are referred to as reference subsections of their respective feature.

Results and Discussion

Morphologic features seen in the three time periods and referenced in this study include the highly dynamic Mobile and Petit Bois Pass ebb-tidal deltas and Pelican Island. In contrast, the Gulf of Mexico and Mississippi Sound sides of Dauphin Island contain few morphologic features, with the gulf side seafloor sloping gently seaward and the sound side being relatively flat. Other features include the breach in the island and associated overwash deposits that are visible in the 2006 DEM (fig. 7). Storm breaching has occurred in the same general vicinity in the past (Byrnes and others, 2010), reflecting the vulnerability of narrow island width and low elevations to storm inundation.

The three time periods (1987–2015; 1987–2006; and 2006–2015) represent multi-decadal change, impact of Hurricanes Ivan/Katrina, and recovery following Hurricanes Ivan/Katrina, respectively, and will be discussed in the context of these periods and events. It should be noted that other significant storms impacted the island during the early (1987–2006) time period, such as Hurricane Danny (1997), and Hurricane Georges (1998); however, since 2006, there has been relatively few significant storm impacts to the island (table 1). Thus, the early (1987–2006) and late (2006–2015) timeframes can be considered "stormy" and "non-stormy", respectively. In the 20 years before 1987, only four tropical storms passed within 185 km (100 nm) of Dauphin Island (one of which, Hurricane Frederic, passed directly over the island as a category 4 storm). Relative to this prior two-decade period of 4 storms, the 1987–2006 timeframe (12 storms in two decades) can be considered exceptionally stormy.

The five areas of analysis (reference subsections A–E), where all three time periods contain seafloor measurements, are shown as polygons for each time period in figures 9–11. From these subsections sediment volumes were calculated and compared to assess volumetric change over time (table 2). Finally, six two-dimensional shore-perpendicular transects at various locations are compared over the three time periods to evaluate vertical change (locations shown in figs. 3, 7, and 8). The profiles will be discussed following the results of the volumetric change assessment.

Long-Term Change (1987–2015)

Over the three decades from 1987 to the present, barrier island retreat and breaching is evident in the long-term (1987–2015) comparison, as well as the occurrence of the breach in the middle of the island (fig. 9). In general, seafloor elevations around Dauphin Island have declined, with only the Mobile Bay and Petit Bois ebb-tidal delta regions producing net accretions of sediment (table 2). Mobile Bay ebb-tidal delta experienced only a slight net accretion. Sediment volumes increased 2 percent within the reference subsection (A) at a rate of $3.7x10^3$ m³/yr. This rate is relatively negligible when compared to change rates in other areas, suggesting the Mobile ebb-tidal delta cell is in equilibrium. Sediment transported westward to Pelican Island and beyond is replaced by sediment migrating from the eastern lobe of the Mobile ebb-tidal delta retains equilibrium despite large volumes of sediment being dredged from the ship channel and removed offshore. Byrnes and others (2008) estimate that between 1990 and 2006, $10.8x10^6$ m³ of sediment had been removed from the ship channel. Some of the historical offshore disposal areas are immediately offshore of the ebb-tidal delta and appear to be supplying sediment back to the western side of the Mobile ebb-tidal delta system (Byrnes and others, 2008).

The gulf-facing shoreface of Pelican Island has experienced the most change in elevation over the long-term time period as the island rapidly migrated landward and appended to Dauphin Island (fig. 9). The reference subsection (B) has lost 49 percent in sediment volume (table 2) as sediment moved out of the zone through shoreface erosion and sediment transport, both along the shoreline of Dauphin Island

Table 2. Accretion and erosion volumes, net change, and rates of change for reference subsections of morphological features/areas of submerged areas around Dauphin Island. (Areas are shown for each time period as lettered polygons in figures 9–11.)

Time period	Interval years	Feature/area	Accretion (10 ⁵ m ³)	Erosion (10 ⁵ m³)	Change (10 ³ m ³)	Rate of change (10 ³ m ³ /yr)
1987–2015	28	Mobile ETD (A)	50.10	-49.06	103	3.69
		Pelican Is. (B)	21.53	-44.19	-2,266	-80.92
		Dauphin GOM (C)	2.06	-150.53	-14,847	-530.24
		Petit Bois (D)	18.08	-10.16	791	28.26
		Dauphin MS (E)	5.32	-115.64	-11,031	-393.97
1987–2006	19	Mobile ETD (A)	20.05	-23.49	-344	-18.11
		Pelican Is. (B)	14.00	-38.73	-2,473	-130.17
		Dauphin GOM (C)	0.77	-99.31	-9,854	-518.62
		Petit Bois (D)	18.40	-6.78	1,162	61.15
		Dauphin MS (E)	4.92	-71.13	-6,621	-348.47
2006-2015	9	Mobile ETD (A)	37.20	-28.69	851	94.56
		Pelican Is. (B)	14.41	-11.25	315	35.05
		Dauphin GOM (C)	3.92	-31.32	-2,740	-304.45
		Petit Bois (D)	4.53	-7.40	-287	-31.86
		Dauphin MS (E)	8.15	-31.15	-2,300	-255.55

[m³ cubic meter; m³/yr, cubic meter per year; GOM, Gulf of Mexico; MS, Mississippi Sound; ETD, ebb-tidal delta]

and rollover into the Mobile ebb-tidal delta. As a result, it has experienced the largest loss in volume per unit area (-0.38 m) of any of the cells. The adjacent Dauphin Island cell (C) received sediment transported from Pelican Island, resulting in accretion over the long term on the east edge of the cell (fig. 9). This positive budget is offset by shoreface erosion that increases westward as the long, narrow portion of the island migrated landward from 77 m on the east end to 164 m on the west end between 1987 and 2015. At the position of the 1987 shoreline, 3–4 m of vertical elevation has been lost. The gulf-facing shoreline reference subsection (C) lost about 530x10³ m³/yr (table 2), the highest rate of any cell. Most of this loss occurred along the immediate shoreline, but erosion also occurred offshore across the western half of the island (fig. 9). Much of the sediment eroded from the gulf shoreface of Dauphin Island was transported through littoral transport westward to the island and accretion offshore (fig. 9). From 1987–2015, the volume in the Petit Bois Pass reference subsection (D) increased by 79 percent, or +28.3x10³ m³/yr, building shoreface shoals up to 5 m high. This influx of sediment has greatly expanded the Petit Bois Pass ebb-tidal delta over the past century through tidal-driven sediment accretion (Flocks and others, 2015).

In Mississippi Sound, the only appreciable gain of sediment in the reference subsection (E) occurred at the breach through storm overwash (fig. 9). This excludes deposition at the immediate shoreline through island migration because the reference subsection, in general, begins 200 m offshore (figs. 9–11; no 2006 data available at the shoreline). The rest of the area (E) uniformly lost 0.4 to 1.0 m in elevation at a rate of -394×10^3 m³/yr. There appears to be some shoreface erosion and subsequent deposition further into the sound, which will be explored further by comparing elevation profiles later in this discussion.

Stormy Period Change (1987–2006)

During the 19-year time period ending in 2006, Dauphin Island was impacted by 12 storms, 4 of which had significant impact on the island (table 1), including the breach. Although the Mobile Bay ebbtidal delta experienced net accretion over the long term, during this time period a net loss of sediment occurred. Over twice as much sediment was removed from the reference subsection (A) during this time period than was gained long-term (table 2), but at a relatively low rate ($-18x10^3 \text{ m}^3/\text{yr}$) when compared to other areas around the island. Although removal of sediment from the system during storm impact is a large driver of the loss, approximately 7.0x10⁵ m³/yr of sediment was dredged from the Mobile ship channel during this time period and placed in offshore sites (USACE, 2016), likely reducing the net sediment available to migrate westward into the study area. Accretion of sediment on the western flank of the Mobile cell occurred during rollover of Pelican Island (fig. 10), noting that coverage of this change is likely incomplete given that some of this area was not captured during the 2006 survey.

Between 1987 to 2006, Pelican Island has rotated counterclockwise so that the southern tip has migrated landward approximately 350 m, and the northern tip has moved seaward about 60 m. The island had also accreted approximately 650 m towards Dauphin Island (fig. 10) at the expense of the southern end. This movement has resulted in up to 3.8 m vertical loss in the southern portion of the Pelican Island reference subsection (B) and up to 3 m vertical gain adjacent to Dauphin Island. Net change in the Pelican Island reference subsection over this time period has been a loss of 2.5x10⁶ m³, or $-130 \times 10^3 \text{ m}^3/\text{yr}$ (table 2), as sediment has been removed from the system both through littoral transport and storm impact. Westward, along Dauphin Island, the most dramatic change was the formation of the breach, while the rest of the island experienced 1-3.25-m elevation loss at the shoreface through erosion and landward migration (50 m east end to 95 m west end). The rate of loss (5.2x10⁵ m³/yr) within the reference subsection (C) over this time period is the highest of any time period in any subsection, and is a result of littoral transport westward and wave erosion during storms. In contrast, the Petit Bois Pass ebb-tidal delta reference subsection (D) experienced a sizable gain of 6.1×10^4 m³/yr over this time period. The amount of accretion and rate of gain, although by far the largest of any cell during any time period (table 2), is only 12 percent of the rate of loss along the adjacent gulf-facing Dauphin shoreline, suggesting episodic storm processes dominated nonstorm littoral transport along the island shoreface.

The Mississippi Sound side of Dauphin Island maintained a very high net loss rate that is very consistent with the long-term loss rate (table 2). Vertical erosion is fairly uniform throughout the subsection, the highest elevation loss (\sim 1 m) occurs 1+ km from the breach (fig. 10). Since the 2006 bathymetric dataset does not capture the shoreface on the sound side, the elevation gain of only a portion of overwash deposit at the breach can be measured and ranges from +0.3 to +1.0 in elevation between 1987 and 2006.

Non-stormy Period Change (2006–2015)

Since 2006, only two tropical storms passed within 184 km of Dauphin Island (table 1), thus normal (for example, non-storm) littoral processes are expected to be the dominant mode of sediment transport over the past decade. The Mobile ebb-tidal delta reference subsection (A) experienced a large amount of accretion during this period and the highest rate of gain of any subsection over any time period. Deposition more than doubled what had been lost over the previous period (table 2). Most of the elevation gain occurred within the northwest part of the subsection and is likely a result of littoral sediment trapping due to the welding of Pelican Island to Dauphin Island (fig. 11). Some rollover of the southern end of Pelican Island, although reduced from the previous (stormy) time period, may also contribute to the sediment surplus.

The Pelican island reference subsection (B), which had significant erosion in the stormy time period, reversed loss and experienced almost an equal amount of accretion at a rate of $+35.1 \times 10^3$ m³/yr (table 2). The submergence of the southern portion of Pelican Island (fig. 11) likely contributed to sediment deposition within the reference subsection, and storm-induced rollover into the Mobile ebb-tidal delta cell has been reduced. West of where Pelican and Dauphin Islands merged, the remainder of Dauphin Island continued to thin through shoreface erosion, up to 100 m on the western end. Offshore sandbars migrated landward and welded to the shoreface, reducing seafloor elevations by up to 2 m approximately 200 m offshore, and increasing elevations by 1 m at the shoreline. The storm breach at the center of the island was closed by rock during this time period (2011), and there is approximately 2 m of accretion seaward of the structure. As throughout all time periods, the gulf side of Dauphin Island continued to lose sediment, although at almost half the rate of the previous time period (table 2), reflecting reduced storm-related erosion processes acting on the system. Within the Petit Bois Pass ebb-tidal delta, linear areas of erosion adjacent to areas of deposition are consistent with westward shoal migration (fig. 11). The shoals are 100-500 m in length and up to 2 m in height (fig. 3). The terminal spit has accreted 680 m westward from its 2006 position and littoral transport has contributed up to 3.5 m in elevation along the shoreface at the westernmost tip. Although the Petit Bois Pass reference subsection (D) had accreted substantially in the previous time period, during this period the net change was negative, accumulating 25 percent less sediment than was deposited during the prior decade. This suggests that littoral transport of sediment from Dauphin Island to Petit Bois Pass during non-stormy conditions is substantially less than what is liberated and transported during stormy conditions, and not enough to maintain equilibrium at this location without episodic deposition.

Like the gulf side of Dauphin Island, the sound side experienced erosion in all periods of analysis, although substantially less loss occurred during the 2006–2015 period than during the prior period. Rate of erosion in the reference subsection (E), although negative, decreased 65 percent from the stormy period (table 2). Elevation loss across the sound side was generally a uniform 0.2–0.3 m. Prior to the breach being closed in 2011, floodtide deposits through the former inlet increased elevations by 1 m above overwash elevations approximately 300–400 m north of the structure. This is the only area in this cell that shows net accretion (fig. 11). Much of the shoreface on the sound side was not surveyed in 2006, but elevation change analysis from an area at the western tip of the island that was covered suggests erosion occurred all the way to the shoreline.

Elevation Profiles

Six transects (figs. 3, 7, and 8)—four shore perpendicular and two shore parallel—were chosen to compare elevation change across the 1987, 2006, and 2015 time periods. Transect T1 (fig. 12) is shore perpendicular and extends across the eastern margin of the Petit Bois Pass ebb-tidal delta. Sand ridges are visible as peaks in the elevation profiles, and comparison of the profiles over time show the sand ridges growing and migrating landward (fig. 12, location A). Shoreface accretion between 1987 and 2006 is reflected by the seaward migration of the profile, but this elevation gain was lost by 2015 (fig. 12, location B). Offshore, a divergence in the profiles over time represents the growth and movement of the ebb-tidal delta (fig. 12, location C).

Transect T2 (fig. 13) extends from Mississippi Sound south across the breach in the island and into the Gulf of Mexico (see figs. 3, 7, and 8 for location). Persistent erosion is seen in the loss of elevation across both the sound and the gulf (fig. 13, locations A and B), along with shoreface retreat (fig. 13, location B). The offshore and shoreface appear to have stabilized between 2006 and 2015. The island breaching between 1987 and 2006 is clearly evident, as well as the rock structure addition in 2011 (fig. 13, location C).

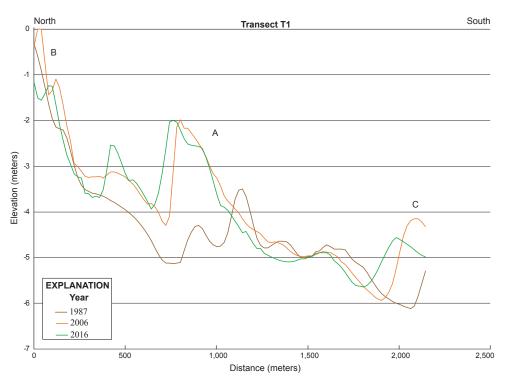


Figure 12. Elevation profiles across the Petit Bois ebb-tidal delta for the three time periods (transect T1, see figs. 3, 7, and 8 for locations). A, B, and C refer to locations discussed in the text. The vertical exaggeration is 250x.

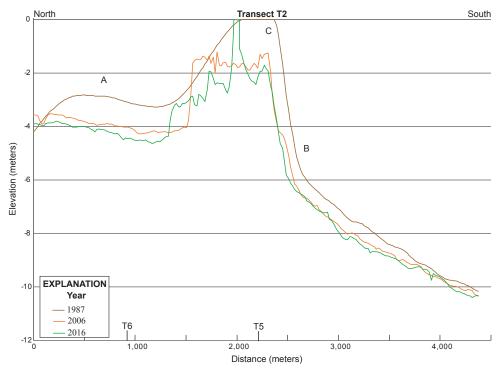


Figure 13. Elevation profiles from Mississippi Sound, across the island breach and into the Gulf of Mexico, for the three time periods (transect T2, see figs. 3, 7, and 8 for locations). Position of crossing transects (T5 and T6) are shown. A, B, and C refer to locations discussed in the text. The vertical exaggeration is 260x.

Transect T3 (fig. 14) extends seaward from the Pelican/Dauphin accretionary wedge offshore (see figs. 3, 7, and 8 for location). Sediment accretion as Pelican Island welded onto Dauphin Island is shown by up to a 3-m increase in elevation since 1987 (fig. 14, location A) and over 3 m accretion up to 1 km offshore. Beyond 1 km, the seafloor has been stable throughout the time periods.

Transect T4 (fig. 15) is shore perpendicular across the Mobile Bay ebb-tidal delta (see figs. 3, 7, and 8 for location) and reflects the dynamic morphology of this deposit. At the Dauphin Island shoreline, shoreface retreat is evident by the landward migrating profiles and loss in elevation, between 1987 and 2015 (fig. 15, location A). Immediately offshore, up to 1 m of sediment has infilled a former tidal channel present in the 1987 profile (fig. 15, location B). Erosion along the transect has occurred from 1 km to 2.7 km, with approximately 0.5-m elevation loss occurring throughout (fig. 15, location C). At the seaward extent of the transect, along the edge of the ebb-tidal delta, landward shoal migration occurred between 1987 and 2006 as Pelican Island moved northward. Since 2006, the shoal has migrated landward of the transect and has been replaced by a small tidal inlet (fig. 15, location D).

Transect T5 (fig. 16) runs shore parallel along the gulf shoreline of Dauphin Island, from the Petit Bois Pass to Pelican Island (see figs. 3, 7, and 8 for locations). High-frequency nearshore sand waves are evident in all three time periods, some over 1 m in height (fig. 16, location A). A significant amount of erosion due to landward migration of the island is evident across four-fifths of the profile, as much as 4 m (fig. 16, location A). At the Petit Bois ebb-tidal delta, sand ridge development since 1987 has occurred, along with the infilling of a tidal channel (fig. 16, location B).

Transect T6 (fig. 17) is a shore-parallel profile across Mississippi Sound (see figs. 3, 7, and 8 for location). In general, the profile records the consistent loss in elevation across the sound since 1987—up to 1.5 m of loss—and the flanks appear to be more stable than the central portion of the profile (fig. 17). No sense of sediment-transport direction can be discerned from the profiles due to lack of data in the earlier datasets at the western end of Dauphin Island.

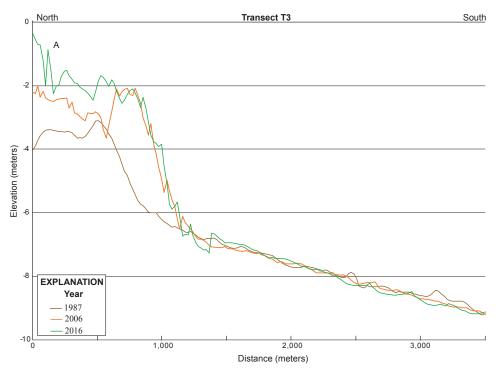


Figure 14. Elevation profiles along the gulf side of Pelican Island for the three time periods (transect T3, see figs. 3, 7, and 8 for locations). A refers to a location discussed in the text. The vertical exaggeration is 240x.

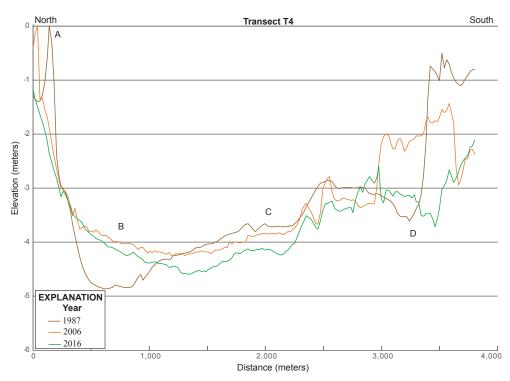


Figure 15. Elevation profiles across the Mobile ebb-tidal delta for the three time periods (transect T4, see figs. 3, 7, and 8 for locations). A, B, C, and D refer to locations discussed in the text. The vertical exaggeration is 460x.

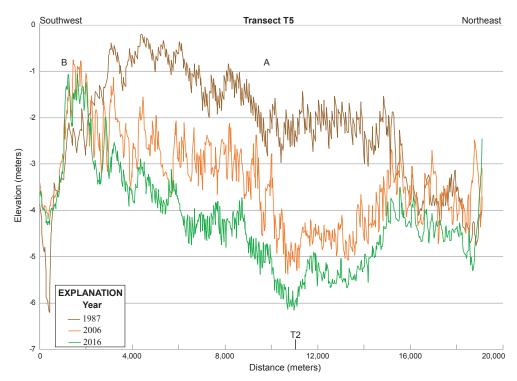


Figure 16. Elevation profiles across the gulf side of Dauphin Island for the three time periods (transect T5, see figs. 3, 7, and 8 for locations). Position of a crossing transect (T2) is shown. A and B refer to locations discussed in the text. The vertical exaggeration is 1980x.

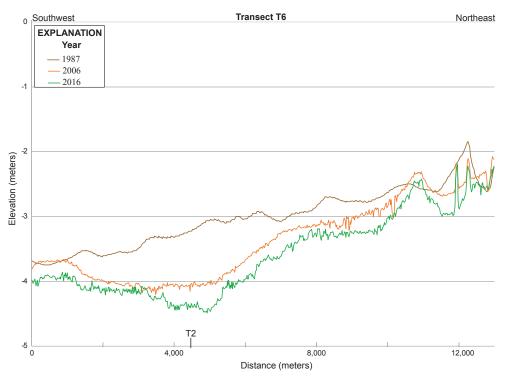


Figure 17. Elevation profiles across the sound side of Dauphin Island for the three time periods (transect T6, see figs. 3, 7, and 8 for locations). The vertical exaggeration is 1830x.

Temporal and Spatial Sediment Flux

Comparing changes in erosion rates over time (fig. 18), over the long term (1987–2015), the ebbtidal deltas were the only features to either remain in equilibrium (Mobile ebb-tidal delta, A) or accrete (Petit Bois Pass, D). The Gulf of Mexico (C) and Mississippi Sound (E) seafloor lost sediment at relatively high rates, and Pelican Island lost sediment at a relatively low rate. Since 1987, Pelican Island has been migrating landward and rolling over through overwash into the Mobile ebb-tidal delta, producing net loss within the reference subsection (B).

During the stormy period (1987–2006), only the Petit Bois Pass reference subsection (D) experienced a positive sedimentation rate, while all other areas experienced erosion. Loss at the Mobile ebb-tidal delta (A) was relatively small and could be in part due to dredging of the Mobile Outer Bar ship channel and removal of sediment offshore. During the non-stormy period (2006–2015), the gulf (C) and sound (E) sides of Dauphin Island continued to experience overall erosion of the shoreface, at rates 41 percent and 27 percent less, respectively, than during the stormy period (fig. 18). The ebb-tidal deltas flipped their response relative to the earlier period, with the Mobile ebb-tidal delta (A) gaining sediment at a rate higher than its prior loss, and Petit Bois Pass (D) losing sediment at a relatively small rate. The Pelican Island reference subsection (B) response flipped as well, gaining sediment during the non-stormy period. In addition, Pelican Island migrated toward and welded to Dauphin Island. The southern end submerged below water level, releasing sediment from the system or cause the shoal to rollover, could explain the net gain to the Pelican Island cell. By welding onto Dauphin Island, Pelican Island trapped sediment within the Mobile ebb-tidal delta cell, resulting in accretion in the western part of the system during this time period (fig. 11).

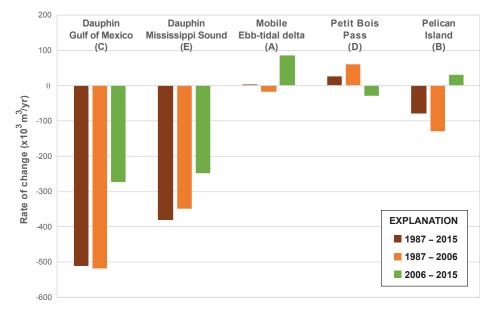


Figure 18. Rates of change (erosion/accretion over time) for the two time periods and long-term (1987–2015) for each reference subsection. See figures 9–11 for locations.

Conclusion

The seafloor around Dauphin Island is spatially and temporally dynamic, with specific areas changing elevation at different rates in response to morphology and oceanographic conditions. In general, the submerged environment can be divided into the following five geomorphologic features: two ebb-tidal deltas (Mobile Pass and Petit Bois Pass) at the inlets on either end of Dauphin Island, Pelican Island/shoal on the western flank of the Mobile ebb-tidal delta, the shoreface of Dauphin Island facing the Gulf of Mexico, and the shoreface of Dauphin Island facing Mississippi Sound. Bathymetric change within these areas was analyzed over two time periods (1987–2006 and 2006–2015) and compared to the long term (1987–2015). The first time interval (1987–2006) corresponds to a period of frequent and intense storm impacts with 12 tropical storms passing near the island, 4 of them severe (table 1). During this time, episodic erosion and rapid transport of the seafloor sediments is expected to be the dominant process affecting elevation. In contrast, only two tropical storms passed by Dauphin Island during the second time interval (2006–2015). During this period, normal east-to-west littoral sediment transport, driven by a prevailing southeast wave climate, is the main process of seafloor change.

The geomorphologic features identified in the study do respond differently over the stormy and non-stormy time periods, which can be quantified through variations in erosion and accretion rates (fig. 18). By far the most erosion, both in volume and persistence, occurs along the central and western shoreface of Dauphin Island, both on the gulf and sound sides, with reduced net erosion occurring during the nonstorm period. The ebb-tidal deltas at either end appear to be in equilibrium relative to the rest of the island. The Mobile Pass ebb-tidal delta (A) appears to be "recovering" from Hurricanes Ivan/ Katrina through a net accumulation of sediment since 2006. Some of this accretion can be attributed to the welding of Pelican Island onto Dauphin Island and trapping sediment within the ebb-tidal delta that would otherwise migrate along the shoreface of Dauphin Island though a prevailing westward sediment transport. This prevailing transport supplies sediment to the Petit Bois Pass ebb-tidal delta from the Dauphin Island shoreface. Based on rates and volumes of erosion and accretion at the island shoreface and at Petit Bois Pass, westward sediment transport appears to be more significant during storm activity than during normal littoral transport. Petit Bois Pass experienced net accretion during the stormy period and net erosion during the non-stormy period, correlating with higher erosion rates at the Dauphin Island shoreface during the stormy versus non-stormy period (fig. 18). This suggests that sediment delivery during normal littoral transport, while occurring, does not maintain (or barely maintains) equilibrium at the Petit Bois Pass. The sound side of Dauphin Island mimics the trend of the gulf side and appears to also be supplying sediment to the Petit Bois Pass ebb-tidal delta through similar processes.

References Cited

- Byrnes, M.R., Griffee, S.F., and Osler, M., 2008, Evaluation of channel dredging on shoreline response at and adjacent to Mobile Pass, Alabama: Report prepared for the U.S. Army Corps of Engineers, Mobile District, 199 p., accessed March 17, 2017, at http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/072108-A-AQ963-014.pdf.
- Byrnes, M.R., Griffee, S.F., and Osler, M., 2010, Channel dredging and geomorphic response at and adjacent to Mobile Pass, Alabama: Report prepared for the U.S. Army Corps of Engineers, Mobile District, ERDC/CHL TR-10-8, 311 p.
- DeWitt, N.T., Stalk, C.A., Flocks, J.G., Bernier, J.C., Kelso, K.W., Fredericks, J.J., and Tuten, T., 2017, Single-beam bathymetry data collected in 2015 nearshore Dauphin Island, Alabama: U.S. Geological Survey data release, accessed May 30, 2017, at https://doi.org/10.5066/F7BZ648W.
- Flocks, J.G., Ferina, N.F., and Kindinger, J., 2011, Recent geologic framework and geomorphology of the Mississippi-Alabama shelf, northern Gulf of Mexico, *in* Buster, N., Holmes, C., eds., Gulf of Mexico; Origins, waters and biota, 3. Geology; Texas A&M University Press, College Station, Tex., p. 475.
- Flocks, J.G., Kindinger, J.L., and Kelso, K.W., 2015, Geologic control on the evolution of the inner shelf morphology offshore of the Mississippi barrier islands, northern Gulf of Mexico, USA: Continental Shelf Research, v. 101, p. 59–70.
- Guy, K.K., 2015, Barrier island shorelines extracted from Landsat imagery: U.S. Geological Survey Open-File Report 2015–1179, 3 p., accessed March 17, 2017, at https://doi.org/10.3133/ofr20151179.
- Otvos, E.G., and Giardino, M.P., 2004, Interlinked barrier chain and delta lobe development, northern Gulf of Mexico: Sedimentary Geology, v. 169, p. 47–73.
- Parker, S.J., Davies, D.J., and Smith, W.E., 1997, Geological, economic, and environmental characterization of selected near-term leasable offshore sand deposits and competing onshore sources for beach nourishment: Geological Survey of Alabama Circular 190, 173 p.
- U.S. Army Corps of Engineers (USACE), 2016, Dauphin Island Restoration Organization Memorandum for Record, accessed March 17, 2017, at http://www.dauphinislandrestoration.org/gvt/corps/2016-08-23-Corps-mtg-memo-final.pdf.

From: To: Cc:	(b)(6)
Subject: Date:	RE: AL HB 422 - Dredge Material Placement Monday, February 19, 2018 11:06:00 AM

(b)(6) I am including (b)(6) who can help with the previous studies paragraph and what they mean.

One thing that I th	nink we shou	ald note is that		(b)(5)	
		(b)(5)			In
speaking with	(b)(6)	it is important tha		(b)(5)	
			(b)(5)		

As for the new work material, all existing borings that we have on the bar, which are extensive, indicate that (b)(5)



Original Message	
From: (b)(6)	
Sent: Monday, February 19, 2018 8:34 AM	1
То:	(b)(6)
	(b)(6)
Cc:	(b)(6)
	(b)(6)

Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Material Placement

Good morning all. A couple of changes after weekend reflection. Please review this draft. Judy

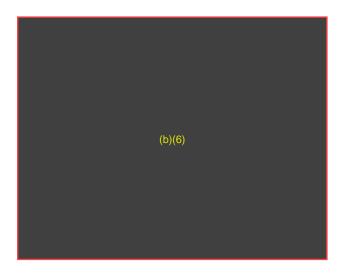


From (b)(6) Sent: Friday, February 16, 2018 6:17 PM	
То	(b)(6)
	(b)(6)
Cc	(b)(6)
	(b)(6)

Subject: AL HB 422 - Dredge Material Placement Importance: High

All: per calls and emails earlier today, please see attached a revised fact sheet on the subject legislation. I really							
need (b)(5) I welcome any comments or compelling facts. I noted							
some of	(b)(6) possible consequences – but on second r	ead of the measure, it appears (b)(5)					
	(b)	(5)					

(b)(6) The committee hearing is Weds. I would like to finalize this fact sheet by Tuesday, noon, so our lobbyists can do their work. I understand Monday is a federal holiday. If anyone has questions, please let me know. Much appreciate. (b)(6)



From: To:	(b)(6)
Subject:	RE: Mobile Harbor GRR Town Hall - Revised SAV slide
Date:	Monday, February 19, 2018 2:53:00 PM
Attachments:	MCC Facility Layout.pdf
	Parking Lot Location.JPG Room Layout.pdf

Thanks (b)(6) Attached is the parking and facility layout of the convention center. We are revising the room layout slightly. We are in room 201 a,b, and c. The town hall is scheduled to be from 6-8pm. We'll probably get there around 4:30 but will confirm time after tomorrow's meeting.



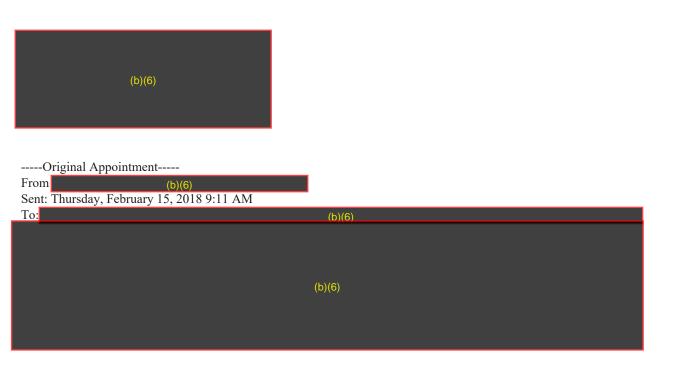
-----Original Message-----

From: (b)(6) Sent: Monday, February 19, 2018 1:53 PM To: (b)(6) Subject: RE: Mobile Harbor GRR Town Hall - Revised SAV slide

(b)(6)

See attached revised SAV slide. It contains some corrected info, but does NOT change the message or presentation from you heard last Friday during the rehearsal. Also, do you have an agenda for the public meeting (times, specific meeting location room)?

Appreciated.

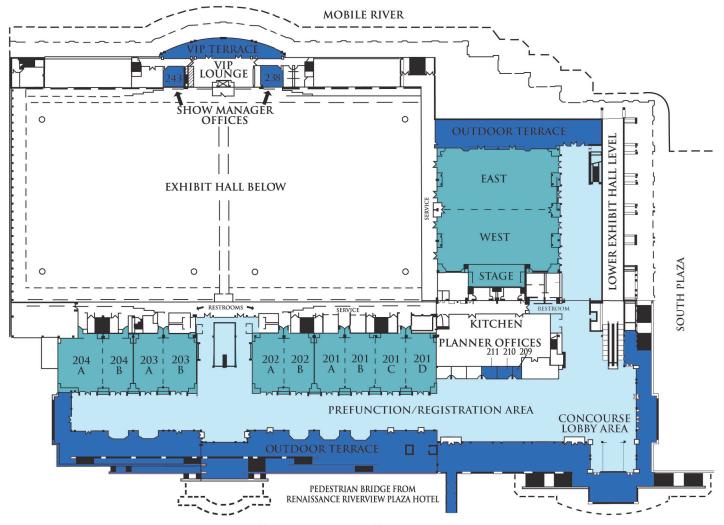


(b)(6)

Subject: Mobile Harbor GRR Town Hall Meeting Rehearsal When: Tuesday, February 20, 2018 1:00 PM-2:00 PM (UTC-06:00) Central Time (US & Canada). Where: Main PM Conference Room

All: Please plan on attending a rehearsal on Tuesday, 20 February at 1300hrs in the Main PM Conference Room (across from the restrooms) for the Mobile Harbor GRR Town Hall meeting to be held February 22.





<u>concourse level</u>

ROOM	RO	OM DIMENSION	S			EXHIBITS		
Ballroom	Square Feet	Size in Feet	Ceiling Height	Banquet 60" Rounds	Theatre	Classroom 18" Tables	Reception	10' x 10' Booths
East	7,000	105 x 60	22'	450	685	462	737	40
West	7,000	105 x 60	22'	450	735	462	737	40
Combined	*15,508	105 x 120	22'	1000	1,600	924	1,474	80
Meeting Roo	ms							
201 A	1,700	54 x 30	17'	90	172	102	178	
201 B	1,700	54 x 30	17'	90	172	102	178	
201 C	1,700	54 x 30	17'	90	172	102	178	
201 D	1,700	54 x 30	17'	90	172	102	178	
Combined	6,834	54 x 120	17'	360	830	519	712	38
202 A	1,800	54 x 32	17'	90	172	102	189	
202 B	1,700	54 x 30	17'	90	172	102	178	
Combined	3,536	54 x 62	17'	200	397	231	367	20
203 A	1,700	54 x 30	17'	90	172	102	178	
203 B	1,800	54 x 32	17'	90	172	102	189	
Combined	3,536	54 x 62	17'	200	397	231	367	20
204 A	2,500	54 x 43	17'	200	288	168	262	
204 B	1,700	54 x 30	17'	90	172	102	178	
Combined	4,252	54 x 73	17'	300	484	309	440	24
		on & Storage Of	fices					
209	108	9 x 12	9'	N/A	N/A	N/A	N/A	N/A
210,211,212	180	15 x 12	9'	N/A	N/A	N/A	N/A	N/A
Show Manage								
243	440	20 x 22	9'	N/A	N/A	N/A	N/A	N/A
238	440	20 x 22	9'	N/A	N/A	N/A	N/A	N/A
VIP Lounge	1,500	24 x 58		ility via VIP elevato	5.7 · 12			
Kitchen	5,500	50 x 110		oility to all areas via		ors.		
*Additional	square footage i	ncludes a 45' x1	5' Stage and ty	wo (2) 12' x 22' Dr	essing Rooms			
Prefunction,	Registration Are	ea = 39,000 sq. ft						
Outdoor/River Terraces = $25,000$ sg. ft.				All areas are A	DA accessible.			

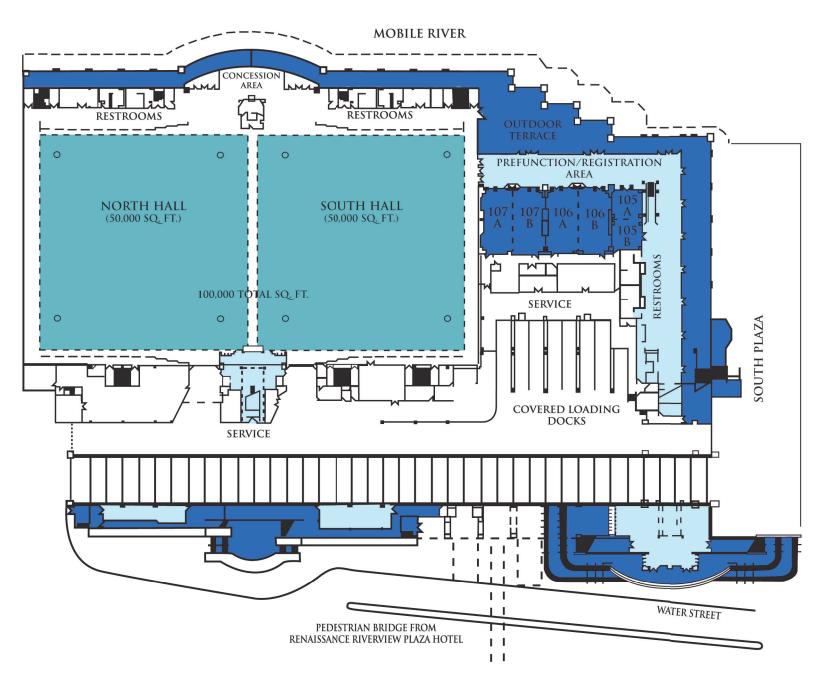
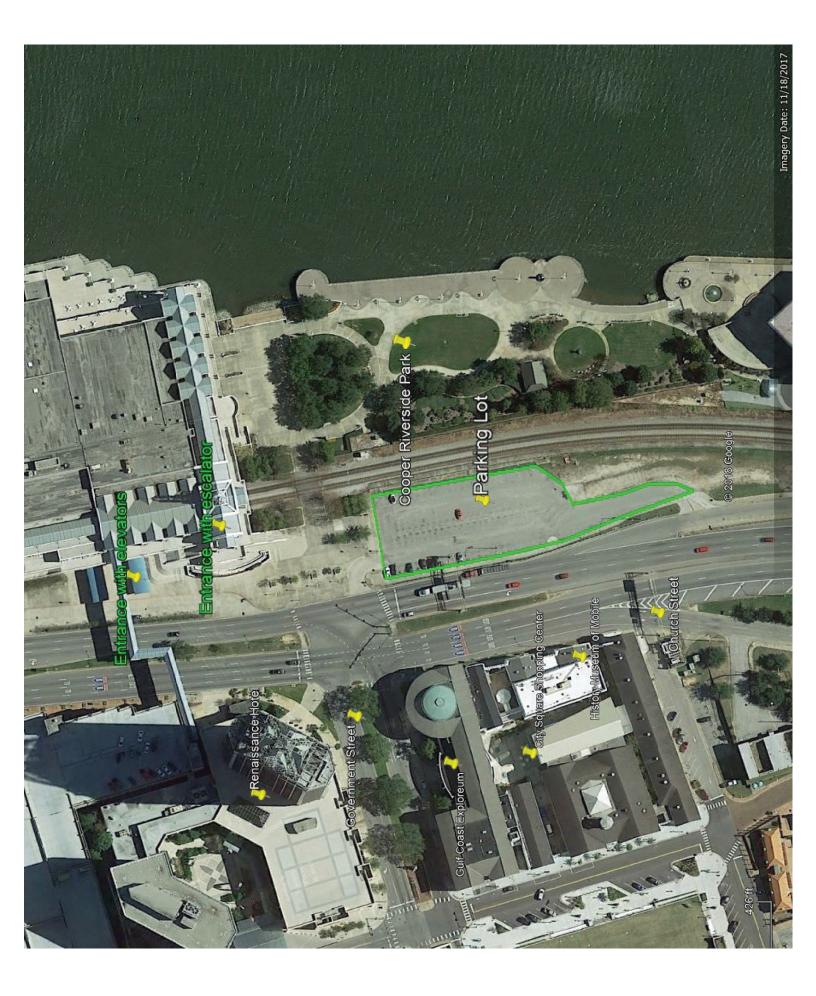
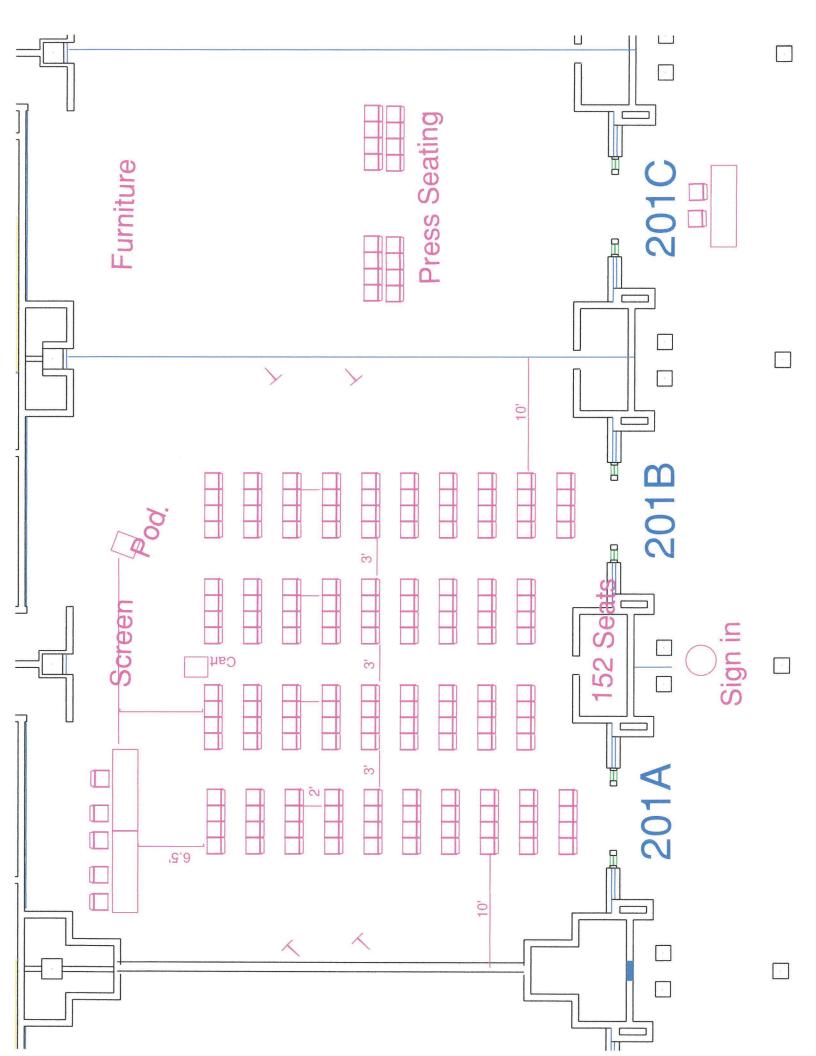


exhibit hall level

ROOM	RO		S		M CAPACITIES EXHIBITS			
Exhibit Hall	Square Feet	Size in Feet	Ceiling Height	Banquet 60" Rounds	Theatre	Classroom 18" Tables	Reception	10' x 10' Booths
North Hall	50,000	234 x 208	30'	4,140	5,555	4,448	5,286	267
South Hall	50,000	234 x 208	30'	4,140	5,555	4,448	5,286	267
Combined	100,000	234 x 216	30'	8,280	11,110	8,896	10,572	534
Meeting Room	15							
105 Ă	700	27 x 24	12'	40	77	45	72	
105 B	700	27 x 24	12'	40	77	45	72	
Combined	1,400	27 × 48	12*	90	154	90	144	N/A
106 A	1,600	58 x 27	12'	100	177	100	167	
106 B	1,600	58 x 27	12'	100	177	100	167	
Combined	3,200	58 x 55	12'	230	354	210	334	18
107 A	1,500	58 x 26	12'	100	166	100	156	
107 B	1,600	58 x 27	12'	100	177	100	167	
Combined	3,100	5 8 x 53	12'	230	343	210	323	17
Prefunction/	Prefunction/Registration Area = 13,000 sq. ft.					are ADA access	ible	
Outdoor/Rive	er Terraces = 20),000 sq. ft.			All dreds	are ADA access	INIC.	





From: To:	(b)(6)
Subject:	RE: AL HB 422 - Dredge Material Placement
Date:	Monday, February 19, 2018 3:20:00 PM

Yeah, I just found it. Don't know what the difference is but this IS the Morton Study (b)(6) mentioned it in a rebuttal to our responses to their scoping comments way back when...will get with (b)(6) tomorrow.

(b)(6)	
Original Message From: (b)(6) Sent: Monday, February 19, 2018 3:06 PM	
То:	(b)(6)
	(b)(6)
Cc:	(b)(6)
	(b)(6)

Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Material Placement

(b)(6) This is the USGS study that is often cited by (b)(6)

Blockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf This is also the study cited in the white paper prepared for the AL Leg a couple of years ago, which had Corps review. In the Exec. Summary and on pages 21-22, the report would leave a reader to believe that the channel is a "sediment" sink that captures "sands that normally would have bypassed about the ebb tidal delta and fed the MS-AL barrier islands downdrift." The paragraph further states there is plenty of sand downdrift of the channel available for reworking and nourishing DI.

The study goes on to state that downdrift sands were impacted by dredging of outer bar entrances....see page 24. Pages 25-27 reinforce the three cited reasons for land loss at DI. "The principal causes of barrier island land loss in the northern Gulf of Mexico are frequent intense storms, a relative rise in sea level, and a deficit in the sediment budget." The latter is tied to the statements regarding dredging inlets impacts.

In that we referenced the 2	007 study	in the last white	paper, and in that	(b)(6)	and	(b)(6)	(b)(5)
			(b)(5)				
(b)(5)	(b)(6)						



From:	(b)(6)	
Sent: Monday, Fel	bruary 19, 2018 11:07 AM	
To:	(b)(6)	
	(b)(6)	
Cc:	(b)(6)	
	(b)(6)	
Subject DE. ALL	JD 122 Dradge Material Diagonant	

Subject: RE: AL HB 422 - Dredge Material Placement

(b)(6) I am including (b)(6) who can help with the previous studies paragraph and what they mean.

One thing that I think we should note is that	(b)	(5)
	(b)(5)	
(b)(5)	For example, if	(b)(5)
	(b)(5)	

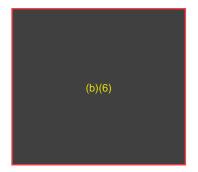
As for the new work material, all existing borings that we have on the bar, which are extensive, indica (b)(5)	te (b)(5)
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(b)(6) Subject: [Non-DoD Source] RE: AL HB 422 - Dredge	Material Placement
Good morning all. A couple of changes after weekend	
(b)(6)	
From: (b)(6) Sent: Friday, February 16, 2018 6:17 PM To: (b)(6)	
	(b)(6)
Cc: (b)(6)	(b)(6)

Subject: AL HB 422 - Dredge Material Placement Importance: High

All: per cal	ls and ei	mails earlier today, please see attached a revised fact sheet on the subject legislation	(b)(5)
		(b)(5)	
(b)(5	(b)(6)		



From: To:	(b)(6)
Subject:	Mobile Harbor DMMP Discussion Minutes
Date:	Tuesday, February 20, 2018 11:14:00 AM

All,

Following are the minutes from today's DMMP Discussion:

 A preliminary assessment will be included within the Mobile Harbor GRR to document the continued availability of dredge material disposal capacity (ER 1105-2-100, App E Missions and Evaluation Procedures).
 It is anticipated that the preliminary assessment will document that there is sufficient dredged material disposal capacity for the project, including, 20 years capacity of placement of maintenance material within SIBUA.

3.) In order to ensure 20 year capacity within SIBUA, the methodology for placement within SIBUA will change.4.) However, the study will propose use of an expanded SIBUA that will run along the ebb-tidal shoal closer to

Dauphin Island.

6.) The expanded site for placement of bar maintenance material will be based on data collection and modeling resulting from the Mobile Harbor GRR and Barrier Island Assessment.

7.) Operations Division is currently pursuing permits and other requirements to receive approval of the expanded site.

8.) The expanded SIBUA will allow continued placement of material using current methodology.

9.) Placement within current SIBUA (including SIBUA South) or the planned expanded site may vary depending on the movement of material within those sites.

Please let me know if you have any comments prior to forwarding to Curtis.



Original Appointment	
From: (b)(6)	
Sent: Monday, February 19, 2018 3:18 PM	
To:	(b)(6)
	(b)(6)

Subject: Mobile Harbor DMMP Discussion

When: Tuesday, February 20, 2018 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada). Where: Small 3rd floor PM Conference Room (the closet)

All: Per Friday Meeting, need to determine if DMMP is required for the Mobile Harbor GRR Study, and if not, why not.





From: To: Cc:	(b)(6)
Subject: Date:	RE: AL HB 422 - Dredge Material Placement Tuesday, February 20, 2018 11:23:00 AM
(<mark>b)(6)</mark> l'm fine wi	th it. Only comment is the statement in the 4th paragraph that states "The 1978 study's assumptions, data and conclusions have since been disproven." I would (b)(6)
	(b)(6)
Original Mes	(b)(6)
To	(b)(6) (b)(6)
Cc: Subject: [Non-Do Thank (b)(6)	(b)(6) oD Source] RE: AL HB 422 - Dredge Material Placement
	(b)(6)
From: Sent: Tuesday, Fo	(b)(6)
Cc:	(b)(6) HB 422 - Dredge Material Placement
(b)(6) I have reviewed t	this and the earlier version this morning and had a couple of discussions with b (6) ^{this} morning. I am very comfortable with the white paper as written.
	(b)(6)
Original Mes	(b)(6)
To:	(b)(6)
	(b)(6)
Cc: Subject: [Non-Do	(b)(6) oD Source] RE: AL HB 422 - Dredge Material Placement
could not accurat CHANGE TO TI	Attached is the white paper in its final state. Thanks to all who contributed to the information. I did omit one suggestion. (b)(6) (b)(5) (b)

THANKS SO MUCH !!

	(b)(6)	
From	(b)(6)	

Sent: Tuesday, February 20, 2018 7:37 AM		
То	(b)(6)	
	(b)(6)	
Cc:	(b)(6)	-
	(b)(6)	
CIT OF ALUDION DI MARCHINI		

Subject: RE: AL HB 422 - Dredge Material Placement

(b)(6)

There is a recent (2017) USGS report that says the system is pretty much storm driven and supports the conclusions of the 2010 Byrnes report. I've attached a copy.

(b)(6)

Original Message	
From (b)(6)	
Sent: Monday, February 19, 2018 3:06 PM	
To(h)(6)	
(b)(6)	
(b)(6)	•
Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Material Placement	

(b)(6) his is the USGS study that is often cited by (b)(6) BlockedBlocke

The study goes on to state that downdrift sands were impacted by dredging of outer bar entrances...see page 24. Pages 25-27 reinforce the three cited reasons for land loss at DI. "The principal causes of barrier island land loss in the northern Gulf of Mexico are frequent intense storms, a relative rise in sea level, and a deficit in the sediment budget." The latter is tied to the statements regarding dredging inlets impacts.

In that we referenced the 2007 study in the last white paper, and in that	(b)(C)	(b)(5)
in that we referenced the 2007 study in the last white paper, and in that	(0)(0)	(0)(3)
		(b)(5)

(b)(6)	
From Sent: Monday, February 19, 2018 11:07 AM To: (b)(6) Cc: (b)(6) Subject: RE: AL HB 422 - Dredge Material Placement	
(b)(6) I am including (b)(6) ho can help with the previous studies paragraph and what they mean. One thing that I think we should note is that (b)(5) In speaking with (b)(6) it is important that (b)(5) As for the new work material, all existing borings that we have on the bar, which are extensive, indicate that	(b)(5) (b)(5) (b)(5)

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		(b)(6)	
		(0)(0)	

----Original Message---

From: (b)(6)

Sent: Monday, February 19, 2018 8:34 AM		
To:	(b)(6)	
	(b)(6)	
1		
Ce	(b)(6)	
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	(b)(6)	
Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Mater	ial Placement	

Good morning all. A couple of changes after weekend reflection. Please review this draft (b)(6)

(b)(6)	

From (b)(6) Sent: Friday, February 16, 2018 6:17 PM To:	(b)(6)	
	(b)(6)	
<u>с</u>	(b)(6)	
	(b)(6)	
Subject: AL HB 422 - Dredge Material Placement		

Subject: AL	HB 422 -	Dredge	Material	Placen
Importance:	High			

All: per calls and emails earlier today, please see attached a revised fact sheet on the subject legislation. I really need (1)	h)(5)
(b)(6)	
(b)(6)	The committee hearing is Weds. I would
like to finalize this fact sheet by Tuesday, noon, so our lobbyists can do their work. Tunderstand Monday is a federal holiday. If anyone has questions, please let me	cnow. Much appreciate (b)(6)

(b)(6)

From: To: Cc:	(b)(6)
Subject:	RE: AL HB 422 - Dredge Material Placement
Date:	Tuesday, February 20, 2018 12:09:00 PM

Maybe superseded rather than disproved is a better choice of words. To my knowledge	(b)5)
(b)(5)	
(b)(5)	

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

From	(b)(6)		
Sent:	Tuesday, February 20, 2018 11:35 AM		
To:	(b)(6)		
Cc:		(b)(6)	
		(b)(6)	
		(b)(6)	

Subject: [Non-DoD Source] Re: AL HB 422 - Dredge Material Placement

Thank (b)(6) The last paper had this statement. Any particular reason? It's a powerful statement worth repeating. (b)(6)

Sent from my iPhone

On Feb 20, 2018, at 11:24 AM,	(b)(6)
(b)(6)	wrote:

(b)(6) I'm fine with it. Only comment is		(b)(5)
	(b)(5)	
	(b)(6)	
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Original Message		
From: (b)(6)	
Sent: Tuesday, February 20	, 2018 11:11 AM	
To:	(b)(6)	
	(b)(6)	



Sent: Tuesday, I	ebruary 20, 2018 11:08 AM	
To:	(b)(6)	
		Γ
	(b)(6)	
Cc:	(b)(6)	
CC.		
	(b)(6)	

Subject: RE: AL HB 422 - Dredge Material Placement

(b)(6)

I have reviewed this and the earlier version this morning and had a couple of discussions with (b)(6) this morning. I am very comfortable with the white paper as written.

(b)(6)	
CN 9	
Original Message	
From: (b)(6)	
Sent: Tuesday, February 20, 2018 10:52 AM	
To: (b)(6)
(1)(6)

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

Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Material Placement

Good morning. Attached is the white paper in its final state. Thanks to all who contributed to the information. I did omit one suggestion. (b)(6) (b)(5)

(b)(5)
(b)(5) IF ANYONE SEES A NEED FOR A CHANGE TO THIS DOCUMENT, PLEASE INSERT YOUR
CHANGE, FINALIZE AND SEND TO ME BY NOON TODAY. I am traveling and I can forward that final
document to our lobbyist in Montgomery. If there are no changes as currently written, please also confirm by noon
today.

THANKS SO MUCH !!

(b)(6)

From:	(b)(6)	
	uary 20, 2018 7:37 AM	
To:	(b)(6)	
	(b)(6)	
Cc:	(b)(6)	
	(b)(6)	

Subject: RE: AL HB 422 - Dredge Material Placement

There is a recent (2017) USGS report that says the system is pretty much storm driven and supports the conclusions of the 2010 Byrnes report. I've attached a copy.

(b)(6)	

Original Message		
From: (b)(6)		
Sent: Monday, February 19, 2018 3:06 PM		
Го: (b)(6)		
	(b)(6)	
Cc: (b)(6	i)	
	(b)(6)	

Subject: [Non-DoD Source] RE: AL HB 422 - Dredge Material Placement

(b)(6) This is the USGS study that is often cited by (b)(6) BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf <BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf> <BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf> <BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf> <BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf> <BlockedBlockedBlockedBlockedhttps://pubs.usgs.gov/of/2007/1161/OFR-2007-1161-screen.pdf> This is also the study cited in the white paper prepared for the AL Leg a couple of years ago, which had Corps review. In the Exec. Summary and on pages 21-22, the report would leave a reader to believe that the channel is a "sediment" sink that captures "sands that normally would have bypassed about the ebb tidal delta and fed the MS-AL barrier islands downdrift." The paragraph further states there is plenty of sand downdrift of the channel available for reworking and nourishing DI.

The study goes on to state that downdrift sands were impacted by dredging of outer bar entrances....see page 24. Pages 25-27 reinforce the three cited reasons for land loss at DI. "The principal causes of barrier island land loss in the northern Gulf of Mexico are frequent intense storms, a relative rise in sea level, and a deficit in the sediment budget." The latter is tied to the statements regarding dredging inlets impacts.

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In that we referenced the 2007 study in the last white paper, and in that

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		(b)(6)

From: Sent: Monday, February 19, 2018 11:0	(b)(6) 07 AM		
То	(b)(6)		
	(b)(6)		
Cc:	(b)(6)		
	(b)(6)		
Subject: RE: AL HB 422 - Dredge Ma	aterial Placement		
_			
(b)(6) I am including (b)(6)	who can help with the	he previous studies paragraph and w	what they
One thing that I think we should note		(b)(5)	
eaking with (b)(6), it is impo	(b)(5)	(b)(5)	In
	(b)(5)		
As for the new work material, all exist (b)(5		e on the bar, which are extensive, in	ndicate <mark>(b)(</mark> !



Good morning all. A couple of changes after weekend reflection. Please review this draft (b)(6)

(b)(6)

From: Sent: Friday, February 16, 2018 6:17 PM To: Cc:

Subject: AL HB 422 - Dredge Material Placement Importance: High

All: per calls and emails earlier today, please see attached a revised fact sheet on the subject legislation. I really need (b)(6) (b)(5) (b)(6) The committee hearing is Weds. I would like to finalize this fact sheet by Tuesday, noon, so our lobbyists

(b)(6)

can do their work. I understand Monday is a federal holiday. If anyone has questions, please let me know. Much appreciate (b)(6)



From: To:	(b)(6)		
Cc:			
Subject:	Q&As - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting		
Date:	Tuesday, February 20, 2018 2:11:00 PM		
Attachments:	Mobile Harbor GRR CommPlan 02.06.18.docx 2016-09-23 Rebuttal of Mobile District Responses.pdf		

All: Latest Q&A's attached. I have also attached the scoping comments along with our responses (and rebuttal).



Original Message		
From (b)(6) Sent: Monday, February 05, 2018 9:49 AM		
Sent: Monday, February 05, 2018 9:49 AM		
To:	(b)(6)	
	(b)(6)	
Cc:	(b)(6)	
(b)(6)		
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(b)(6)

Subject: Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.

(b)(6)	

Pages 3 through 13 redacted for the following reasons: (b)(5) Marked Draft

Rebuttal of Mobile District Responses to Major Comments Received in the Public Scoping Meeting Process and Discussed at the August 9, 2016 Meeting

Major Public Comment Summaries Provided: August 9, 2016 Mobile District Responses Provided: August 31, 2016 Rebuttals to Mobile District Responses Provided: September 23, 2016

Prepared by (b)(6)

Public Comment 1: The Study must comply with the requirements of Section 5 of the Rivers and Harbors Act of 1935 which requires every Corps report:

"...looking to the improvement of the entrance at the mouth of any river or at any inlet ..." to "...contain information concerning the configuration of the shore line and the probable effect thereon that may be expected to result from the improvement having particular reference to erosion and/or accretion for a distance of not less than ten miles on either side of the said entrance."

The Corps did not address this legal requirement in its 1980 report.

Mobile District Response 1: The above quote is only partial and does not capture the full text of the law. The actual text is as follows:

"74TH CONGRESS. SESSION 1. CHS. 829-831. AUGUST 30, 1935, [H.R. 6250] [Public, No. 409] SEC. 5. Every report submitted to Congress in pursuance of any provision of law for preliminary examination and survey looking to the improvement of the entrance at the mouth of any river or at any inlet, in addition to other information which the Congress has directed shall be given, shall contain information concerning the configuration of the shore line and the probable effect thereon that may be expected to result from the improvement having particular reference to erosion and/or accretion for a distance of not less than ten miles on either side of the said entrance."

The current GRR study is not for "preliminary examination and survey" but rather for evaluation of options for construction within the congressionally authorized dimensions of the navigation channel. Also, under Corps procedures and regulations, the GRR study will not be submitted to Congress, but will be reviewed and approved within the Corps at the appropriate level. For these reasons, Section 5 does not directly apply to the current study.

However, this does not mean that the information required by that section will not be studied during

the GRR process as Corps regulation (ER 1105-2-100) requires, "each investigation on navigation improvements potentially affecting adjacent shoreline will include analysis of the probable effects on shoreline configurations. A distance of not less than ten miles along the shore on either side of the improvement should be analyzed."

Rebuttal 1: The major point of the comment is that the GRR must evaluate the effects of the Mobile Harbor project, both existing conditions (i.e., No Action Alternative) and the considered width and depth alternatives, on the adjacent shorelines for a distance of not less than 10 miles on either side of the Mobile Pass Inlet. Since the 1980 Survey Report recommending the improvements failed to satisfy that planning requirement, the GRR Study must correct that outstanding deficiency.

Paragraph 5-3d (entitled "Sedimentation") on page 5-4 in Chapter 5 (i.e., Design Factors and Studies) of the Corps' EM 1110-2-1613, HYDRAULIC DESIGN OF DEEP DRAFT NAVIGATION PROJECTS is reproduced in its entirety in the following:

Littoral sediments. Sediments are introduced into the navigation project from the littoral systems that exist in all lakes and oceans. Nearshore currents driven by waves, wind, tides, or water-mass movement cause sediment particles, usually medium to fine sands but occasionally clays and silts, to be moved along the shore. As the sand-size sediments reach the deeper waters of the navigation project, deposition occurs in and near the entrance channel. Clays entering from the lower end may be transported upstream by estuarine circulation. Structures such as jetties are used to trap the sands and keep shoals from forming in the navigation project. A sand-bypassing arrangement may be necessary to maintain the trapping capability of the jetty structures and to minimize damage to adjacent beaches that interruption of the littoral process usually causes. The planner/designer is *required* [emphasis added] to study and develop predictions of erosion and accretion for a distance of 10 miles on either side of an entrance channel improvement project.

In short, the referenced paragraphs in ER 1105-2-100 and EM 1110-2-1613 clearly *require* the Mobile District to specifically investigate the effects of enlarging the Mobile Harbor project on the shorelines occurring for a distance of 10 miles on either side of the Mobile Pass Inlet. Based on the very clearly stated language in these respective planning and design guidance paragraphs, the 10-mile design study requirement is not conditioned upon whether or not a specific report is to be submitted to Congress or not. Instead, the Corps, as an agency, has determined the specified distance for analysis is representative of sound engineering practices. Further, the 10-mile design requirement has its roots in large part on Section 5 of the Rivers and Harbors Act of 1935, as well as the universally observed fact that engineering works (to include dredged navigation channels) in ocean inlets typically interrupt littoral drift, causing erosion and/or accretion of the adjacent shorelines.

The 10-mile requirement was in effect at the time the Mobile District's 1980 report

recommending the Mobile Harbor improvements was prepared. However, the 1980 report did not investigate the potential effects of the recommended Outer Bar Channel improvement on the adjacent shorelines on either side of Mobile Pass. As a result, the 1980 report did not comply with applicable Corps policy guidance regarding the point made by the Public Scoping Comments. The GRR Study provides the appropriate vehicle to correct the existing deficiency in the 1980 report that remains through today. That is why the "10-mile distance" issue continues to be pressed by the public.

References:

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. May 31, 2006. Engineering and Design: Hydraulic Design of Deep-Draft Navigation Projects. Engineering Manual 1110-2-1613. Washington, D.C.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

U.S. Congress. August 30, 1935. Rivers and Harbors Act of 1935. Public Law 74-409. Washington, DC.

Public Comment 2. The Study must acknowledge the existence of and address the findings, conclusions, and recommendations contained in the Corps' 1978 Draft Report entitled "Feasibility Report for Beach Erosion Control and Hurricane Protection, Mobile County (Including Dauphin Island)". The Corps acknowledged in the 1978 report, for the first and only time, that maintenance of the Mobile Harbor Outer Bar Channel is unquestionably contributing to the erosion of Dauphin Island. To this date, the Corps has consistently ignored both the existence of and the contents of the 1978 report.

Mobile District Response 2: The conclusions of the 1978 report were based on observational information: maps, charts, and photos. This may have been an appropriate methodology at the time, but, because of technological improvements in the intervening four decades, the hydrodynamic and sediment transport modeling used for this study will more accurately characterize coastal processes. This will allow us to assess potential impacts by a proposed change to the navigation channel dimensions as well as beneficial placement of dredged material. Any relevant data from the 1978 report will be included in the Mobile Harbor GRR.

Rebuttal 2: The Mobile District Response misses the point of the comment. With the exception of paragraph 4.23 in the 1986 SEIS to the original 1980 report and EIS, the Mobile District has consistently ignored the very existence of the 1978 report and its associated findings and conclusions. It appears the Mobile District has hoped that by continually ignoring the 1978 report the public would never know it existed. But the 1978 report does exist, will continue to exist, and the Corps' continued refusal to acknowledge its existence will not make that report go away, along with its relevant conclusions regarding the historic effects of maintaining the Outer Bar Channel on the erosion of Dauphin Island.

What is particularly concerning is that although the subsequent 1980 report recommended the Outer Bar Channel be enlarged, it failed completely to recognize and analyze the previous 1978 report's conclusions that maintenance of the channel was contributing to the loss of sand from the littoral drift system and the erosion of Dauphin Island. Only two years separated completion of these two years and the engineering investigations were conducted within the same office in the Mobile District and may even have involved the same engineers on staff at that time. In reply to the above Mobile District Response, all reasonable engineers and scientist would agree that "technological improvements" in the science and art of coastal engineering would not have sufficiently advanced during the two years between 1978 and 1980 to indicate the analyses conducted for the 1978 report were outdated by 1980.

Given the particular relevance of the 1978 report's conclusion that maintenance of the Outer Bar Channel was contributing to both the loss of littoral drift sand and to the erosion of Dauphin Island's shoreline, it is extremely curious that the 1980 report did not include an analysis of that "contribution" and how that "contribution" could be affected should the Outer Bar Channel be deepened and widened as recommended. As a result of the chronological proximity of these two reports, the failure of the 1980 report to analyze how the recommended increase in the channel's dimensions could influence littoral drift sands and the Dauphin Island shoreline is confounding. It deserves to be reiterated that that failure represents a continuing major deficiency in the 1980 report, despite the Mobile District's failure to acknowledge that fact. Again, that deficiency must be corrected in the ongoing GRR Study.

The Mobile District Response attempts to diminish the veracity of the 1978 report's conclusions by inferring that the "technological improvements in the intervening four decades" somehow render the 1978 report invalid. While the concerned public are certainly not coastal engineers or experts in hydrodynamic modelling and the development of inlet sediment budgets, a few among us have had enough professional exposure to these topics over the years to appreciate the fact that the basic engineering assumptions and approaches applied to produce the 1978 report remain valid today. Any coastal engineering study dealing with the configuration of a navigation channel, sediment movement, shoreline configurations, and hydrodynamic conditions in inlets must first consider "maps, charts, and photos", as well as hydrographic surveys, dredging records, tides, storms events, and wind and wave conditions. The 1978 report is built upon such data, as is the Byrnes *et al.* 2008 report prepared in connection with the 2000-2009 Dauphin Island Property Owners Association (DIPOA) vs government lawsuit, as well as the Byrnes *et al.* update in 2010 and all subsequent reports prepared on the Alabama-Mississippi barrier islands and studies of other inlets around the world.

A major difference between "modern" studies from the type of analyses conducted for the1978 report are the tools used today. Those tools include advanced computer technology and numerical modeling techniques that allow "more sophisticated" analyses to now be performed. One outcome of this "new technology" is the production of very attractive graphics and data presentations which can leave the impression that the results generated by "modern" studies are far superior to the results produced by the more "primitive" engineering hand calculations performed by engineers of yesteryear. One should resist the seduction and allure of the modern "pretty pictures" and recognize that the basic engineering assumptions and approaches followed to produce the 1978 report have not materially changed today. In doing so, one should also be aware that the same "primitive" technology used in 1978 is representative of the type of engineering experience and professionalism that satisfactorily designed the Panama Canal; constructed countless flood control and hydroelectric projects across the nation, and formulated much of the basic coastal engineering theory and principals that remain in effect today.

The central fact remains that despite ignoring the existence of the 1978 report and its associated conclusions that maintenance of the Outer Bar Channel is contributing to the loss of littoral drift sands and the erosion of Dauphin Island, the Mobile District has never officially pronounced are proved that the 1978 report's specific conclusions are incorrect or in error. All the Mobile District has done through the years is to periodically allege that there is no relationship between maintenance of the Outer Bar Channel and the interruption in littoral drift processes across the Mobile Pass Inlet and Dauphin Island's eroding shoreline. All such claims have been based entirely upon rhetoric, with no detailed studies being conducted to either affirm or reject the 1978 report's conclusions through an objective analysis of the data, engineering approach, and conclusions contained in that report. The closest that the Mobile

District has ever come to date to truly studying the Dauphin Island erosion issue was contracting for the Byrnes *et al.* 2008 report in connection with the above mentioned DIPOA lawsuit which contained the weakly stated sentence in its conclusions: "...there appears to be no measurable negative impacts associated with historical channel dredging across the Mobile Pass Outer Bar".

For those not familiar with the 2008 Byrnes *et al.* report, it is important to know that the Corps contracted to have the report prepared in connection with the DIPOA lawsuit to determine if the Outer Bar Channel was contributing to the erosion of Dauphin Island. In agreeing to have the report prepared, both parties to the lawsuit required that the report would be subjected to a review by an independent panel of three experts in the field of coastal engineering. One of those experts was the world renown late Dr. Robert Dean, Professor Emeritus in the University of Florida's Department of Civil and Coastal Engineering, Engineering School of Sustainable Infrastructure and Environment. In his March 7, 2008, Review Report, Dr. Dean conveyed the following two observations dealing with the application of the data considered in the study and his conclusion, respectively:

"The available bases for evaluating the impact of a deepened channel on the adjacent shorelines include: (1) Analysis and interpretation of data, (2) Experience and judgment, and (3) Application of accepted coastal engineering methodology. The main approach followed in the Final Report was in the assembly, synthesis and analysis of the available data sources in the vicinity of Mobile Bay Entrance. Some of these data were collected many years ago at times when the survey control and technology were of lesser quality than at present. My experience in conducting and analyzing hydrographic surveys has documented the need to examine these data carefully before acceptance and that survey data may contain bias. The position adopted in the [Byrnes 2008] Final Report is that any bias in the available survey data is negligible. Additionally, there is uncertainty as to some of the methodology applied with regard to shoreline changes and sea level changes over the period of record of more than a century."

"With the exception of the 2001/2002 survey, the Final Report has considered the survey data to be free of bias. My experience has documented the need to examine all survey data critically to ensure that the data are bias free or at least to recognize the possible presence of bias in the results...In my experience, these are unacceptable assumptions/considerations**...Because such large plan areas (ebb tidal shoals) are considered here, any bias becomes of critical significance in volumetric determinations."

^{**}Assumptions referred to are contained in the Byrnes et al. 2008:

Page 44 – Shoreline Change Analysis: "Substantial effort was spent ensuring that any systematic errors were eliminated prior to change analysis. Therefore, measurement errors associated with present and past shoreline surveys are considered random".

Page 192 – Bathymetric Errors: "Substantial effort was spent ensuring that any systematic errors were eliminated from all data sets prior to change analysis. As such, measurement errors associated with present and past surveys are considered random. Because random errors are equally distributed, they can be neglected relative to change calculations'".

"I respectfully dissent from a finding that the construction, operation and Maintenance Dredging Practices of and at the Channel have not resulted in at least Minimum Measurable Erosion of Dauphin Island's shoreline. I conclude that certain critical portions of the Final Report are arbitrary in their methods of analysis and acceptance/interpretation of the available data resulting in uncertainty remaining in the final results."

Just one year prior to Completion of the Byrnes et al. 2008 report, the US Geological Survey published the 2007 Morton report on the Mississippi-Alabama barrier islands. The Morton report contained the following statements:

"... [The Mobile Harbor] outer bar channel now acts as a sediment sink that traps sand that would have bypassed around the ebb tidal delta and fed the Ms-Al barrier islands downdrift."

"... [Maintenance dredging] practices conducted around the tidal inlets between the barrier islands permanently removed large volumes of beach quality sand from the littoral drift system that otherwise would have nourished the adjacent barrier islands and mitigated land losses."

"Sand supply is also the only factor where the historical trend of the factor (progressively increased reduction in sand supply attendant with increased dredging depths) temporally matches the trend of progressively increased land loss."

Although the Byrnes *et al.* 2008 report made frequent references to information contained in the Morton 2007 report, they neither acknowledged the above findings nor attempted to specifically disprove the principle Morton finding that the historical loss of Dauphin Island through erosion dating back to 1958 has occurred coincidentally with the period of increased dredging of the Outer Bar Channel and the removal of sand from the littoral drift system. The reason Byrnes *et al.* failed to address that significant point of professional disagreement that goes to the very purpose behind which the Mobile District contracted for their report in connection with the above mentioned lawsuit is unknown. It is also not known if the Corps technical staff that reviewed the Byrnes *et al.* 2008 report questioned the significant disparity in conclusions between the respective reports or requested the different professional views be reconciled. In view of the prior existing 2007 Morton report, the overall value of the Byrnes *et al.* 2008 report would have enhanced value had it acknowledged the variation in conclusions reached and attempted a justification as to why their report was "more correct" instead of appearing to dismiss Morton's 2007 report as only representing a qualitative analysis of the erosion issue.

We are aware of no other studies specifically conducted by anyone on the Outer Bar Channel-Dauphin Island erosion issue that support the conclusion contained in the Byrnes *et al.* 2008 and 2010 reports upon which the Mobile District appears to rely entirely upon to support its "no effect" position. In addition to the above cited Morton 2007 report, local coastal engineer Dr. Scott Douglass has maintained for years that there is a direct cause-effect relationship between maintenance of the Outer Bar Channel and the erosion of Dauphin Island. Of even more significance, the Mobile District's own Mississippi Coastal Improvement Program reports (2009 and 2016) have also acknowledged the role that the Pascagoula and Gulfport deep draft navigation channels play in contributing to the erosion of the Mississippi barrier islands to the west of Dauphin Island. It is appropriate to emphasize that cause-effect role is consistent with information contained in the much wider national and worldwide literature. To that point, the literature consistently points out that whenever an engineered project (i.e., dredged navigation channel) interrupts the natural littoral drift processes at an inlet, the immediate downdrift shorelines usually experience erosion of varying degrees unless mitigation measures are implemented. However, despite the preponderance of evidence to the contrary, the Mobile District continues to maintain the position that the Mobile Pass Inlet is the one inlet on the Gulf Coast, within the United States, and around the world where this almost universal cause-effect relationship does not apply.

In conclusion and with all due respect, the concerned public does not accept the 2008 and 2010 Byrnes *et al.* contractor reports paid for by the Mobile District as the authoritative last word on the Outer Bar Channel-Dauphin Island erosion issue. In light of the above cited information to the contrary, much more extensive proof is required before the Mobile District position can be accepted by the interested public. *Hopefully, the Alabama Barrier Island Restoration Assessment will contain the required objectively developed information that all stakeholders can buy into its results and conclusions. However, that will not be possible if the entire Assessment is based entirely upon the Byrnes et al. 2008 and 2010 reports unless the issues raised in Dean's (2008) independent review and the counter conclusions conveyed in reports prepared by other coastal experts like Morton (2007) are not satisfactorily reconciled.*

References:

Byrnes, M.R., S.F. Griffee, and M.S. Osler. January 2008. Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama. U.S. Army Corps of Engineers, Mobile Engineer District. Mobile, Alabama.

Byrnes, M. R., S. F., Griffee, and M. S. Osler, 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8. U.S Army Engineer Research and Development Center, Vicksburg, Mississippi.

Dean, R.G. March 7, 2008. Review of Final Report by Applied Coastal Research and Engineering: "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Bay Entrance, Alabama". U. S. Army Corps of Engineers, Mobile Engineer District, Mobile, Alabama.

Morton, R. A. 2007. Historical Changes in the Mississippi-Alabama Barrier Islands and the Roles of Extreme Storms, Sea Level, and Human Activities. Open File Report 2007-1161. U.S. Geological Survey, Coastal and Marine Geology Program. St. Petersburg, Florida.

National Fish and Wildlife Foundation-Department of the Army. April 30, 2015. Memorandum of Agreement, NFWF Gulf Environmental Benefit Fund, Alabama Barrier Island Restoration Assessment,

NFWF Project ID No. 45719. Washington, D.C.

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. November 1985. Final Supplemental Environmental Impact Statement, Mobile Harbor, Alabama, Channel Improvements, Offshore Dredged Material Disposal. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. June 2009. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Plan and Integrated Environmental Impact Statement: Volume 1 - Main Report. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. June 2009. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Plan and Integrated Environmental Impact Statement: Appendix H - Barrier Islands. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. January 2016. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Barrier Islands Restoration Plan, Final Supplemental Environmental Impact Statement: Appendix H - Barrier Islands. Mobile Engineer District, Mobile, Alabama.

U.S. Court of Federal Claims. July 15, 2005. Litigation Settlement Agreement. Dauphin Island Property Owners Association, Inc., et. al. vs. United States, No. 00115L.

U.S. Court of Federal Claims. November 15, 2005. First Addendum to Litigation Settlement Agreement. Dauphin Island Property Owners Association, Inc., et. al. vs. United States, No. 00115L.

Public Comment 3: The 1978 report contained July 9, 1975 letters from Mobile District Engineer COL Drake Wilson to Congressman Jack Edwards, the Mobile County Commission, and the City of Mobile stating that the Dauphin Island erosion problem would be addressed in the District's separate study of Mobile Harbor that ultimately resulted in the 1980 report which led to the WRDA of 1986 authorization to deepen and widen the ship channel. However, the 1980 "Survey Report on Mobile Harbor, Alabama" inexplicably ignored the Dauphin Island erosion issue.

Mobile District Response 3: The 1980 Survey Report on Mobile Harbor, Alabama did recognize that Dauphin Island was experiencing erosion problems and that there could be opportunities for placement of sand in the littoral system. However, even though the report indicated that there may be opportunities for placement of sand in littoral system, Congress in the WRDA 1986 directed that all dredged material would be disposed in the Gulf.

<u>Rebuttal 3</u>: The Mobile District Response neither addresses the point made in the comment regarding the 1980 report, nor accurately states the complete facts regarding the full authorization of the Mobile Harbor project. The following sets the record straight.

- A total of 1,136 pages comprise the pdf copy of the 1980 report package. A word search of the entire document for "Dauphin Island" revealed that those two words occur in tandem at only 55 locations in the total report. Examination of the 55 occurrences reveal that the associated discussions at 46 of the 55 locations had absolutely nothing to do with the erosion issue. That means *in the entire 1,136-page 1980 report package, the Dauphin Island erosion problem is "mentioned" only 9 times.* The complete text associated with each of those occurrences is provided below so there can be no misunderstanding of the full context of the overall discussions within which Dauphin Island's erosion was "mentioned".
 - Page 39: "Since both Sand and Dauphin Islands are presently experiencing some erosion problems, it is highly probable that the present maintenance project could be coupled with a beach nourishment program in the future. The principal impediment to the immediate implementation of such a program lies in the present lack of a sufficient number of hopper dredges which have pump-out capability. As more dredges with this capability become available, the material from the outer bar could be pumped into the littoral drift system of Sand and Dauphin Islands."
 - Page 58: "Existing maintenance of the entrance channel provides sand that can be utilized to restore the eroded beaches of Dauphin Island..."
 - Page 64: Environmental Quality Plan "The existing maintenance methods of Mobile Harbor would be modified as follows: Maintenance of the entrance channel provides sand that can be utilized to restore the eroded beaches of Dauphin Island."
 - > Page 140: Least Environmentally Damaging Plan "...nourishing Dauphin Island

beaches ... "

Pages 66, Appendix 3: Mobile United Comment on DEIS – 3. The Corps will use sand from the entrance channel to restore eroded beaches on Dauphin Island and Fort Morgan peninsulas.

Page 67, Appendix 3: Mobile District Response to Mobile United Comment – "The Corps of Engineers current maintenance practice allows for disposal of the sandy bar channel material for beach nourishment when equipment is available. This would continue to be the policy for future maintenance of the channel. The use of new work material from the entrance channel for beach nourishment will be further investigated during post authorization studies."

- Page D-15, Appendix 5: "Environmental Quality Alternative 16. Existing maintenance of the entrance channel provides sand that can be utilized to restore the eroded beaches of Dauphin Island..."
- Page D-42, Appendix 5: "Environmental Quality (EQ) Plan Maintenance of the entrance channel provides sand that can be utilized to restore the eroded beaches of Dauphin Island."
- Page D-92, Appendix 5: "135. Since both Sand and Dauphin Islands are presently experiencing some erosion problems, it is highly probable that the present maintenance project will be coupled with some sort of beach nourishment program in the future. The principal impediment to the immediate implementation of such a program lies in the existing lack of a sufficient number of hopper dredges which have pump-out capability. As more dredges with this capability become available, the material from the outer bar would be pumped into the littoral drift system of Sand and Dauphin Islands."
- There is no argument with the Mobile District's contention that the 1980 report "...did • recognize [emphasis added] that Dauphin Island was experiencing erosion problems and that there could be opportunities for placement of sand in the littoral system". However, after considering the above 9 quotes, any reasonable individual would agree that the level of effort expended to merely "recognize" that the erosion problem existed in the 1980 report certainly could not be considered to represent an adequate in-depth "investigation" of the problem. The Public Comment makes the point that the 1980 report was and remains deficient in regards to the erosion issue because it failed entirely on all accounts to "investigate" the erosion problem. In view of the fact that the Mobile District's prior 1978 report had concluded just two years before that maintenance of the Outer Bar Channel contributes to the erosion of Dauphin Island, it is inconceivable as to why the 1980 report did not investigate the prior Mobile District identified connection between maintenance of the existing channel dimensions and Dauphin Island's erosion problem how enlarging the channel could further influence erosion. And, to not even mention the findings and conclusions on the erosion issue contained in the Mobile District's own 1978 report defies

all understanding.

Another significant point made about the failure of the 1980 report to either acknowledge, reject, or to expand upon the conclusions presented in the 1978 report is that the Mobile District failed to honor the commitment made by then District Engineer COL Drake Wilson in a series of 1975 letters that the Mobile Harbor study would "address" the Dauphin Island erosion issue. The implication of the verb "address" is that the erosion problem would be "investigated" not merely "recognized". Also on the subject of Mobile District commitments, the Mobile United submitted comments on the Draft EIS on October 5, 1979. Mobile United's comment on pages 64 and 66 in Appendix 3 stated

"There is general agreement that deepening of the channels should be undertaken when this becomes necessary to protect our competitive position in world trade, and to move bulk cargoes basic to the economic development of Alabama, such as coal, iron, and oil. This statement, however, is conditional on...3. The Corps will use sand from the entrance channel to restore eroded beaches on Dauphin Island and Fort Morgan peninsulas."

To which the Mobile District responded as follows:

"The Corps of Engineers current maintenance practice allows for disposal of the sandy bar channel material for beach nourishment when equipment is available. This would continue to be the policy for future maintenance of the channel. *The use of new work material from the entrance channel for beach nourishment will be further investigated during post authorization studies*" [emphasis added].

No investigations are identified in the GRR Study's Project Management Plan (PMP) that are specifically directed at: (1) analyzing the placement of new work material dredged from the Outer Bar Channel for beach nourishment; and (2) evaluating the potential to couple future channel maintenance with some sort of beach nourishment program in the future as discussed in the 1980 report. When these two issues were raised recently with the Mobile District staff, they responded that the GRR would not conduct such investigations. Instead, they pointed to the Alabama Barrier Island Assessment as the "new future study" that is to provide the information needed to restore Dauphin Island. While the Assessment should undoubtedly produce information that could be useful to the GRR Study, the fact remains that despite the previous referenced Mobile District commitment made in the 1980 report to investigate placing new work dredged material on Dauphin Island's eroding shorelines, the Mobile District no longer plans to honor that commitment in the GRR Study.

It is time the Mobile District started living up to its prior commitments, in lieu of making additional commitments that would be "fulfilled" in future studies. Honoring past commitments will go a long way in restoring the public's trust in the integrity of the Corps

to do what it says it will do, instead of following the past practice of making statements just to placate for the moment a stated concern of the public.

• The Mobile District Response also fails to acknowledge the existence of the below explicit language contained in Section 302 of the Water Resources Development Act (WRDA) of 1996 that amended the original WRDA of 1986 authorization for the Mobile Harbor improvements and that also serves as the authority under which the GRR Study is being conducted:

"In disposing of dredged material from such project, the Secretary, after compliance with applicable laws and after opportunity for public review and comment, may consider alternatives to disposal of such material in the Gulf of Mexico, including environmentally acceptable alternatives for beneficial uses of dredged material and environmental restoration."

By amending the original 1986 project authorization, Congress granted the Secretary the discretionary decision-making authority to consider environmentally acceptable alternatives to disposal in the Gulf, "…including beneficial uses of dredged material and environmental restoration".

Review of the March 31, 2016 Mobile District Memorandum of Record of a December 9, 2015 meeting of the Mobile Bay Interagency Working Group reveals that the District is very familiar with the Section 302 authority. The memorandum shows that the Mobile District plans to selectively use that authority in the GRR Study for dredged material that would be removed from only the segment of the Mobile Harbor channel located within Mobile Bay. Based on that memorandum, it must be concluded that the Mobile District has not yet given any consideration to developing a "beneficial uses" option under Section 302 in the GRR Study to restore Dauphin Island's eroding shoreline with the sands that would be dredged from the Outer Bar Channel.

In view of the amended project authority, it is irrefutably clear that an "environmentally acceptable [beneficial uses] alternative" could be formulated to use both new work and subsequent maintenance dredged material from the Outer Bar Channel to restore the severely eroding shorelines of the Sand/Pelican shoal and Dauphin Island. Given the large number of Public Scoping Comments submitted on this very issue, it is reasonable to expect that the GRR Study should develop such an alternative for serious in-depth investigation. *Such an alternative should be investigated in the GRR to beneficially use the dredged material to counter Dauphin Island's erosion regardless of the factors that are responsible for the erosion.*

To date, the Mobile District has ignored specific Public Scoping Comments calling for dredged material to be used to restore Dauphin Island. Of equal significance, the District has not only refused to consider a dredged material disposal alternative that would comply with the Section 302 authority that specifically amended the Mobile Harbor

authorized project, but has failed to even acknowledge the potential to apply Section 302 to develop a disposal alternative that would positively address the Island's erosion problem. The Mobile District owes the concerned public a rational explanation for its actions in this regard. It is neither acceptable nor logical to defer all GRR Study plan formulation activities relative to developing a Section 302 disposal alternative using Outer Bar Channel sand to benefit Dauphin Island, while waiting on the results of the ongoing Alabama Barrier Island Restoration Assessment that are not due for two years in the future. Application of Section 302 does not depend upon the exact cause of the erosion problem being first determined before Mobile Harbor dredged material can be used to beneficially help counter the problem.

The major problem with the Mobile District's current approach is the incompatibility of the respective schedules for the GRR Study and the Alabama Barrier Island Restoration Assessment. For example, the February 3, 2016 "GRR Decision Management Plan to TSP Milestone" states that the environmental assessment of plans and mitigation evaluations are to be completed by July 31, 2017 and September 28, 1917, respectively. Although that internal Mobile District document is not clear if those two events will include an identification of the dredged material disposal options considered, it must be assumed that they do. Further, it is the concerned public's understanding that the Alabama Barrier Island Restoration Assessment's Comprehensive Feasibility Report will not be completed until March 1, 2019. Thus, almost two years separate these two important efforts. The Mobile District staff has repeatedly stressed that the GRR Study efforts relative to the effects of maintenance of the Outer Bar Channel on the erosion of Dauphin Island and the development of appropriate options to dispose of the new work and maintenance dredged material will depend in large part upon the results of the Alabama Barrier Island Restoration Assessment (see Mobile District Comment 8 below). However, given the disparate nature of the two schedules, it is not clear how the Mobile District plans to obtain needed information from the Assessment in time to satisfy the schedule requirement of the GRR Study. As a result, the interested public is concerned that the GRR Study will be completed without adequately investigating the Dauphin Island erosion issue as happened in the 1980 report.

Instead of relying solely upon the Alabama Barrier Island Restoration Assessment, the GRR should begin work on a beneficial uses of dredged material disposal alternative to restore Dauphin Island's eroding shoreline in compliance with Section 302 of the WRDA of 1996. The beneficial uses disposal option should be included in the initial array of channel dimension and disposal alternatives investigated in the GRR Study. *Failure to do so will confirm the concerned public's increasing suspicion that the direction of the GRR Study is being influenced by unexplained biases and motives that are compromising the objectivity and integrity of the Study while failing to comply with a host of existing federal laws, Corps planning policy guidance, CEQ's NEPA regulations, and prior Mobile District commitments.*

References

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508). Washington, D.C.

National Fish and Wildlife Foundation-Department of the Army. April 30, 2015. Memorandum of Agreement, NFWF Gulf Environmental Benefit Fund, Alabama Barrier Island Restoration Assessment, NFWF Project ID No. 45719. Washington, D.C.

Parson, L.E. March 31, 2016. Memorandum for Record: December 9, 2015. Mobile Harbor Interagency Working Group Meeting. U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama.

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

U.S. Congress. October 12, 1996. Water Resources Development Act of 1996. Public Law 104-303. Washington, DC.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

US Army Corps of Engineers. Last Updated February 3, 2016. Mobile Harbor GRR Decision Management Plan to TSP Milestone (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. February 2016. Project Management Plan, Mobile Harbor, Alabama, General Reevaluation Report (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. July 2016. Public Scoping Report for the Mobile Harbor General Reevaluation Report Supplemental Environmental Impact Statement Public Scoping Meeting - Tuesday, January 12, 2016. Mobile, Alabama, Mobile Engineer District, Mobile, Alabama. **Public Comment 4**: Since the January 12, 2016 Public Scoping Meeting, the Corps has forged ahead with conduct of the Study. Regarding Corps planning process terminology, what is the present status of its efforts to (1) identify Problems and Opportunities in the study area, (2) develop Planning Objectives, and (3) identify Alternative Management Measures? When does the Corps plan to provide this information to the public for review and feedback?

Mobile District Response 4: This navigation study will examine the costs and benefits as well as the environmental impacts of modifying the dimensions of the existing Federal navigation project within its authorized limits. The purpose of the study will be to determine improvements for safety and efficiency of harbor users. The public scoping meeting helped to inform the Problems and Opportunities, Planning Objectives, and Management Measures that have been identified for the navigation study. The public scoping meeting also informed the initial array of alternatives that was developed and screened to narrow the range of widths and depths to be considered. While this information can be obtained from the Alternatives Milestone Meeting documents located on the Mobile District Website for the Mobile Harbor GRR

(http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/), it should be noted that this information is preliminary and subject to change. Public review and comment will be solicited once the draft GRR has been prepared.

Rebuttal 4: The Mobile District should understand that the public's concerns with the Mobile Harbor GRR Study are generally not with the alternative channel depth and width dimensions being considered. Instead, the concerns are primarily focused on where the new work and the subsequent maintenance dredged material from both the Mobile Bay and the Outer Bar channel segments will be placed. The principal environmental impacts from enlarging the Mobile Bay channel will essentially be associated with the location, manner, and timing of disposal of the dredged material.

The Mobile District Response states that: "...the [January 12, 2016] public scoping meeting helped to inform the Problems and Opportunities, Planning Objectives, and Management Measures that have been identified for the navigation study". With all due respect, a thorough examination of the "Report Synopsis" contained on the Mobile District website does not support that contention. To the contrary, the review indicates the public's major scoping comments, that were reiterated to the Mobile District staff in meetings on March 25 and August 9, **have had no influence** in developing the Problems and Opportunities, Planning Objectives, and Management Measures contained in the present version of the "Report Synopsis". The page footer in that document indicates it was prepared in February 2016 before the public scoping comment period ended on February 29, 2016 and considerably in advance of the Public Scoping Report being completed at the end of July 2016.

The following provides examples of major scoping comments submitted by multiple members of the public that are not reflected in the "Report Synopsis":

• The description of the Study Area should be expanded to clarify that at least 10 miles

of the shoreline on either side of the Mobile Pass Inlet are included in the Study Area and will be investigated to assess the potential effects of channel enlargement and the associated disposal of both new work and maintenance disposal of the sands dredged from the Outer Bar Channel as required by EM 1110-2-1613: "Engineering and Design: Hydraulic Design of Deep-Draft Navigation Projects". This specific clarification of the geographic scope of the Study Area is pointed out because the 1980 report failed to comply with that Corps design requirement. See Rebuttal 1 above.

- The list of Prior Reports and Existing Water Projects should include the Mobile District's 1978 report entitled "Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection". That report is directly relevant to the GRR Study because it concluded maintenance of the Outer Bar Channel removes sand from the littoral drift system and contributes to the erosion of Dauphin Island. See Rebuttal 2 above.
- In the Problems/Opportunities Section, no mention is made of the severe erosion "problem" being experienced by Dauphin Island. This is particularly troublesome given the fact that both Corps and non-Corps studies have concluded maintenance of the Outer Bar Channel is contributing to the island's erosion due to the historic and continuing removal of sand from the littoral drift system. Similarly, the "Report Synopsis" is also silent on the potential "opportunity" to mitigate Dauphin Island's erosion problem by depositing both new work construction and future maintenance dredged sand dredged from the Outer Bar Channel at a more effective nearshore location and by employing similar placement approaches as those recently recommended by the Mobile District to restore Mississippi's eroding barrier islands. (see Rebuttals 2 and 3 above)
- The Planning Goals and Objectives discussion only refers to the National Economic Development (NED) federal objective. Given the historic and ongoing severe erosion of Dauphin Island that is caused in part by maintenance of the Outer Bar Channel, this discussion should be expanded to also address the Environmental Protection Mission of the Corps. Congress specifically added that mission to the Corps by Section 306 of the WRDA of 1990 which states Environmental Protection is "...one of the primary missions of the Corps of Engineers in *planning, designing, constructing, operating, and maintaining* [emphasis added] water resources projects". In the years following passage of the WRDA of 1990, all of the Corps' planning, design, construction, and operations policies and guidance have been modified to incorporate the Environmental Protection Mission as a central feature of the Corps overall agency culture.

In describing the characteristics of the NED Federal Objective, ER 1105-2-100 includes the following:

"With regard to site-specific project studies, every effort should be made to assure that *both* [emphasis added] economic and environmental value is added

to watershed resources...Protection of the Nation's environment is achieved when damage to the environment is eliminated or avoided and important cultural and natural aspects of our nation's heritage are preserved. Various environmental statutes and executive orders assist in ensuring that water resources planning is consistent with protection."

ER 1105-2-100 also includes the following statement regarding the Corps' Environmental Restoration mission in connection with the NED:

"Multipurpose plans that include ecosystem restoration shall contribute to both NED outputs and NER outputs. In this latter case, a plan that trades off NED and NER benefits to maximize the sum of net contributions to NED and NER is usually recommended."

Further examples of the emphasis the Corps is to place on its Environmental Protection Mission are contained on the Corps' Headquarters website. Quotes extracted from the links to the Corps Environmental Operating Principles and on the Environmental Program, respectively, are provided below:

http://www.usace.army.mil/Missions/Environmental/Environmental-Operating-Principles/:

"The United States Army Corps of Engineers Environmental Operating Principles were developed to ensure that Corps of Engineers missions include totally integrated sustainable environmental practices. The Principles provided corporate direction to ensure the workforce recognized the Corps of Engineers role in, and responsibility for, sustainable use, stewardship, and restoration of natural resources across the Nation...The strong emphasis on sustainability must be translated into everyday actions that have an effect on the environmental conditions of today, as well as the uncertainties and risks of the future."

http://www.usace.army.mil/Missions/Environmental.aspx:

"As the nation's environmental engineer, the U.S. Army Corps of Engineers manages one of the largest federal environmental missions: restoring degraded ecosystems; constructing sustainable facilities..."

"USACE works in partnership with other federal and state agencies, nongovernmental organizations and academic institutions to find innovative solutions to challenges that affect everyone – sustainability, climate change, endangered species, environmental cleanup, ecosystem restoration and more."

"USACE is striving to restore ecosystem structure and processes, manage our land, resources and construction activities in a sustainable manner..."

Section 14 in the "Report Synopsis" does address the Corps' Environmental Operating Principles. However, that discussion is only conceptually presented and could apply to any Corps study. The discussion provides no evidence to indicate those principles have in fact actually been considered in the work accomplished to date on the GRR Study. The point made by referencing the above Corps policy and guidance statements is that although it is understood the Mobile Harbor GRR Study must necessarily satisfy the requirements of the NED federal objective, the GRR Study must also comply with the Corps' Environmental Protection Mission requirements. However, the "Report Synopsis" only states that the NED federal "...objective is the project goal". The absence of a commitment that the GRR Study will also include consideration of the significant environmental concerns conveyed in the public scoping comments is concerning since it is not clear how the Mobile District will balance NED benefits to also comply with its Environmental Protection Mission. Given the role that the Outer Bar Channel has played in Dauphin Island's erosion problem and the strong likelihood the GRR Study will give increased consideration to disposing of future maintenance material within Mobile Bay. The balance between NED and Environmental Protection is an important issue that needs to be clarified and conveyed to the public. Otherwise, many of the Corps' nice sounding words intended to build public confidence in the agency (i.e., environmental sustainability, environmental restoration, stewardship, eliminate or avoid environmental damage, preserve natural environments, planning is consistent with protection, transparent planning process, etc.) as they relate Environmental Protection as "...one of the primary missions of the Corps of Engineers in *planning, designing, constructing,* operating, and maintaining [emphasis added] water resources projects" will only ring as hollow statements. Again, this concern is being emphasized since the 1980 report failed to investigate the Dauphin Island erosion issue even though the problem was well known to the Mobile District at the time.

 According to Section 12 of the "Report Synopsis," development and screening of the initial array of alternatives was limited to depth and width considerations. That approach is not consistent with the statement in the above Mobile District Response that "...the public scoping meeting also informed the initial array of alternatives that was developed and screened to narrow the range of widths and depths to be considered". The major public scoping comments submitted were centered on concerns as to where the new work and maintenance dredged material would be placed, not the channel depths and widths.

Since dredged material disposal alternatives have not yet been considered, the quoted phrase in the Mobile District Response is misleading. The reason for the GRR Study delaying consideration of the dredged material disposal options explained in Section 12.3 is understood and appreciated. Nevertheless, given the serious concerns that have been expressed by the public over the dredged material placement issue (both in Mobile Bay and for the Outer Bar Channel) and the tremendous quantities of dredged material that will be involved, it is reasonable that the disposal issue should begin to be considered at some level at the front end of the GRR Study

A final point must again be made, as it was made in a number of the Public Scoping Comments, as well as in the March 25 and August 9 meetings with the Mobile District staff to no avail to date: From the perspective of the concerned public, the overall GRR Study approach is designed, either by accident or by intent, to prevent the general public from having any meaningful input into the channel improvement plan that will eventually be recommended for implementation throughout the entire length of Mobile Bay and in the nearshore coastal waters seaward of the Mobile Pass Inlet. The above Mobile District Comment concludes with the sentence: "Public review and comment will be solicited once the draft GRR has been prepared." That means almost two years will pass before the public is provided the Draft GRR and integrated SEIS for review and comment. In the interim, the existing Project Management Plan (PMP) schedule contains no opportunities for the public to be involved in the planning process. By the time the Draft GRR and SEIS are released for public review, the Mobile District's plans will be essentially locked in stone and it will be almost impossible for the public to influence the Tentatively Selected Plan (TSP) should the concerned public believe key features of the TSP are unacceptable. At the August 9 meeting with Mobile District staff, a commitment was made to revise the overall study schedule contained in the PMP to provide additional opportunities for the public to be involved in and provide into the planning process prior to completion of the Draft GRR and EIS. However, as the end of September approaches, the public has not been provided with the promised revised GRR Study schedule identifying those dates.

References:

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

US Army Corps of Engineers. May 31, 2006. Engineering and Design: Hydraulic Design of Deep-Draft Navigation Projects. Engineering Manual 1110-2-1613. Washington, D.C.

US Army Corps of Engineers. January 2016. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Barrier Islands Restoration Plan, Final Supplemental Environmental Impact Statement: Appendix H - Barrier Islands. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. Last Updated February 3, 2016. Mobile Harbor GRR Decision Management Plan to TSP Milestone (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama. US Army Corps of Engineers. February 2016. Project Management Plan, Mobile Harbor, Alabama, General Reevaluation Report (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-</u> *GRR/.* Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. February 2016. Report Synopsis for Mobile Harbor General Reevaluation Report (r 23Aug2016). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. July 2016. Public Scoping Report for the Mobile Harbor General Reevaluation Report Supplemental Environmental Impact Statement Public Scoping Meeting - Tuesday, January 12, 2016. Mobile, Alabama, Mobile Engineer District, Mobile, Alabama.

U.S. Congress. November 28, 1990. Water Resources Development Act of 1990. Public Law 101-640. Washington, DC.

Public Comment 5: During the over 36 years since the Corps' 1980 report was completed, maintenance of the Outer Bar Channel has continued, further contributing to the erosion of Dauphin Island. Between 1974 to 2000 alone, Corps records show that over 20,000,000 cubic yards of dredged beach quality sand was deposited in the open Gulf and permanently lost from the littoral drift system. Since the 1980 report did not address this loss of sand, the new GRR Study must address the impact of the historical sand deficit to Dauphin Island caused by maintenance of the Outer Bar Channel. The Corps' Elizabeth Godsey and Justin McDonald stated at the Scoping Meeting the Study will not address the historic sand losses caused by the Corps maintenance dredging practices of the Outer Bar Channel. How can the Corps justify ignoring this significant sand loss and its effect on the erosion of Dauphin Island as a key feature of the "Without Project" condition? The loss of sand must be addressed and mitigation measures identified to replenish both the historic and future project losses for both "Without" and "With" project conditions, whether the channel is deepened and widened or not.

Mobile District Response 5: The Corps position is that dredging and placement practices associated with operation and maintenance of the Mobile Harbor Channel have not had a measurable impact on Dauphin Island. This view is supported by Byrnes et al. (2010). Byrnes et al. (2010) evaluated the impact of construction and maintenance dredging in the Mobile Outer Bar Channel on the ebb tidal shoal and Dauphin Island shorelines. Byrnes et al. (2010) concluded the following: "Based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar" (pg. 206). The GRR will address potential effects of proposed channel improvements to the existing navigation project. See response to question 6 for discussion on the without project condition.

Rebuttal 5: The Mobile District's official position that maintenance of the Outer Bar Channel has had no measurable impact on Dauphin Island appears to be supported by only two contractor prepared reports prepared in 2008 and 2010 -- both by Byrnes *et al.* Those two reports propose a sediment budget calculated for the Mobile Pass Inlet and Dauphin Island based upon bathymetric mapping and dredging records for the period 1920 through 2002. The contents and findings of the two reports are essentially identical, with the major difference being a slight refinement in the data considered in the 2010 report that resulted in minor adjustments to the proposed sediment budget. *In accepting the conclusions contained in the two Byrnes et al. reports, the Mobile District selectively ignored the counter views expressed by a number of other credible sources, including the 1978 report prepared by the Mobile District that agreed with the conclusions of more recent authors discussed in Rebuttal 2 above.* Hopefully, the results of the ongoing Alabama Barrier Island Restoration Assessment will finally put this longstanding issue to rest.

Review of the 2010 Byrnes *et al.* report raises the following concerns with the proposed sediment budget:

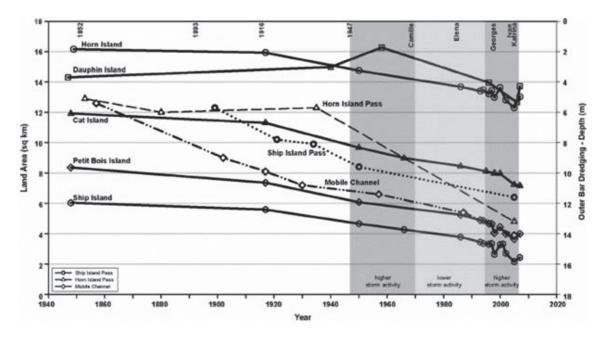
• "Sediment erosion and accretion volumes were quantified for the period 1917/20 to 1986/2002 by comparing (differencing) bathymetric survey data." That means the

estimated sediment volume differences for the areas studied were determined by comparing bathymetric maps produced in specific years over the 82-year period considered. Since the hydrographic survey technology employed to produce bottom depth maps has vastly improved over this period, the accuracy of the depth data obtained from maps produced in the early portion of the 82-year period considered compared to the depth data on maps prepared in recent years is unknown. It should be acknowledged that even a slight error in the quality of the mapping can significantly affect estimated sediment erosion and accretion volumes for specific areas studied.

The Byrnes *et al.* 2010 report asserts that Dauphin Island's continued expansion to the west at a relatively consistent rate over the 82-year period is evidence indicating the sand supply to the island has not been reduced by maintenance of the Outer Bar Channel. However, the proposed sand budget does not consider the loss of sand from a generalized reduction in the topographic relief of Dauphin Island's populated West End that has occurred since the 1970s. While periodic storm created breaches and washover surge channels have indeed healed through littoral drift processes, there has been an overall diminishment in the island's western surface elevations that have not been restored. Instead of being fed by a "robust sand supply" as suggested by Byrnes *et al.*, the observed westward expansion of Dauphin Island may in fact be due to a combination of the cannibalistic erosion of the Sand-Pelican Island shoals, erosion of Dauphin Island's Gulf beaches west of the fishing pier, and to the generalized decrease in the topographic relief of the island's populated West End where washover has become more common place during minor storm events.

• In developing the proposed sand budget, Byrnes *et al.* (2008 and 2010) do not directly address the change in Dauphin Island's overall size (including a general narrowing of the island's West End) that began to occur in the latter half of the 82-year period considered. Morton (2007) showed that "...after 1958 [Dauphin] island entered into a net erosional phase that has persisted and most recently accelerated." Morton identified three factors as potentially contributing to Dauphin Island's loss of land: (1) frequent intense storms; (2) sea level rise; and (3) a reduction in sand supply. Land loss on Dauphin Island and its sister barrier islands to the west have consistently occurred since the 1970s even during periods of low storm activity. Tide gauge records do not demonstrate that sea level rise accelerated during this same period.

Morton attributed the rapid increases in the Dauphin Island land loss rates to reduced sand supplies resulting from dredging of the Mobile Outer Bar Channel and to the disposal of the dredged sand in deeper Gulf waters. Morton suggested a strong temporal correlation exists with the channel maintenance dredging activities. The correlation between channel dredging/disposal and Dauphin Island's loss of land indicates the island's sand budget deficit stems from a long-term reduction in sand supply caused by progressively deeper dredging of the Mobile Outer Bar Channel and



Historical Land Loss for Alabama-Mississippi Barrier Islands (from Morton 2008)

the removal of the sand from the littoral drift system. Thus, the channel acts as a sediment sink, trapping sand that normally would have bypassed around the ebb-tidal delta and nourished Dauphin Island and the downdrift Mississippi barrier islands. This means the natural sand transport system is disrupted by dredging that removes the sand from the system and disposes of it in deeper water where it cannot be recaptured in its totality back into the system.

Thus, maintenance of the Outer Bar Channel has an indirect influence on Dauphin Island's historical shoreline changes through induced erosion. Morton contends that such indirect impacts are sometimes more significant than direct impacts because they remain undetected for long periods of time. His view is supported by the casual recollections of locals who first noticed the beginning of erosion of the Sand-Pelican Island shoals in the early 1970s, that were followed in subsequent years by increasing observations of the sustained erosion now affecting Dauphin Island's western Gulf shoreline in particular.

• In their proposed sand budget, Byrnes *et al.* (2010) averaged maintenance annual dredging records between 1920 and 2002 to arrive at 287,000 cy/yr of sand being "…extracted from the channel and disposed of offshore." That amount represents a slight increase in the 274,000 cy/year contained in their 2008 report. The problem with this approach is that actual dredging volumes have not remained constant over the entire 82-year period as depicted in the below figure from Byrnes et al (2010).

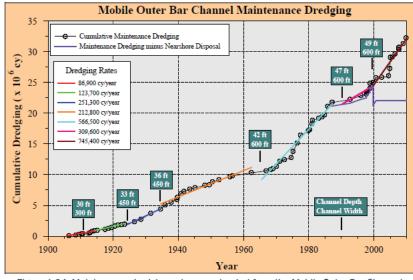


Figure 1-24. Maintenance dredging volumes extracted from the Mobile Outer Bar Channel between 1904 and 2009. Sand extraction rates were determined using linear regression analysis on segments of the curve reflecting changes in channel dimensions with time (data available in Appendix B).

Dredging volumes have actually increased dramatically over the 82-year entire period as shown in the above figure taken from Byrnes et al. (2010). Initial shallow dredging of the Mobile Outer Bar Channel had minimal effects on sediment transport when navigation depth requirements were less in the early years compared to the deeper draft requirements of the ships calling on the Port of Mobile today. Byrnes *et al.* (2010) point out that "...between 1956 and 1965, major changes were made to channel width and depth (36' deep by 450' wide prior to 1956 and 42' by 600' wide after 1965), resulting in a 2.5 to 3-fold increase in maintenance dredging quantities." The timeframe within which the "major changes were made to channel width and depth" corresponds closely with the finding reported by Morton (2007) that "...after 1958 [Dauphin] island entered into a net erosional phase that has persisted and most recently accelerated". The dataset considered in the Mobile District's 1978 report that concluded maintenance of the Outer Bar Channel is contributing to the erosion of Dauphin Island also included these years.

The Mobile District's 1980 report neither investigated the influence of maintaining the then existing Outer Bar Channel on the erosion of Dauphin Island, nor the potential effects of the recommended increased channel depth and width to further influence erosion of the island. Consideration of the volumes actually dredged today will provide a more realistic view of how maintenance of the channel influences the sand budget for the Mobile Pass Inlet and Dauphin Island.

Actual maintenance dredged volumes for the Outer Bar Channel for the 30-year period between 1980 and 2009 are listed in the table on the following page. The 30 period considered includes a series of three increases in channel depth that occurred beginning with 42 feet (originally constructed in 1965), 47 feet (constructed between

1989-90), and the present 49 feet (deepened in 1999). Thus for this more recent 30year period of increased channel depth, the average annual volume of sand dredged and carried offshore for disposal is approximately 503,000 cy. This is almost twice the 287,000 cy/yd used by Byrnes *et al.* to represent the volume of annual dredged sands considered in their 2010 sand budget model. From a sensitivity analysis standpoint, it would be interesting to see how replacing the current 287,000 cy/yd dredging volume with 503,000 cy/year would affect the sand budget model. It should also be pointed out

Dredge Date	Gross Quantity Dredged (yd ³)	Disposal Area Used ^{1/}
Feb-Dec 1980	1,129,337	ODMDS
Jan-Mar 1981	610,623	ODMDS
Dec 1982-Jan 1983	312,408	ODMDS
Jan-Nov 1984	559,607	ODMDS
Aug-Oct 1985	1,386,536	ODMDS
Jan-Feb 1987	656,089	Nearshore Feeder Berm
Feb 1989-May 1990	^{2/} 6,755,352	ODMDS
Aug-Sep 1992	466,607	ODMDS
Nov-Dec 1995	621,172	ODMDS
Aug-Dec 1997	710,996	ODMDS
Sep-Oct 1998	1,279,780	ODMDS
Aug-Sep 1999	71,380	ODMDS
	54,600	SIBUA
May-Sep 1999	<u>3</u> / 3,061,598	SIBUA
Apr-Jul 2000	758,280	ODMDS
Mar 2002-May 2002	92,820	SIBUA
Jun 2004	230,110	SIBUA
Oct 2004-Nov 2004	1,184,817	SIBUA
Oct 2004-Jan 2005	1,808,765	SIBUA and at Lighthouse
Aug 2005	67,555	SIBUA
Apr-Jun 2006	487,975	SIBUA
Aug 2007	1,083,860	SIBUA
Nov-Dec 2008	585,430	SIBUA
Sept-Nov 2009	942,817	SIBUA
Total Dredged from Outer Bar Channel	24,918,514	For 30 years 1980-2016
Total Placed in Ocean DA	14,672,078	For 30 years 1980-2016
Total Placed at Nearshore Feeder Berm	656,089	For 1987 only
Total Placed in SIBUA or at Lighthouse	9,600,347	For 30 years 1980-2016
Average Annual Maintenance Dredging Volume	⁴ / 503,000	For 30 years 1980-2016

Mobile Harbor Outer Bar Channel Dredging History (1980-2009)

(Source: USACE annual maintenance quantities)

^{1/} ODMDS – EPA approved open water Ocean Dredged Material Disposal Site SIBUA – Sand Island Beneficial Use Area

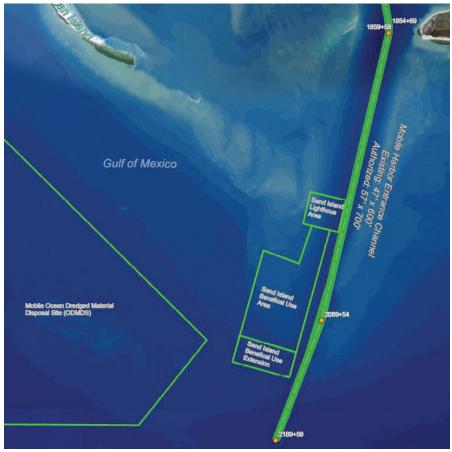
^{2/} New work deepening from 42 to 47 feet

 $\frac{3}{2}$ New work deepening from 47 to 49 feet.

⁴/ Excludes new work deepening volumes in 1989-1990 and 1999

503,000 cy/yd, an additional almost 10 million cy of sands were dredged to deepen the channel that during the 30-year period when the maintenance dredged volume averaged on two separate occasions (i.e., in 1989-90 and 1999), with all of those sands also being carried to the offshore disposal site out of nearshore littoral drift system. The potential impact on the modern Mobile Pass sand budget from those deepening events is not specifically discussed in the Byrnes et al. 2010 report.

• The Byrnes et al. 2010 sand budget indicates 50,000 cy/yr of sand "cross" the Outer Bar Channel from the east. Since the channel is dredged on a one or two-year cycle to provide the 49-foot depth, shoaling rarely reduces effective navigation depths. The maintained channel depth of 49 feet exceeds the depth of the natural 20-foot channel across the bar by almost 30 feet. Because of this great depth, Byrnes et al. refers to the maintained navigation channel as a "gorge". The sand budget distinguishes the 50,000 cy/yr alleged to cross the channel from the Fort Morgan Peninsula from the 161,000 cy/year hypothesized (see below bullet) to be transported landward to the ebb tidal delta from the Sand Island Beneficial Use Site (SIBUA) that includes depths below the -30-foot contour. The sand budget does explain the physical process responsible for transporting 50,000 cy/yr of sand from the east across the channel "gorge".



SIBUA and Mobile Harbor ODMDS

 The above table shows the Mobile District began in 1999 to place maintenance dredged sands almost exclusively within the SIBUA, with the intended goal being to keep "...sand removed from the bar channel in the local littoral drift system." The location of the SIBUA is depicted on the following illustration taken from a Mobile District January 12, 2016 Public Scoping Meeting display. The illustration also shows the relationship of the SIBUA to the Outer Bar Channel, the shallow waters of the Mobile Pass ebb tidal delta above the -30-foot bottom contour, and the offshore Ocean Dredged Material Disposal Site (ODMDS).

After just 10 years of consistent use, the Corps had to add 207 acres to the SIBUA by extending its southern boundary by 2000 feet. The Public Notice stated the disposal area needed to be expanded "...provide sufficient depths for access of the dredge equipment...due to site depths changing". The need for the expansion implies that depths were decreasing in the SIBUA because a significant volume of the placed dredged sands were actually accumulating within the site instead of being incorporated into the littoral drift system as planned. This fact is supported by the below Figure 4-11 which was taken from the Byrnes *et al.* 2010. Figure 4-11 graphically depicts the accumulated sands in dark blue that existed in the SIBUA in 2002. It is important to note that the sand accumulations depicted in Figure 4-11 represent the observed conditions after the SIBUA had been used for just three years between 1999 and 2002. It would be interesting to compare the 2002 sand accumulations with those that exist today to determine if the deposited dredged sands are continuing to accumulate in the SIBUA.

The 2008 southward expansion of the SIBUA, will farther remove placed dredged sands from the ebb tidal delta, which should show an increased tendency for the sand to remain at that location in lieu of being reincorporated into the littoral drift system as intended. Between 1999 and 2009, a total of 9,600,347 cy of maintenance dredged sands had been placed in the SIBUA. The total volume placed within this site has continued to increase in the seven subsequent years between 2000 and 2016.

Byrnes et al. 2010 suggests in their proposed sand budget that over the 82-year period between 1920 and 2002, an average of 161,000 cy/yr is transported annually from the offshore area within which the SIBUA landward to the ebb tidal delta's eastern lobe. This volume estimate is questioned. As shown in the above table, dredged material had only been placed in the SIBUA during the last three years of the 82-year period considered. That means the 161,000 cy/yr estimate is based on only three years of data. The 161,000 cy/yr volume, if correct, represents around 48% of the 337,000 cy/yd estimated to be naturally transported from eastern lobe of the ebb tidal delta into the Outer Bar Channel, 85% of which is subsequently dredged and carried offshore for disposal. Further, considering the average of 287,000 cy/yd the sand budget proposes is dredged annually, 161,000 cy/yr would mean that around 56% of the dredged sands deposited offshore are transported landward to the ebb tidal delta's eastern lobe to be reincorporated into the littoral drift system. These are very large percentages which conflict with the observed facts that Dauphin Island's Gulf shoreline is eroding, and has

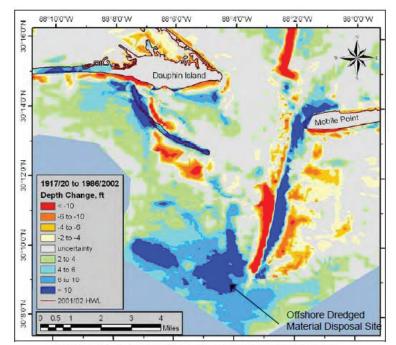


Figure 4-11. Bathymetric change on the Mobile ebb-tidal delta, 1917/20 to 1986/2002. Deposition zones seaward and west of the navigation channel were last surveyed in 1991. The deposition area farthest to the west is the Mobile Outer Mound. The irregular polygon just west of the outer mouth bar channel is believed to mark the historical location of dredged material disposal from the outer bar channel.

been since the early 1970s, because the island is suffering from an overall deficit of sand. As important as the issue of how much of the dredged sand placed in the SIBUA is actually returned to the littoral drift system, it is difficult to understand how the proposed 161,000 cy/yr volume can be based on essentially three years of dredged material disposal data and the bathymetric conditions in the SIBUA out of an 82-year period of record. Thus, this aspect of the proposed sand budget does nothing to explain why Dauphin Island is suffering from a general deficit of sand. As such the 161,000 cy/yr estimate is questionable and requires further investigation and analysis.

 As stated in the above bullet, if the 161,000 cy/yr volume estimate is correct, that would mean 56% of the average maintenance volume of 287,000 cy/yr dredged from the Outer Bar Channel and carried offshore for disposal in the SIBUA each year is returned to ebb tidal delta and eventually transported by natural nearshore hydrodynamic forces to nourish Dauphin Island's eroding shoreline. Even if that assumption is correct, it is logical to expect that the cumulative year-in and year-out loss of the remaining 44% of the dredged sands that appear to be accumulating in the SIBUA and effectively lost from the littoral drift system to eventually begin to adversely affect the natural sand budget. This logic is being borne out by the steady ongoing erosion of the Sand-Pelican Island shoals and Dauphin Island's Gulf shoreline. Further, if the 161,000 cy/yd return estimate in the proposed sand budget is correct and the modern dredging average of 503,000 cy/yd is considered, that would mean the amount of sand projected to be returned to the ebb tidal delta should decrease from 56% to 32% of the total dredged and carried offshore for disposal each year.

The proposed sand budget should be updated to reflect "modern" conditions within the SIBUA as they exist today after the site has experienced at least 15 years of receiving the more realistic modern average annual dredging volume of 503,000 cy/yr. Further, the GRR Study should also include a comprehensive analysis of the potential effects of the considered increases in channel width and depth to determine if enlarging the channel could further affect the natural sand budget for Mobile Pass and Dauphin Island.

• The 2010 Byrnes *el al.* report concludes that "...based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar." *If that conclusion is to be accepted by all parties, which it currently is not, the central question that must be answered is: What is causing the severe erosion of the Sand-Pelican Island shoal and Dauphin Island that began to occur in the latter half of the 20th century has been coincidental with increased dredging of the Outer Bar Channel?*

The above Mobile District Response misses the point made by the comment: **Since the 1980** report failed to investigate the Dauphin Island erosion issue as the Mobile District committed would occur in the previously identified 1975 letters, during the intervening 37 years to the present, the island has continued to erode with no corrective remedy being identified. The Mobile District Response states "...the GRR will address potential effects of proposed channel improvements to the existing navigation project [emphasis added]". That extremely narrow study objective implies the Mobile District plans to conduct the GRR Study in a manner that will not only violate the Corps' ER 1105-2-100 and other planning policy and guidance, but also the provisions of the Council on Environmental Quality's NEPA regulations. Under the current Mobile District approach, whatever erosion losses the island experienced between 1980 and the Study's base year would remain and not be investigated in the GRR Study, even if the Outer Bar Channel maintenance program contributed to those losses. The Study would only investigate the island's incremental additional erosion losses projected to occur over the 50-year future period considered in the Study. What is needed, and expected by the concerned public, is for the GRR Study to include efforts directed at thoroughly investigating the effects of the Outer Bar Channel (both historic and authorized channel dimensions) on the erosion of Dauphin Island. And importantly, the GGR Study should not be allowed to ignore the erosion issue as the Mobile District did when it prepared the 1980 report.

As pointed out numerous times to the Mobile District staff, the 1980 Corps report is seriously flawed in that it completely ignored the Dauphin Island erosion issue, failed to comply with Section 5 of the Rivers and Harbors Act of 1935, ignored the findings of the 1978 Corps report, and did not honor the written commitment made by the Mobile District Engineer in 1975 to

investigate the Dauphin Island erosion problem. If the GRR Study does not address the historic sand losses that have occurred due to maintenance of the Outer Bar Channel interrupting the littoral drift system, what the Mobile District and the Alabama State Port Authority will in essence be conveying to the concerned stakeholders is: "Dauphin Island must continue to accept, bear, and endure the adverse consequences and economic hardships resulting from the island's erosion, while the Port of Mobile and the Theodore Industrial Port continue to profit from the transportation benefits of the channel without having to pay the "full cost of doing business".

Considering information contained in various reports produced by both the Mobile District and the US Geological Survey, maintenance of the Outer Bar Channel has interrupted the littoral transport of sand across the Mobile Pass Inlet dating back to 1939. Based upon those reports, it is possible to select and to individually build a case to support any one of the following years as the baseline from which to address the historic sand losses: 1939, 1958, 1966, 1969, 1978, 1980 and 1986. However, 1980 appears to represent the most defensible year to consider for the GRR Study.

Since the 1980 report did not address the effects of channel deepening on the littoral drift system, that report has a significant outstanding technical, scientific, and logic deficiency that must be corrected in the GRR Study. That study must address the impacts of the historical sand deficit on Dauphin Island attributable to maintenance of the Outer Bar Channel dating back to at least 1980. During the 37 years since the 1980 report was completed, maintenance of the Outer Bar Channel has continued, further contributing to the erosion of Dauphin Island. For example, the significance of the amount of beach quality sands removed from the littoral drift system between 1980 and 2009 is depicted in the above table. Over that period, a total of 24,918,514 cy of were removed by a combination of new work and maintenance dredging, with 14,672,078 cy being disposed of in deep Gulf waters and permanently lost from the littoral drift system. An additional 10,256,436 cy was placed in the SIBUA or in its general vicinity. Based on a modern average annual maintenance volume of 503,000 cy/yr as discussed, would mean an additional 3,523,698 cy of sand could also have been dredged between 2000 and 2016 and placed in the SIBUA.

These historic sand losses that have occurred since 1980 should be addressed in the GRR Study. To ignore them would be an irresponsible action on the part of the Mobile District. The GRR Study must also consider appropriate mitigation measures to restore the historic and future sand losses attributable to the Outer Bar Channel for both the "Without Project" and the "With Project" conditions. To do otherwise, would apply an entirely different standard to the evaluation of the Dauphin Island erosion issue than the Mobile District's used in its recently completed Mississippi Barrier Island Restoration Plan SEIS where it recommended selected islands be restored to the pre-Hurricane Camille conditions of 1969. **Compliance with NEPA requires that the impacts of past actions of an existing project being studied for further improvement must be considered if those historic impacts have not been addressed in a previous NEPA document and if those impacts are relevant to the improvements being considered**. Given the longstanding nature and critical importance of the erosion issue, it is not acceptable for the Mobile District to base its entire position that "...dredging and placement practices associated with operation and maintenance of the Mobile Harbor Channel have not had a measurable impact on Dauphin Island" on just two contractor reports prepared by the same authors (i.e., Byrnes *et al.* 2008 and 2010). The earlier report was prepared in connection with a lawsuit against the Corps, with the latter report essentially "refining" analysis of the data considered in the first report. Both of these reports have not been submitted for exterior professional and peer review; satisfied all upward Corps reporting and review requirements; and been subjected to appropriate agency and public scrutiny. The Dauphin Island erosion issue can only be resolved by conducting thorough objective and transparent analyses in which the trust of the concerned and affected stakeholders is gained.

References:

Byrnes, M.R., S.F. Griffee, and M.S. Osler. January 2008. Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama. U.S. Army Corps of Engineers, Mobile Engineer District. Mobile, Alabama.

Byrnes, M. R., S. F., Griffee, and M. S. Osler, 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8. U.S Army Engineer Research and Development Center, Vicksburg, Mississippi.

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508). Washington, D.C.

Dean, R.G. March 7, 2008. Review of Final Report by Applied Coastal Research and Engineering: "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Bay Entrance, Alabama". U. S. Army Corps of Engineers, Mobile Engineer District, Mobile, Alabama.

Morton, R. A. 2007. Historical Changes in the Mississippi-Alabama Barrier Islands and the Roles of Extreme Storms, Sea Level, and Human Activities. Open File Report 2007-1161. U.S. Geological Survey, Coastal and Marine Geology Program. St. Petersburg, Florida.

National Fish and Wildlife Foundation-Department of the Army. April 30, 2015. Memorandum of Agreement, NFWF Gulf Environmental Benefit Fund, Alabama Barrier Island Restoration Assessment, NFWF Project ID No. 45719. Washington, D.C.

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama. US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama. US Army Corps of Engineers. November 1985. Final Supplemental Environmental Impact Statement, Mobile Harbor, Alabama, Channel Improvements, Offshore Dredged Material Disposal. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

US Army Corps of Engineers. December 5, 2008. Expansion of the Sand Island Beneficial Use Area, Maintenance Dredging and Placement Activities, Mobile Harbor Navigation Project, Mobile County, Alabama. Public Notice No. FP08-MH14-05. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. January 2016. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Barrier Islands Restoration Plan, Final Supplemental Environmental Impact Statement: Appendix H - Barrier Islands. Mobile Engineer District, Mobile, Alabama. **Public Comment 6:** It is crucial that both the Study's "Without Project" condition and the "No Action Alternative" must include and clearly define the significant historic, ongoing, and future projected erosion of Dauphin Island and acknowledge that an unmet mitigation needs exists, and has existed since at least 1980, that is associated with maintenance of the present Outer Bar Channel and will be intensified in the future should that channel segment be deepened and widened. Mitigation of the sand losses should be an integral component of both the "No Action Alternative" and all "Action Alternatives" considered, including the Tentatively Selected Plan and the Recommended Plan. All applicable federal laws dealing with mitigation of project effects should be addressed. In addition, the Study should assure compliance with Chapter 220-4-.09(1) of the State of Alabama Administrative Code (Placement and Configuration of Piers and Other Improvements on State Submerged Lands) which states: "To the maximum extent feasible, all beach compatible dredge materials taken from the tidal coastal system shall be placed on beaches or within the nearshore sand system".

Mobile District Response 6: As defined in ER 1105-2-100, Section 2-4, the without-project condition is the most likely condition expected to exist in the future in the absence of a proposed water resources project. The forecast of future without-project conditions shall consider all other actions, plans and programs that would be implemented in the future to address the problems and opportunities in the study area in the absence of a proposed project. Comparison of conditions with the project to conditions without the project will be performed to identify the beneficial and adverse effects of proposed plans. Expected environmental conditions, especially trends in ecosystem change, shall be considered in forecasting with- and without-project conditions.

The baseline for developing the without-project condition is the conditions existing at the time the study is being conducted. If analyses indicate adverse environmental impacts are a result of proposed channel modifications, mitigation of those impacts will be considered.

For Navigation, the Federal requirements apply rather than the Alabama Administrative Code. The "Supremacy Clause", found in Article VI of the U.S. Constitution, shields federal activities from state regulation unless there is a clear and unambiguous congressional action or mandate authorizing such state regulation. There has been no such congressional action or mandate that would require application of this Alabama Administrative Code requirement.

Rebuttal 6: Corps planning guidance requires that the GRR describe the existing and future conditions expected to exist in the Study Area if no further deepening and widening of the channel occurs. That scenario, referred to as the "Without Project" condition, serves as the baseline against which to assess the environmental effects of the various channel enlargement alternatives are determined by comparing the projected future conditions associated with each depth alternative against the "Without Project" condition.

Similar to Public Comment 5, the concerned public maintains that since the 1980 Corps report failed to consider the historic and future erosion of Dauphin Island attributable to

maintenance of the Outer Bar Channel, as documented in the 1978 Corps report:

"The No Action Alternative would allow continuation of existing erosion and decreasing beach widths. Loss of valuable property would occur causing a decline in local resident use and tourism. Environmental impacts (shorebird and sea turtle nesting habitat) due to erosion and transport of sands would also continue to occur."

As a result of this Mobile District position that was reported just two years prior to completion of the 1980 report, the "Without Project" scenario (i.e., "No Action Alternative") considered in the 1980 report is flawed because it failed to address the indirect role that maintenance of the Outer Bar Channel plays in contributing to the erosion of Dauphin Island. Since the 1980 report did not consider the project cause-effect relationship with the island's erosion problem, that report contained erroneous findings, conclusions, and recommendations. Of equal importance, the erroneous nature of the 1980 report resulted in its accompanying EIS to also be flawed since it neither addressed the actual indirect effects of the existing Outer Bar Channel maintenance program on the erosion of Dauphin Island. *This one significant point alone has the potential to be the topic of a future legal challenge based on National Environmental Policy Act considerations should an interested future party wish to consider that avenue.*

To make it perfectly clear, the concerned public is not interested in pursuing legal actions of any nature at the present time. Instead, the concerned public only insists that the GRR Study serves as the appropriate vehicle to remedy these significant deficiencies in the 1980 report dealing with the "Without Project" condition (i.e., "No Action Alternative") – a crucial element of the Corps' plan formulation process. The GRR Study should:

- First, correct the "Without Project" considered in the 1980 report to acknowledge maintenance of the Outer Bar Channel contributes to the erosion of Dauphin Island;
- Second, the erosion of Dauphin Island that has occurred in the intervening 37 years between 1980 and 2016 (or the base year considered in the plan formulation process) should be accounted for to reflect the historical erosion losses; and
- Third, after all historic erosion losses of Dauphin Island attributable to maintenance of the Outer Bar Channel between 1980 and 2016 (or the base year) are accounted for, the corrected "Without Project" condition should then be forecast over the next 50 years to project the additional erosion the island is anticipated to experience due to continued maintenance of the existing Outer Bar Channel -- even if no further deepening or widening occurs.

If such an analysis is conducted objectively, it should demonstrate and quantify that an "*unmet mitigation* need" has existed for the actual "Without Project" condition since at least 1980 when the report was completed. Restoration of the identified eroded volume of

sand would be required to counter the adverse impacts that have been allowed to occur over the last 37 years due to maintenance of the existing Outer Bar Channel. That mitigation would be totally unrelated to any of the alternatives to be considered to further deepen and widen the Mobile Harbor project. Such an analysis would most likely also show that additional increases in the cross-sectional area of the Outer Bar Channel created through deepening and widening could cause future maintenance of the channel to intensify Dauphin Island's sand losses if appropriate measures are not made an integral component of the recommended plan to retain the dredged sand within the littoral drift system.

To conclude, the GRR Study should quantify Dauphin Island's historic sand losses that occurred between 1980 and 2016 (or base year) which are attributable to maintenance of the Outer Bar Channel. The resulting volume of sand should be characterized in the GRR and SEIS to represent an "*unmet mitigation need*" that is directly connected to maintenance of the existing Mobile Harbor project. The GRR should clearly state that the "unmet mitigation" need will continue to exist, even if no further deepening and widening of the channel occurs, until the Mobile District and the Alabama State Port Authority undertake efforts in full coordination with the affected stakeholders to resolve the "unmet mitigation need". In this connection, all applicable Federal and State laws dealing with mitigation of project effects must be addressed in the GRR Study. In particular, the SEIS must discuss this outstanding deficiency of the 1980 EIS. If not, the Mobile District should expect to receive extensive comments on this issue when the Draft SEIS is released for public review, as well as creating the potential for other actions to be pursued.

With all due respect, the third paragraph in the above comment dealing with the referenced "Supremacy Clause" does not accurately depict how the Corps satisfies its navigation mission throughout the nation. Some States exercise much greater concern than others for their respective resources and have introduced a variety of protective laws that can occasionally conflict with how Federal navigation projects are constructed and maintained. Rather than resolving such conflicts by a heavy-handed application and enforcement of the "Supremacy Clause" which it could rightfully do under the Constitution, the Corps as an agency has typically adopted a "softly softly" approach to work with such States in a positive fashion as the preferred approach to resolve conflicts. The principle method employed is to require the non-Federal partner (i.e., sponsor) for a project to assume the responsibility for complying with State laws. This is routinely accomplished by including specific language in the required local cooperation agreements entered into between the Corps and its numerous non-Federal partners. That language clearly assigns the responsibility for complying with State laws to the non-Federal project partner.

The State of Florida is a classic example of a State that places great stock in protecting its natural resources. Of direct relevance to the Mobile Harbor project, Florida requires Inlet Management Plans be developed where navigation projects are located in coastal inlets. The major goals of these plans are to preserve beach quality sand, prevent erosion of the shorelines on either side of the inlets, and require mitigation of sand losses. Since the Federal Government generally constructs and maintains almost all coastal navigation

projects, the Corps has considerable experience in taking a secondary role to its non-Federal partners (i.e., port authorities, local governmental entities, State agencies, etc.) as they undertake the necessary actions to assure the required inlet management plans are developed in compliance with State law for a Federal navigation project. The Mobile District has direct experience in this regard related to its several shallow and deep draft coastal navigation projects in the Panhandle of Florida.

Reflective of this approach to assure in the case of the Mobile Harbor GRR Study is Article VIII (entitled Federal and State laws) of the original Design Agreement between the Corps and the Port Authority that was amended on May 2, 2014 states the following:

"In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government shall comply with all applicable Federal and State law and regulations..."

This means that the Alabama State Port Authority will be responsible for assuring that the channel widening and deepening project ultimately recommended in the GRR complies with all State laws including Chapter 220-4-.09(1) of the State of Alabama Administrative Code (entitled Placement and Configuration of Piers and Other Improvements on State Submerged Lands) which requires:

"To the maximum extent feasible, all beach compatible dredge materials taken from the tidal coastal system shall be placed on beaches or within the nearshore sand system".

Ultimate compliance with this State law will depend upon the enforcement will of the State Lands Division within the Department of Conservation and Natural Resources in working with the State Port Authority. In either event, the GRR and SEIS must address this specific State provision in view of its direct relevance to the Mobile Harbor project. The concerned public will monitor how this issue is managed in the GRR Study.

References:

Alabama State Port Authority and US Army Corps of Engineers. May 2, 2014. Amendment No. 1 to US Army Corps of Engineers between the Department of the Army and Alabama State Port Authority for Design pf the Mobile Harbor Channel Widening Limited Reevaluation Report. Mobile District, Mobile, Alabama.

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508). Washington, D.C.

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. November 1985. Final Supplemental Environmental Impact Statement, Mobile Harbor, Alabama, Channel Improvements, Offshore Dredged Material Disposal. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

Public Comment 7: The Corps has the discretion to select a plan, other than the National Economic Development (NED) plan, if there is an important overriding reason for choosing an alternative that would not maximize net economic benefits. For navigation projects, part of the overall NED plan is the "Federal Standard", or "least cost" plan, for disposal of dredged material. The Water Resources Development Act of 1996 allows for a disposal method that is not the "least-cost" option, provided the incremental costs of an alternative disposal method are reasonable in relation to the environmental benefits, including the benefits to the control of shoreline erosion. The Corps cannot ignore the leeway that it is provided (by both law and regulation) to finally correct the erosion of Dauphin Island attributable to the Outer Bar Channel.

<u>Mobile District Response 7</u>: Guidance that will be followed for disposal of dredged material is provided in ER 1105-2-100, which includes language on other than least-cost disposal in Section E-14 Special Considerations, pages E-67 to E-68. Paragraph g.(2) defines "reasonable." The complete reference is as follows:

"g. Beneficial Use of Dredged Material. Construction and maintenance dredging of Federal navigation projects shall normally be accomplished in the least costly manner possible (ER 1130-2-520). Section 204 of the WRDA of 1992 established programmatic authority which allows the Corps to carry out ecosystem restoration projects in connection with dredging for construction, operation or maintenance of authorized navigation projects. Guidance for Section 204 is provided in Appendix F. Section 207 modifies Section 204 to allow the Corps select a disposal method that is not the least cost if determined that the incremental costs are reasonable in relation to the environmental benefits. Section 207 establishes an authority which is separate and distinct from the authority established by Section 204. Section 207 projects are not subject to the programmatic limitation of Section 204 and are budgeted through the standard appropriation process. Cost-sharing and decision making criteria are described in the following subparagraphs.

(1) Cost-Sharing. The cost-sharing for Section 207 projects is the same as Section 204 projects. The non-Federal interests must enter into a cooperative agreement in accordance with the requirements of section 221 of the Flood Control Act of 1970 in which the non-Federal interests agree to provide 25 percent of the cost associated with construction of the project for the protection, restoration, and creation of aquatic and ecologically related habitats, including provision of all lands, easements, rights-of-way, and necessary relocations; and pay 100 percent of the operation, maintenance, replacement, and rehabilitation costs associated with the project.

(2) Decision-Making Criteria. The decision making criteria is whether the incremental cost is reasonable in relation to the environmental benefits achieved. Where the incremental Federal costs is 25 percent of the total project cost or \$300,000, whichever is less, the

incremental costs are judged to be "reasonable" in relation to the environmental benefits without the need for detailed analysis. However, it must still be demonstrated that the environmental resources to be protected, restored, or created are valuable, the environmental outputs can be quantified and described and the environmentally beneficial disposal method is supported by Federal and state resource agencies. The environmental disposal method would be subject to appropriate National Environmental Policy Act requirements. For environmentally beneficial disposal methods that have incremental Federal costs which exceed 25 percent or \$300,000, the incremental costs must be justified by demonstrating that the monetary and nonmonetary benefits (outputs) of the ecosystem restoration project justify its incremental costs using cost effectiveness and incremental cost analysis. Where the environmentally beneficial use involves separable increments each increment must be justified. Refer to Section V of this appendix for further information on cost effectiveness and incremental cost analysis."

Rebuttal 7: Should the GRR Study and the Alabama Barrier Island Assessment conclude maintenance of the Outer Bar Channel is contributing to the erosion of Dauphin Island, the Study would be required to include development of an appropriate mitigation plan as pointed out in the "Decision Management Plan to TSP Milestone" and "Report Synopsis". That means the mitigation plan would become an integral component of the plan to deepen and widen the Mobile Harbor and recommended accordingly, with mitigation being cost-shared at the applicable percentages required for the overall project. According to paragraph C-3e(12)(b) in Appendix C (Environmental Evaluation and Compliance) of ER1105-2-100, "…construction costs for mitigation will be treated the same as other project construction costs for cost sharing purposes." Should mitigation be recommended under the overall authority for the Mobile Harbor improvements, there would be no need to involve other study authorities to pursue appropriate mitigation to either avoid, minimize, rectify, reduce, or compensate for the identified impacts as defined in CEQ's NEPA regulations.

Appendix C of ER 1105-2-100 specifies the various Environmental Evaluation and Compliance analytical, procedural, and reporting that would have to be satisfied to develop and recommend an appropriate mitigation plan as part of the GRR Study.

In addition to the authorities pointed out in the Mobile District Response, the discussion of the Corps' Navigation Mission in ER 1105-2-100, paragraph 3-2b(6) dealing with "Specific Policies" identifies an additional authority that could also be considered to address Dauphin Island's erosion problem should the ERR Study conclusively determine maintenance of the Outer Bar Channel is not contributing to the island's erosion. That authority is based upon Section 145 of the WRDA of 1976, as amended. The entire referenced paragraph from ER 1105-2-100 is provided below for information purposes only:

"Placement of Dredged Materials on Beaches. Construction and maintenance dredging of Federal navigation projects shall be accomplished in the least costly manner possible. When placement of dredged material (beach quality sand) on a beach is the least costly acceptable means for disposal, then such placement is considered integral to the project and cost shared accordingly. When placement of dredged material on a beach costs more than the least costly alternative, the Corps may participate in the additional placement costs under the authority of Section 145 of the WRDA of 1976, as amended. The additional cost of placement may be shared on a 65 percent Federal and 35 percent non-Federal basis if: (1) requested by the State, (2) the Secretary of the Army considers it in the public interest, (3) the added cost of disposal is justified by hurricane and storm damage reduction benefits and (4) the shoreline on which the material is placed is open to public use."

References:

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508). Washington, D.C.

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

US Army Corps of Engineers. Last Updated February 3, 2016. Mobile Harbor GRR Decision Management Plan to TSP Milestone (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. February 2016. Report Synopsis for Mobile Harbor General Reevaluation Report (r 23Aug2016). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

U.S. Congress. October 22, 1976. Rivers and Harbors Act of 1976. Public Law 94-587. Washington, DC.

Public Comment 8: Since 1987, the Corps has increasingly placed dredged sands removed from the Outer Bar Channel in the Sand Island Beneficial Use Area (SIBUA). The stated intent of the SIBUA is for littoral drift processes to transport the sand to the Dauphin Island shoreline to counter erosion However, the Corps has never scientifically verified the SIBUA accomplishes its intended purpose, and no monitoring program exists to verify sand from the SIBUA is in fact reaching Dauphin Island. And all the while, Dauphin Island has continued to erode. The Study must: (1) designate a more suitable disposal site closer to Dauphin Island; and (2) recommend implementation of disposal measures that include placement of the sand in the nearshore waters of Dauphin Island in a manner similar to that recently recommended by the Corps to restore Petit Bois Island and Ship Island.

Mobile District Response 8: The Mobile Harbor GRR and the National Fish and Wildlife Foundation (NFWF) Alabama Barrier Island Restoration Assessment present a great opportunity to increase the scientific understanding of the coastal processes influencing the ebb tidal shoal and nearshore areas, including Dauphin Island. The Mobile Harbor study will evaluate changes in the sediment transport processes on the ebb tidal shoal and nearshore coastal areas, including Dauphin Island, due to the proposed channel modifications (i.e. deepening or widening beyond the current depths and widths). The baseline for comparison (a.k.a. the future without project condition) will be the existing condition, with the current channel dimensions, projected into the future over a 50-year planning horizon to account for sea level rise, per USACE guidance. If the results of the future without project vs. the future with project condition (i.e. modified channel dimensions) show negative effects on Dauphin Island, appropriate mitigation measures will be evaluated and recommended. Potential measures could include a revision to the sand placement location at SIBUA.

If comparison of the future without and the future with project conditions shows no significant negative effect on Dauphin Island, there will be no efforts under the Mobile Harbor study to evaluate alternate placement locations. However, alternate placement locations will be evaluated as part of the NFWF Alabama Barrier Island Restoration Assessment to identify potential beneficial use options that could result in a more resilient and sustainable island in support of the critical natural habitats and resources over a 50-year planning horizon. If there are feasible opportunities to improve the sand placement practices for Mobile Harbor that are supported by the information generated from these two efforts, the Mobile District will evaluate those options for potential implementation in accordance with applicable law and policy.

Rebuttal 8: The Mobile District Response appears to be pursuing a reasonable approach to investigate the effectiveness of the SIBUA to return sands dredged from the Outer Bar Channel back into the littoral drift system. In particular, it is gratifying to learn that the Mobile District does not plan to rely solely upon the sand budget proposed in the Byrnes *et al.* 2010 report to evaluate the SIBUA for the reasons stated in Rebuttal 5's sixth bullet above.

Despite a general acceptance of the Mobile District's overall evaluation approach, there is a fundamental disagreement with the following sentence that is repeated from the District's above Response: "The baseline for comparison (a.k.a. the future without project condition) will be the

existing condition, with the current channel dimensions, projected into the future over a 50-year planning horizon to account for sea level rise, per USACE guidance." As explained in Rebuttal 7 above, in regard to the Dauphin Island erosion issue, it is not acceptable to establish the "without" project conditions as they exist today and then look forward 50 years into the future. In effect, the Mobile District is saying that whatever erosion historic harm has occurred to Dauphin Island will be allowed to remain as that harm is manifested today in (1) a degraded Gulf shoreline, (2) general decrease in topographic relief of the populated West End, (3) an overall thinning of the island, and (4) a reduction in the island's total footprint. The Mobile District advocates accepting this degraded condition of Dauphin Island as the "starting point" for the GRR Study – even if maintenance of the Outer Bar Channel between 1980 and today contributed to the overall degradation of the island. Such an approach is unacceptable to the Study.

Since the 1980 report failed entirely to investigate the relationship between maintenance of the Outer Bar Chanel and the erosion of Dauphin Island which the District's own 1978 report asserted existed, that report failure has allowed an additional 37 years (i.e., between 1980 and 2016) of erosion to continue to occur "unaddressed" as if it the erosion had never occurred. It is time the Mobile District finally stepped forward and admitted the 1980 report was deficient in this matter instead of continuing to ignore the "error of omission" and by doing so causing the affected stakeholders and resources to continue to be penalized through no fault of their own. The GRR Study provides the appropriate vehicle to address the 37 years of intervening historical erosion that has occurred to the present, as well as looking from this point forward 50 years into the future was Corps procedures require. The following pertinent statements from Rebuttals 5 and 2 are repeated below to support this position.

- From Rebuttal 5: "If the GRR Study does not address the historic sand losses that have occurred due to maintenance of the Outer Bar Channel interrupting the littoral drift system, then what the Mobile District and the Alabama State Port Authority will in essence be conveying to the concerned stakeholders is: 'Dauphin Island must continue to accept, bear, and endure the adverse consequences and economic hardships resulting from the island's erosion, while the Port of Mobile and the Theodore Industrial Port continue to profit from the transportation benefits of the channel without having to pay the "full cost of doing business".
- From Rebuttal 2: "...[T]he failure of the 1980 report to analyze how the recommended increase in the channel's dimensions could influence littoral drift sands and the Dauphin Island shoreline is confounding. It deserves to be reiterated that that failure represents a continuing major deficiency in the 1980 report, despite the Mobile District's failure to acknowledge that fact. Again, that deficiency must be corrected in the ongoing GRR Study."

As shown in the table in Rebuttal 5, since 1999, the Mobile District has increasingly placed dredged sands removed from the Outer Bar Channel in the SIBUA. The stated intent of the SIBUA is for the dredged sands to be reincorporated into the littoral drift system and ultimately

transported to Dauphin Island to counter shoreline erosion.

Despite the sand budget proposed in the Byrnes *et al.* 2010 report, the Mobile District has never definitively verified that the SIBUA accomplishes its intended purpose. The following facts contribute to the uncertainty: (1) the SIBUA is seaward of the more active shallow nearshore zone within which breaking waves and longshore currents cause sand to be transported; (2) increasing sand accumulations within the SIBUA forced the Corps in 2008 to extend the SIBUA boundary farther southward; and (3) Dauphin Island has continued to erode during the period within which the SIBUA has been most actively used to receive dredged sands.

It is understood that the Alabama Barrier Island Restoration Assessment is analyzing the different pathways for sand to be moved into, within, and out of the Study Area in order to update the existing sand budgets for the Mobile Pass Inlet. That analysis should include a thorough evaluation of the SIBUA. However, in the August 9 meeting, Mobile District staff stated that the GRR study authority does not allow the effectiveness of the SIBUA in satisfying its intended purpose to be addressed. That position does not make sense since it would appear logic and reason would require that all disposal sites recommended to receive sands dredged from an enlarged Outer Bar Channel should be thoroughly analyzed in the GRR to assure that they were cost-effective; could provide the long term capacity necessary to receive dredged material over the economic life of the project; would accomplish all of their intended purposes; and that the resulting environmental and social impacts associated with their use are acceptable.

References:

Byrnes, M. R., S. F., Griffee, and M. S. Osler, 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8. U.S Army Engineer Research and Development Center, Vicksburg, Mississippi.

National Fish and Wildlife Foundation-Department of the Army. April 30, 2015. Memorandum of Agreement, NFWF Gulf Environmental Benefit Fund, Alabama Barrier Island Restoration Assessment, NFWF Project ID No. 45719. Washington, D.C.

US Army Corps of Engineers. September 1978. Draft Mobile County, Alabama (Including Dauphin Island) Feasibility Report for Beach Erosion Control and Hurricane Protection. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. October 1980. Survey Report on Mobile Harbor (Includes Environmental Impact Statement). Mobile Engineer District, Mobile, Alabama.

Public Comment 9: The Study should thoroughly assess and document how maintenance of the Outer Bar Channel has also influenced the erosion of the Mississippi barrier islands to the west, an impact alluded to in the Corps' final Mississippi Barrier Island Restoration Project EIS.

Mobile Response 9: As part of the DIPOA settlement agreement Byrnes performed a study specifically evaluating the impact of the construction and maintenance dredging in the Mobile Outer Bar Channel on the ebb tidal shoal and Dauphin Island shorelines. Byrnes et al. 2010 concluded the following: "based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar" (pg. 206).

Additional analysis conducted as part of the engineering and design for the Mississippi Coastal Improvements Program (MsCIP) Comprehensive Barrier Island Restoration Plan expanded on this study to cover the Mississippi barrier islands of Petit Bois, Horn, and Ship. The study determined the channel at Petit Bois Pass has been filling since the 1960s, potentially providing a more efficient pathway for sand transport from Dauphin Island to Petit Bois Island. In contrast it indicated a net deficit in the sand transport budget from Petit Bois to Horn Island implicating the dredging and dredged material placement of the Horn Island Pass channels (Byrnes, et al. 2012). Based on this information we see no need to do any further studies on the Mississippi Barrier Islands and their response to activities at the Mobile Main Pass.

As stated in the response to comment #8, the Mobile Harbor GRR and the NFWF Alabama Barrier Island Restoration Assessment present a great opportunity to increase the scientific understanding of the coastal processes influencing the ebb tidal shoal and nearshore areas. If additional information/insight is generated from these two efforts, it will be included in the GRR feasibility report and integrated supplemental EIS.

References:

Byrnes, M. R., S. F., Griffee, and M. S. Osler, 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8, U.S Army Engineer Research and Development Center, Vicksburg, MS, 309 p.

Byrnes, Mark R., Julie D. Rosati, Sarah F. Griffee, and Jennifer L. Berlinghoff, 2012. Littoral Sediment Budget for the Mississippi Sound Barrier Islands. Technical Report ERDC/CHL TR-12-9, U.S Army Engineer Research and Development Center, Vicksburg, MS, 184 p.

Rebuttal 9: With the exception of one statement occurring, the overall Mobile District Response is reasonable. The one statement that is not accepted is the one containing the following quote from the conclusion in the Byrnes *et al.* 2010 report: "Based on all available information, there appears to be no measurable negative impacts to ebb-tidal shoals or Dauphin Island beaches associated with historical channel dredging across the Mobile Pass Outer Bar". For the reasons

presented in Rebuttal 5, the Byrnes et al. conclusion is not accepted as fact since the weight of counter information does not support their position in both the extensive scientific literature on the effects of engineering projects in coastal inlets and other professionally expressed views and direct observations about the hydrodynamic consequences relative to maintenance of the Outer Bar Channel and its indirect influence on the erosion of Dauphin Island.

References:

Byrnes, M. R., S. F., Griffee, and M. S. Osler. 2010. Channel Dredging and Geomorphic Response at and Adjacent to Mobile Pass, Alabama. Technical Report ERDC/CHL TR-10-8. U.S Army Engineer Research and Development Center, Vicksburg, Mississippi.

National Fish and Wildlife Foundation-Department of the Army. April 30, 2015. Memorandum of Agreement, NFWF Gulf Environmental Benefit Fund, Alabama Barrier Island Restoration Assessment, NFWF Project ID No. 45719. Washington, D.C.

US Army Corps of Engineers. January 2016. Mississippi Coastal Improvements Program (MsCIP), Hancock, Harrison, and Jackson Counties, Comprehensive Barrier Islands Restoration Plan, Final Supplemental Environmental Impact Statement: Appendix H - Barrier Islands. Mobile Engineer District, Mobile, Alabama. Public Comment 10: The Study must also incorporate and fully address the ongoing work of the Mobile Bay Interagency Working Group (IWG) that was established by the Corps to evaluate alternative dredged material disposal strategies, including beneficial use. The work of the IWG is focused essentially on dredged material removed from the Mobile Harbor ship channel. To date this work has been conducted in a piecemeal manner instead of being evaluated as a comprehensive program as required by the National Environmental Policy Act. As such, the public has not been afforded an adequate opportunity to be involved at the "front end" of each IWG action and only allowed to comment during the Water Quality Certification Public Notice process where the Corps only considers comments in a perfunctory fashion. The work of the IWG dealing with future strategies for disposal of Mobile Harbor dredged material in Mobile Bay is certainly relevant to the enlargement of the ship channel in at least two areas: (1) thin layer disposal of dredged material over the bottoms of Mobile Bay; and (2) future disposal in the 1,200-acre dredged material disposal island the Corps and the Port Authority plans to construct in Upper Mobile Bay.

Mobile Response 10: Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement will address cumulative impacts as defined by the §1508.7 of the Code of Federal Regulations (40 CFR). This section specifically states, "Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." This analysis will consider the impacts of the Proposed Action in conjunction n with other projects in the Mobile Bay, Mississippi Sound, and the northern Gulf of Mexico and in the vicinity of the Mobile Harbor Navigation Channel or other projects along the Gulf coast within 15 miles of Mobile Bay. The IWG addresses sediment management practices and strategies within Mobile Bay but it is only one of many actions within the Mobile area that will be addressed in the Integrated Supplemental Environmental Impact Statement's cumulative impacts. As such, the conceptual beneficial use site in the upper Mobile Bay will also be considered as well as other foreseeable activities.

The Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement will evaluate disposal options and capacities to ensure sufficient disposal site(s) exist for the new work material as well as future operations and maintenance material anticipated for the next 20-years. As part of those disposal sites, beneficial use will also be considered as an option should it be an environmentally acceptable solution. Information gained from previous studies will be used to inform and support the Mobile Harbor GRR with an Integrated Supplemental Environmental Impact Statement.

Rebuttal 10: The overall Mobile District Response is reasonable and consistent with existing Corps policies and guidance. It is important that the Mobile District understand the concerned public submitted the above comment for the following reasons:

- The Mobile Bay Interagency Working Group (IWG) was established by the Mobile • District in 2011-2012. That timeframe coincides with the period within which the Mobile District and the Alabama State Port Authority initiated a series of efforts to submit budget requests and to obtain internal approval to prepare a Limited Reevaluation Report to widen a segment of the Mobile Harbor channel in the lower bay. That effort, if implemented would have represented the second major action to incrementally construct a portion of the authorized 1986 project. The first major action under the 1986 authority occurred in 1999 when the channel was deepened 2 feet to increase the controlling depth from 45 feet to 47 feet. The original 1986 project authority also required all material dredged from the Mobile Bay channel to be placed in the approved Mobile North Ocean Dredged Material Disposal Site (ODMDS) located south of Dauphin Island, which is around 40 miles from the north end of Mobile Bay. The offshore disposal requirement caused annual maintenance dredging costs to increase since the historic practice of disposing of the material in open water adjacent to the channel was no longer allowed. Eventual full implementation of the 1986 authorized project would further increase the existing annual maintenance costs to maintain the Mobile Harbor project which is already the second most expensive deep draft project in the nation to maintain. Recognizing these facts, it appears that the Mobile District and the Port Authority began to consider options to reduce maintenance dredging costs for the Mobile Bay segment of the channel at the same time plans were being pursued to deepen and widen the channel. Important in their efforts was Section 302 of the WRDA of 1996 (see Rebuttal 5 above) which now allows the Corps to "...consider alternatives to disposal of such material in the Gulf of Mexico, including environmentally acceptable alternatives for beneficial uses of dredged material and environmental restoration". In addition, Section 2037 of the WRDA of 2007 called for the development of Regional Sediment Management (RSM) Plans to identify and evaluate opportunities for "beneficial uses" of sediment from the construction, operation or maintenance from federal navigation projects. Appropriate beneficial uses include "... hurricane and storm damage reduction and environmental protection and restoration". This resulted in the Mobile District and the Port Authority cooperating to develop a RSM strategy to seek beneficial uses for dredged material removed the Mobile Bay channel segment only. The IWG was established to seek the assistance of the "environmental community" to identify and pursue specific "beneficial use" options.
- The work of the IWG is focused on material dredged from the Mobile Harbor ship channel. Examination of various documents related to the RSM and IWR effort clearly shows that the primary driving force behind all of the disposal options considered to date is to *reduce the cost of disposal* of maintenance dredged material from the Mobile Bay channel. Review of the March 31, 2016 Mobile District Memorandum of Record of a December 9, 2015 meeting of the IWG states that the "...BU opportunities associated with the navigation activities in the Bay builds on the requests of the ASPA to partner in the implementation of *more effective* [emphasis added] sediment management associated with maintaining the Mobile Harbor navigation project". It is believed the preceding emphasized "more effective" phrase, means "more cost effective" which could

be further translated to actually be defined as to mean "lower costs". Lower cost dredged material alternatives to offshore disposal would not only benefit maintenance of the existing channel dimensions, but also the authorized enlarged channel, the construction of which is the purpose behind the GRR Study. As a result, the work of the IWG will play a major role in developing the required 20-year Dredged Material Disposal Plan that is to be produced by the GRR Study. For this reason alone, the IWG efforts are directly connected to the GRR Study and should not be considered as a "separate" planning effort as implied in the Mobile District Response. Thus, the environmental effects of the IWG planning efforts should be addressed in the GRR Study as a direct component of the Tentatively Selected Plan (TSP), with the resulting short term and long term environmental impacts of dredged material disposal evaluated accordingly.

- Two proposed "beneficial use" alternatives are particularly relevant to the GRR Study:

 thin layer disposal of maintenance dredged material over the bottoms of Mobile Bay; and (2) future disposal of maintenance material in the 1,200-acre dredged material disposal/emergent marsh island planned for construction in Upper Mobile Bay. The alleged environmental benefits that would be produced by these two disposal alternatives have been only vaguely asserted in assorted Mobile District documents, without the benefit of supporting scientific evidence. The alleged "beneficial uses" that are to be realized from the advocated disposal alternatives have not been quantified and only superficially discussed in very general terms. Even though no sound scientific investigations and studies have been conducted to support the alleged benefits, planning and periodic implementation of the IWG-related projects continue to occur.
- Over the last five years, the work of the IWG has been conducted essentially out of the public eye, with no opportunities for the public to be involved are to convey concerns. The only time the public is afforded the opportunity to comment on IWG-related work is when the Mobile District issues a Public Notice as a requirement to obtain State Water Quality Certification at the conclusion of the planning process. The Public Notices are emailed to a small group of recipients contained on a stock Mobile District mailing list. The Public Notices are issued prior to the initiation of construction. While this process is certainly convenient to the Mobile District, it is neither fully transparent nor conducive to providing real and meaningful opportunities for the public to participate in the IWG planning process that is centered on Mobile Bay a regional resource of high ecological, cultural, economic, recreation, and aesthetic values to the surrounding communities, intrinsic values that are completely unrelated to the needs of deep draft navigation (see Rebuttal 11). The bottom line is that most members of Mobile and Baldwin Counties are completely unaware of the work in which the IWG is involved.
- The environmental effects of the IWG efforts are not being evaluated in a comprehensive fashion, using "sound science", as required by CEQ's NEPA regulations. Instead, separate environmental assessments (EA) are prepared on individual projects with the public being subsequently afforded the opportunity to review the EAs after the entire planning and environmental evaluation process is concluded. The work of the

IWG should be covered in an upfront "Programmatic EIS" that would address an overall Dredged Material Disposal Plan for the entire Mobile Harbor project, including both the Mobile Bay and the Outer Bar Channel segments. Future EAs could then be tiered off that foundation NEPA document as the need arises. That approach would also be more in keeping and consistent with Corps and CEQ NEPA guidance.

 For some inexplicable reason, the Mobile District and the Port Authority have intentionally excluded Dauphin Island from what should be a Regional Sediment Management Strategy for the entire Mobile Harbor federal navigation project – not just the Mobile Bay channel segment. The purposeful omission of the Outer Bay Channel from the IWG efforts prevents potential "beneficial uses" of the sands dredged from that channel from ever being considered. A comprehensive evaluation of the environmental effects of the IWG work that allowed full public participation in the process should be helpful in bringing to light why the Outer Bar Channel is being ignored in the Mobile Harbor RSM planning efforts by the Mobile District and Port Authority.

References:

Alabama State Port Authority. Feb 12-13 2014. Beneficial Uses of Dredged Material. Harbors & Navigation Committee Meeting, American Association of Port Authorities. Mobile, Alabama.

Byrnes, M. R., J. L. Berlinghoff, and S. F., Griffee. March 2013. Final Report Sediment Dynamics in Mobile Bay, Alabama: Development of an Operational Sediment Budget. Mobile Bay National Estuary Program. Mobile, Alabama.

Ferraro, C. July 28, 2014. Strategies for Implementing Regional Sediment Management: Using a Collaborative Approach to Implementing RSM Principles in Alabama. 2014 Conference on Ecological and Ecosystem Restoration (CEER). New Orleans, Louisiana.

Frittelli, J. January 10, 2011. Harbor Maintenance Trust Fund Expenditures. CRS Report for Congress R41042. Congressional Research Service. Washington, D.C.

Frittelli, J. September 12, 2013. Harbor Maintenance Finance and Funding. CRS Report for Congress R43222. Congressional Research Service. Washington, D.C.

Islam S. and J. January 2013. Cost Effective Dredging in Mobile Bay: Possibilities for Sustainable Dredged Material Management. January 13-17, 2013 Transportation Research Board Annual Meeting. Washington, D.C.

Martin, L. July 2002. Regional Sediment Management: Background and Overview of Initial Implementation. IWR Report 02-PS-2. Policy Studies Program, U.S. Army Corps of Engineers Institute for Water Resources. Washington, D.C.

Parson, L. March 2012. Regional Sediment Management Program Mobile District - Evaluation of Mobile Bay Channel In-Bay Disposal Practices Disposal Practices.

Parson, L. September 6, 2012. Beneficial Use Opportunities of Dredged Material from the Upper Mobile

Bay Federal Navigation Channel. 2012 Alabama Water Resources Conference. Orange Beach, Alabama. U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi.

Parson, L.E. March 31, 2016. Memorandum for Record: December 9, 2015. Mobile Harbor Interagency Working Group Meeting. U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama.

Parson, L., N. Lovelace, E. Godsey, K. Reine, and J. Gailani. April 2015. Regional Sediment Management (RSM) Strategy for Mobile Bay, Alabama. ERDC/CHL CHETN-XIV-41. U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi.

Parson, L., N. Lovelace, and E. Godsey. January 2015. Regional Sediment Management Program Mobile District (SAM): Beneficial Use of Dredged Material to Fill Oyster Dredge Holes in Mobile Bay. U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi.

Reine, K.J., D.G. Clarke, and G.L. Ray. July 2014. Fishery Resource Utilization of an Estuarine Borrow *Pit in Mobile Bay, Alabama. ERDC/EL TR-14-10. Dredging Operations and Environmental Research Program. U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi.*

US Army Corps of Engineers. April 22, 2000. Planning Guidance Notebook. Engineering Regulation 1105-2-100. U.S. Army Corps of Engineers, Washington, DC.

U.S. Army Corps of Engineers. April 8, 2008. MEMORANDUM SUBJECT: Implementation Guidance for Regional Sediment Management – Section 2037 of the Water Resources Development Act of 2007 (WRDA 2007). CECW-P. Washington, D.C.

U.S. Army Corps of Engineers. May 2012. Draft Environmental Assessment, Brookley Hole Demonstration: Beneficial Use of Dredged Material from Mobile Harbor Federal Navigation Channel, Mobile County, Alabama. Mobile District, Mobile, Alabama.

U.S. Army Corps of Engineers. May 20, 2012. Joint Public Notice: Modification to Maintenance Dredging and Placement Activities, Open Bay Thin-Layer Disposal Option Mobile Harbor Navigation Project, Mobile County, Alabama. U.S. Army Corps of Engineers, Mobile District and Alabama Department of Environmental Management. Mobile, Alabama.

U.S. Army Corps of Engineers. February 19, 2015. Mobile Bay Sediment Management Strategy. Regional Sediment Management Bi-Monthly Webinar. Mobile District, Mobile, Alabama.

U.S. Army Corps of Engineers. December 9, 2015. Beneficial Use of Dredged Material to Create Emergent Tidal Marsh in Upper Mobile Bay. Proposal Submitted to and Approved by the Gulf Coast Ecosystem Restoration Council. Mobile District, Mobile, Alabama.

U.S. Congress. November 28, 1990. Water Resources Development Act of 1990. Public Law 101-640. Washington, DC.

U.S. Congress. November 8, 2007. Water Resources Development Act of 2007. Public Law 110-114. Washington, DC.

Public Comment 11: A more aggressive and continuous public involvement program should be implemented as part of the GRR Study.

Convince the Mobile District that an aggressive and continuous public involvement program should be implemented as part of the Study to: (1) allow the public to be kept regularly informed of the Study's progress and (2) be provided an opportunity to provide meaningful input to influence study decisions.

The Mobile District's 9-page Public Information Management Strategy (PIMS) represents a "cookie cutter" generic description of a public involvement strategy that could apply to any Corps study. The PIMS contains few specifics about the public involvement activities that will actually be conducted during the Mobile Harbor Study. Instead, vague phrases like "could include" and "may involve" characterize much of the PIMS. To date, it appears the Mobile District has completely ignored the numerous public scoping comments it received requesting a true and continuous public involvement program be conducted over the entire course of the study. As now written, the next time the Mobile District plans to contact the public is in the summer 2018 when it releases the Draft EIS for public review (required by law to do so). By the time the Draft EIS is released, the Mobile District's plans will be essentially locked in stone and will be difficult to be changed. The PIMS should be revised to specifically identify the public involvement measures that will be implemented and clearly shown on the Corps' "Mobile Harbor GRR Schedule".

The Mobile District frequently uses the term "transparency" to describe its planning process. However, there is nothing transparent about the manner in which the Mobile Harbor Study is now being managed. Instead, the present study approach is designed to in effect keep the public completely in the dark over the next two years as the Mobile District and the Port Authority make irreversible Study decisions and expend \$7.8 million of Study funds that cannot be retrieved to develop a plan to enlarge the Mobile Harbor Channel, including a recommended plan that potentially could continue to negatively impact Dauphin Island and include the disposal of significant volumes of maintenance material within Mobile Bay. The absence of inclusion of a true public involvement program in the GRR Study causes the concerned public to question if this is an intentional decision to avoid transparency.

The Mobile District should establish a Citizen Advisory Committee requested in the scoping comments that will meet at least two to four times a year with the District and Port Authority to assess how public concerns are being addressed in the GRR Study. This is needed since the concerned public is not only not being informed about study decisions and progress, but also is not being provided a voice in the conduct of the GRR Study.

Mobile District Response 11: Although the need for increased public involvement in the GRR Study was discussed with the Mobile District staff during the March 25 and August 9 meetings, this concern/issue was not submitted as a specific comment to the Mobile District. Therefore, the District has not been afforded an opportunity to respond to it in the same manner as they responded to the previous 10 comments above.

Additional Elaboration on Public Comment 11: Corps planning policy and guidance emphasizes the importance of involving the public in the planning process. For example, paragraph 2-5 in Chapter 2 of ER 1105-2-100 states "...the success of the planning process depends to a great extent on establishing a successful partnership with the project sponsors and other stakeholders...It is important to develop a strategy that creates relevant, quality public involvement opportunities for those who have, or may have, an interest in the study."

The following excerpt from paragraph B-3 in Appendix B (Public Involvement, Collaboration and Coordination) in ER 1105-2-100 defines the "Goals and Objectives" of public involvement and coordination in the Corps planning process:

"The goal of public involvement and coordination is to open and *maintain channels of communication with the public in order to give full consideration to public views and information in the planning process* [emphasis added]. The objectives of public involvement are 1) to provide information about proposed Corps activities to the public; 2) to make the public's desires, needs, and concerns known to decisionmakers; 3) to provide for consultation with the public before decisions are *reached; and, 4) to consider the public's views in reaching decisions* [emphasis added]. All this must occur, however, with the awareness that the Corps cannot relinquish its legislated decision-making responsibility. The outcome of any planning is subject to institutional constraints."

Paragraph B-4 describes the basic and essential public involvement "Requirements" that are to satisfied in Corps planning studies:

"District offices shall conduct planning studies in an **open atmosphere to attain public understanding, trust, and mutual cooperation and shall provide the public with opportunities to participate throughout the planning process** [emphasis added]. In addition, each district office shall...discuss in the report **how information gained from public and sponsor involvement has been used in and influenced the planning process** [emphasis added]."

Key word and phrases from the above excerpts and other Corps guidance documents that describe the positive attributes of a meaningful public involvement program include the following:

- Transparency
- Conduct studies in an open atmosphere
- Give full consideration to public views
- Open and maintain channels of communication
- Make public desires, needs, and concerns known to decision-makers
- Consult with public before decisions are reached
- Attain public understanding, trust, and mutual cooperation

- Provide public with opportunities to participate throughout planning process
- Explain how public information is used and influenced planning process
- Develop strategy to create relevant, quality public involvement opportunities

Paragraph B-10 in Appendix B of ER 1105-2-100 discusses the use of "Advisory Committees" in Corps planning studies. The full paragraph is reproduced in the following:

"Public Law 92-463 establishes approval and other requirements for advisory committees, boards, councils, conferences, panels, task forces, commissions or other similar groups formed in the interest of obtaining advice or recommendations. Advisory committees wholly comprised to full time officers or employees of the Federal Government, local civic groups whose primary function is rendering a public service with respect to a Federal program, or groups providing advice to State and local governments are exempt from those requirements. If an advisory committee not exempt from the Act is desired as a part of a study, approval shall be requested through HQUSACE (CERM). No advisory committee shall be established prior to approval. AR 15-1 describes information required to establish an advisory committee under the Act."

A Mobile Harbor Advisory Committee was created by the Mobile District in 1975 in connection with the Survey Study that eventually produced the 1980 report which serves as the foundation document for the GRR Study. Paragraph 9.04 of the FEIS in the 1980 report package (see page 60 in Appendix 1) describes the successful role the Advisory Committee played in the conduct of the Survey Study. The entire text of paragraph 9.04 is included in the following:

"Early in 1975, a special committee which became known as the Mobile Harbor Advisory Committee was formed for the purpose of providing access to the planning process for a wide cross-section of the various public in the Mobile Region. Membership on the committee was comprised of individuals from the following interest groups: citizens, business and commerce, local government, environmental interests, state government, port interests, organized labor, and fish and wildlife interests. Several workshop meetings were held with this committee during the major stages in plan formulation. This committee served a vital role to access the public response to alternative plans and to provide a public contact point through key stages in the plan formulation process."

A large number of public comments were submitted during the Scoping Process requesting that an Advisory Committee be created to facilitate public involvement and input into the GRR Study. The public request was reiterated in March 25 and August 9 meetings with Mobile District staff. Since the Mobile District has not acted upon the request, Mr. Stan Graves sent a letter to the District on September 7 specifically requesting the Mobile Harbor Advisory Committee be reconstituted to participate in the GRR Study in view of the important role the Mobile District states that Committee played in facilitating public involvement activities critical

to the preparation of the 1980 report. Considering the extensive public concerns that have been raised over deepening and widening the Mobile Harbor project, it appears the Mobile Harbor Advisory Committee could represent an important conduit to facilitate public participation in the GRR Study.

A significant number of comments were submitted during the Public Scoping process requesting increased opportunities be provided in the GRR Study to allow the public to be both better involved in and informed about study progress and interim decision-making. To respond to these comments, the Mobile District staff committed at the August 9 meeting to examine the existing GRR Study Schedule to identify additional opportunities for increased public involvement. The District said a modified Study Schedule showing the added opportunities would be shared with the public in the "near future". Among the key study events that would be informative for the public to be involved would include, but not be limited to the following efforts: (1) all future charrettes and workshops with environmental agencies to discuss environmental concerns/issues; (2) updates on the status of the Alabama Barrier Island Restoration Assessment; (3) completion of the environmental assessment of alternatives scheduled for July 31, 2017; (4) coordination of the mitigation evaluation on September 28, 2017; (5) final screening of alternatives on January 29, 2018; (6) delivery of input from the Alabama Barrier Island Restoration Assessment; and (7) selection of the Tentatively Selected Plan. Six weeks have passed since the August 9 meeting and the "revised public involvement schedule" has not been provided.

To date, there is no evidence the spirit and intent of the Corps' planning guidance is actually being applied to shape a meaningful and effective public involvement program for the GRR Study. For example, the concerned public is rapidly developing the firm opinion that the Mobile District is not seriously considering the large number of significant comments provided during the Scoping Process. As a result, it appears that Scoping was conducted in essentially a perfunctory manner only because that effort is mandated by the CEQ's NEPA regulations. After participating in two meetings with the Mobile District staff on March 25 and August 9 staff and after reviewing the July 2016 Public Scoping Report, there is no indication the Public Scoping Comments are being seriously considered or having a substantive influence on the GRR Study planning process. It is time the Mobile District stopped paying only lip service in its efforts to comply with Corps agency policies and guidance in regard to the public involvement program to better serve the concerned public's "public's desires, needs, and concerns" as described above. The Mobile District needs to acknowledge the interested and concerned public is also one of its customers.

References:

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508). Washington, D.C.

Parson, L.E. March 31, 2016. Memorandum for Record: December 9, 2015. Mobile Harbor Interagency Working Group Meeting. U.S. Army Corps of Engineers, Mobile District, Mobile, Alabama.

US Army Corps of Engineers. July 2016. Public Involvement Management Strategy: Mobile Harbor General Reevaluation Report (GRR) with Integrated Supplemental Environmental Impact Statement (SEIS) for the Proposed Widening and Deepening Project of the Mobile Harbor Navigation Channel, Mobile County, Alabama. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. Last Updated February 3, 2016. Mobile Harbor GRR Decision Management Plan to TSP Milestone (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. February 2016. Project Management Plan, Mobile Harbor, Alabama, General Reevaluation Report (r 23Aug16). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-</u> <u>Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. February 2016. Report Synopsis for Mobile Harbor General Reevaluation Report (r 23Aug2016). Downloaded from: <u>http://www.sam.usace.army.mil/Missions/Program-and-Project-Management/Civil-Projects/Mobile-Harbor-GRR/</u>. Mobile Engineer District, Mobile, Alabama.

US Army Corps of Engineers. July 2016. Public Scoping Report for the Mobile Harbor General Reevaluation Report Supplemental Environmental Impact Statement Public Scoping Meeting -Tuesday, January 12, 2016. Mobile, Alabama, Mobile Engineer District, Mobile, Alabama.

Graves, S. September 7, 2016. Letter to Curtis M. Flakes. Requesting Reconstitution of the Mobile Harbor Advisory Committee.

From: To:	(b)(6)
Subject:	Emailing: Dredging Discussion.pptx
Date:	Tuesday, February 20, 2018 2:22:00 PM
Attachments:	Dredging Discussion.pptx

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

Dredging Discussion.pptx

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.

MOBILE HARBOR GRR

With Integrated Supplemental Environmental Impact Statement

Material Placement Discussion Prepared by David Newell, P.E. 23 January 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."





33 CFR 335.7

Federal standard means the dredged material disposal alternative or alternatives identified by the Corps which represent the least costly alternatives consistent with sound engineering practices and meeting the environmental standards established by the 404(b)(1) evaluation process or ocean dumping criteria.





2

25 JUL 1978 Maintenance Dredging Provisions of the Clean Water Act of 1977 (P.L. 95-217)

Maximum beneficial use of dredged material, such as for beach nourishment, should be realized where possible, consistent with existing policy. However, if States impose beneficial dredged material uses as permit conditions, any additional expense associated with such provisions will be the responsibility of local interests.

EM 1110-2-5025 Dredging and Dredged Material Management

Dredged material is a resource, and environmentally sound beneficial use of dredged material for such projects as wetland creation, beach nourishment, and development projects must be encouraged.



3

ER 1105-2-100, App E Missions and Evaluation Procedures

Section II Navigation, E-14. Special Considerations.

h. Placement of Dredged Material on Beaches for Hurricane and Storm Damage Reduction. When placement of dredged material (beach quality sand) on a beach is the least costly acceptable means for disposal, then such placement is considered integral to the project and cost shared accordingly. In cases were placement of dredged material on a beach is more costly than the least costly alternative, the Corps may participate in the additional placement costs when: (1) requested by the state; (2) the Secretary of the Army considers it in the public interest; and (3) the added cost of disposal is justified by hurricane and storm damage benefits (see Section IV of this appendix). When all local cooperation requirements are met the Corps may cost share the additional costs 50 percent (Section 933, WRDA 1986, as amended). In cases where the additional costs for placement of the dredged material is not justified, the Corps may still perform the work if the State requests it, and the state or other sponsor contributes 100 percent of the added cost.





ER 1105-2-100, App E Missions and Evaluation Procedures (Cont.)

Section II Navigation, E-15. Dredged Material Management Plans.

E-15. Dredged Material Management Plans. All Federally maintained navigation projects must demonstrate that there is sufficient dredged material disposal capacity for a minimum of 20 years. A preliminary assessment is required for all Federal navigation projects to document the continued viability of the project and the availability of dredged material disposal capacity sufficient to accommodate 20 years of maintenance dredging. If the preliminary assessment determines that there is not sufficient capacity to accommodate maintenance dredging for the next 20 years, then a dredged material management study must be performed.

a. Policy.

(1) (c) ...It is the policy of the Corps that all dredged material management studies include an assessment of potential beneficial uses for environmental purposes including fish and wildlife habitat creation, ecosystem restoration and enhancement and/or hurricane and storm damage reduction. Districts and MSCs will make every effort to ensure that sponsors and other interests understand the valuable contributions that beneficial uses can make to management plans and will maximize use of regional forums to share experiences of opportunities for beneficial uses.





5

Term of Settlement Agreement from the 2000 DIPOA Lawsuit:

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.





6

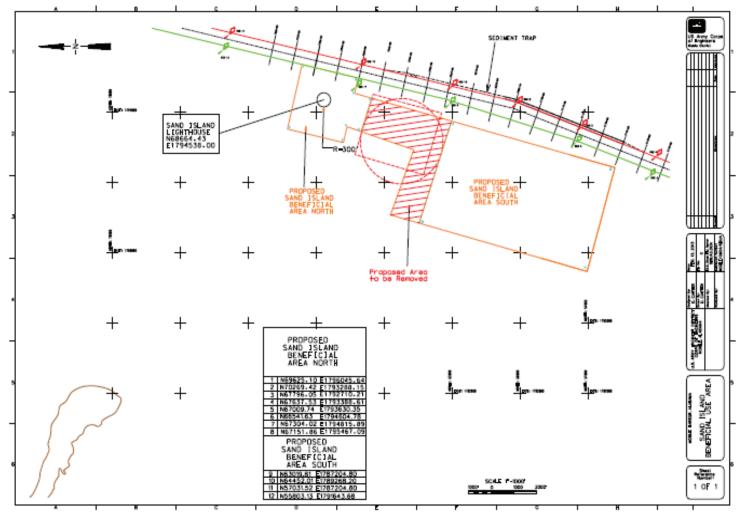




US Army Corps of Engineers *













From: To:	(b)(6)
Subject:	22 Feb 2018 Public Meeting v7 - compiled.pptx
Date:	Wednesday, February 21, 2018 8:46:00 AM
Attachments:	<u>22 Feb 2018 Public Meeting v7 - compiled.pptx</u>

(b)(6) Before I forward to the full team, let me know if this looks okay.



Pages 2 through 27 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject: Date:	RE: I have to leave the building i will check back at my room Wednesday, February 21, 2018 10:09:00 AM

(b)(6) These really need a bit more clean up to be presentable. Please incorporate (b)(6) comments and make sure text stands out a little less and is at a consistent dimension off the channel line, and is at the proper angle in relation to the channel.

Original Message	
From: (b)(6)	
Sent: Tuesday, February 20, 2018 7:21 PM	
To:	(b)(6)
(b)(6)	

Subject: RE: I have to leave the building ... i will check back at my room

On slide 1, the white box should be lowered to include the turning basin.

On slide 2, picture number 2 is the 3 mile passing lane. Therefore, the current plan on the left should state the language (b)(6) provided for the 100' wide 3 mile long passing lane. I also noticed that the picture states upper bay and it should state, "Mobile Harbor Lower Bay Channel"

In addition, Picture 3 states lower bay and it should state "Mobile Harbor Entrance Channel"

Original Message		
From: (b)(6)		
Sent: Tuesday, February 20, 2018 5:18 PM		
To:	(b)(6)	
(b)(6)		

Subject: [Non-DoD Source] FW: I have to leave the building ... i will check back at my room

Please see attached

From: (b)(6) Sent: Tuesday, February 20, 2018 6:04 PM To: (b)(6)

Subject: RE: I have to leave the building ... i will check back at my room

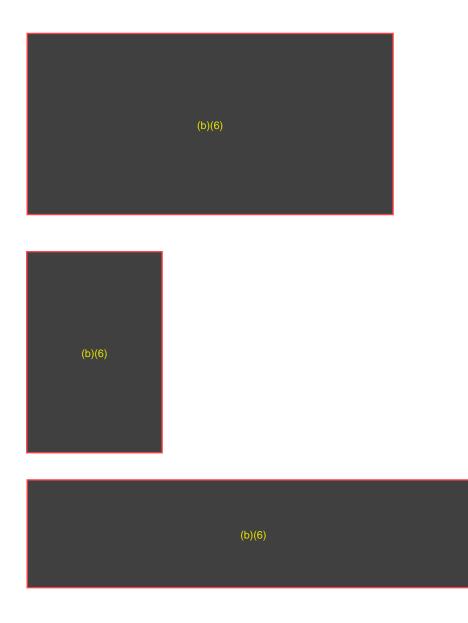
Here ya go. That top picture didn't work well because the picture stuff behind it came thru so it wasn't easy like the others (just the sea showing).

I'm closing down and I think they wanted them by noon tomorrow but my plane lands in ATL at 11:27 and doesn't leave until 2:12, and I don't leave until 10:25 tomorrow morning but I don't' know if you're able to get any comments by then.

(b)(6)	

From: (b)(6) Sent: Tuesday, February 20, 2018 6:00 PM To: (b)(6) Subject: I have to leave the building ... i will check back at my room

And you can make any revisions when you are at the airport tomorrow afternoon and send to the printer then, right?



From: To: Cc:	(b)(6)
Subject:	RE: Mobile Harbor GRR
Date:	Wednesday, February 21, 2018 10:35:00 AM

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.

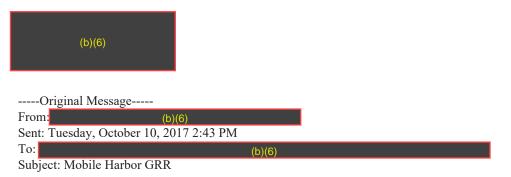


Original Mes	sage	
From:	(b)(6)	
Sent: Wednesday	, October 11, 2017 7:11 AM	
To:	(b)(6))

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)

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?



From: To: Cc:	(b)(6)
Subject:	Fw: 22 Feb 2018 Public Meeting O&M Board.pptx
Date:	Wednesday, February 21, 2018 11:08:59 AM
Attachments:	22 Feb 2018 Public Meeting O&M Board.pptx

Sent from my BlackBerry 10 smartphone.

Original Message From (b)(6) Sent: Wednesday, February 21, 2018 11:06 AM To: (b)(6) Subject: 22 Feb 2018 Public Meeting O&M Board.pptx

The updated O&M Board for (b)(6)

Update on the Mobile Harbor General Reevaluation Report

COL James DeLapp DISTRICT COMMANDER

22 February 2018





MAINTENANCE DREDGING AND PLACEMENT



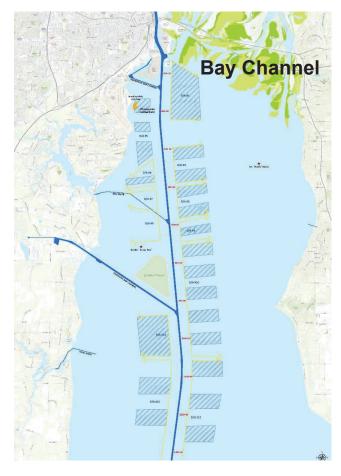




- Short to moderate disposal distance Best in calm water
- All material types mud, sand, rock



- Deep water dredging and disposal area
- Best dredge for rough seas
- Short or long haul distance
- Sand or mud



From: To:	(b)(6)		
Subject:	FW: Draft Final Slides		
Date:	Wednesday, February 21, 2018 12:15:00 PM		
Attachments: image003.png			
	Draft February 2018 Public Meeting Slides.pdf		

Hey (b)(6)

These look good enough to me, before I forward my response, do these look okay to you?



Original Message		
From: (b)(6)		
Sent: Wednesday, February 21, 2018 11:25 AM		
То	(b)(6)	
(b)(6)		
Cc: (b)(6)		
Subject: [Non-DoD Source] Draft Final Slides		

(b)(6)

Here are the 5 slides. Please review and let me know if there are any more changes. I'm trying to get these sent to the printer before I board my next flight. (b)(6) s in route to the SAME meeting so please make sure I'm copied on any comments or approval for printing.

(b)(6)



Pages 2 through 6 redacted for the following reasons: (b)(5)

From: To: Cc:	(b)(6)	
Subject:	FW: Draft Final Slides	
Date:	Wednesday, February 21, 2018 1:13:00 PM	
Attachments:	Draft February 2018 Public Meeting Slides COMMENTS.pdf	

Misspelled existing and change the 3 mile passing lane to state 500'. Otherwise looks good...Thank you!



Original Message		
From: (b)(6)		
Sent: Wednesday, February 21, 2018 12:2	2 PM	
To:	(b)(6)	
Subject: RE: Draft Final Slides		

...They misspelled existing and I'm asking them to change the 3 mile passing lane to state 500'



He (b)(6)

These look good enough to me, before I forward my response, do these look okay to you?



Original Message	
From: (b)(6)	
Sent: Wednesday, February 21, 2018 11:25 AM	
To:	(b)(6)
(b)(6)	



Here are the 5 slides. Please review and let me know if there are any more changes. I'm trying to get these sent to the printer before I board my next flight. (b)(6) is in route to the SAME meeting so please make sure I'm copied on any comments or approval for printing.

(b)(6)

(b)(6)

Pages 3 through 7 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	Timeline.pptx
Date:	Wednesday, February 21, 2018 1:24:00 PM
Attachments:	<u>Timeline.pptx</u>

(b)(6) Is slide number 2, in general, what you are thinking? If so, I still need to do a bit of clean up but I wanted to make sure that this is the right direction.



Pages 2 through 4 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Cc:	
Subject: Date: Attachments:	Latest Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting Wednesday, February 21, 2018 3:02:00 PM 22 Feb 2018 Public Meeting v7 - compiled.pptx

All,

Latest slide set attached. Let me know if you see anything critical by tomorrow at 0900hrs.





Subject: Q&As - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Latest Q&A's attached. I have also attached the scoping comments along with our responses (and rebuttal).



Original Message	
From (b)(6) Sent: Monday, February 05, 2018 9:49 AM	
Sent: Monday, February 05, 2018 9:49 AM	
To:	(b)(6)
	(b)(6)
Cc:	(b)(6)
	(b)(6)

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.



Pages 4 through 32 redacted for the following reasons: (b)(5)

From: To: Cc:	(b)(6)
Subject:	RE: Draft Final Slides
Date:	Wednesday, February 21, 2018 3:13:00 PM
Attachments:	22 Feb 2018 Public Meeting OM Board.pptx

(b)(6) Please replace final board with the attached (2nd slide). Otherwise looks good.



Original N	Message		
From:	(b)(6)	
Sent: Wednes	day, February 21, 20)18 2:55 PM	
To:		(b)(6)	
Cc:	(b)(6)		
~ 11			

Subject: [Non-DoD Source] RE: Draft Final Slides

Here are the final slides, can either of you please review before I send to the printer. I fixed "existing" on both slides 1 and 2 and also changed to "500" on both slides

(b)(6)	

-----Original Message-----From: (b)(6) Sent: Wednesday, February 21, 2018 2:14 PM To: (b)(6) Cc: (b)(6) Subject: FW: Draft Final Slides

(b)(6)

Misspelled existing and change the 3 mile passing lane to state 500'. Otherwise looks good...Thank you!

(b)(6)	

Original Message	
From: (b)(6)	
Sent: Wednesday, February 21,	2018 12:22 PM
То	(b)(6)
Subject: RE: Draft Final Slides	

...They misspelled existing and I'm asking them to change the 3 mile passing lane to state 500'

Original Message	
From: (b)(6)	
Sent: Wednesday, February 21, 2018 12	:16 PM
To:	(b)(6)
Subject: FW: Draft Final Slides	

Hey (b)(6)

These look good enough to me, before I forward my response, do these look okay to you?



Original Message	
From: (b)(6)	
Sent: Wednesday, February 21, 2018 11:25 AM	1
То	(b)(6)
(b)(6)	
Cc (b)(6)	
Subject: [Non-DoD Source] Draft Final Slides	

(b)(6)

Here are the 5 slides. Please review and let me know if there are any more changes. I'm trying to get these sent to the printer before I board my next flight. (b)(6) s in route to the SAME meeting so please make sure I'm copied on any comments or approval for printing.

(b)(6)

(b)(6)



Pages 4 through 5 redacted for the following reasons: (b)(5)

From: To:	(b)(6)
Subject:	Mobile Harbor GRR - Risk Register_AM_03Feb16.xl
Date:	Thursday, February 22, 2018 8:28:00 AM
Attachments:	Mobile Harbor GRR - Risk Register AM 03Feb16.xl

Pages 2 through 94 redacted for the following reasons: (b)(5)

From: To:	(b)(6)		
Cc:			
Subject:	Final Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting		
Date:	Thursday, February 22, 2018 10:29:00 AM		
Attachments:	22 Feb 2018 Public Meeting - Final.pdf		

All: Final Slides for tonight's Town Hall are attached.



Original Message		
From: (b)(6)		
Sent: Wednesday, February 21, 2018 3:03		
To:	(b)(6)	
	(b)(6)	
Cc	(b)(6)	
	(b)(6)	

Subject: Latest Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All,

Latest slide set attached. Let me know if you see anything critical by tomorrow at 0900hrs.





Subject: Q&As - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Latest Q&A's attached. I have also attached the scoping comments along with our responses (and rebuttal).





Subject: Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.



Update on the Mobile Harbor General Reevaluation Report

COL James DeLapp DISTRICT COMMANDER 22 February 2018







USACE Overview

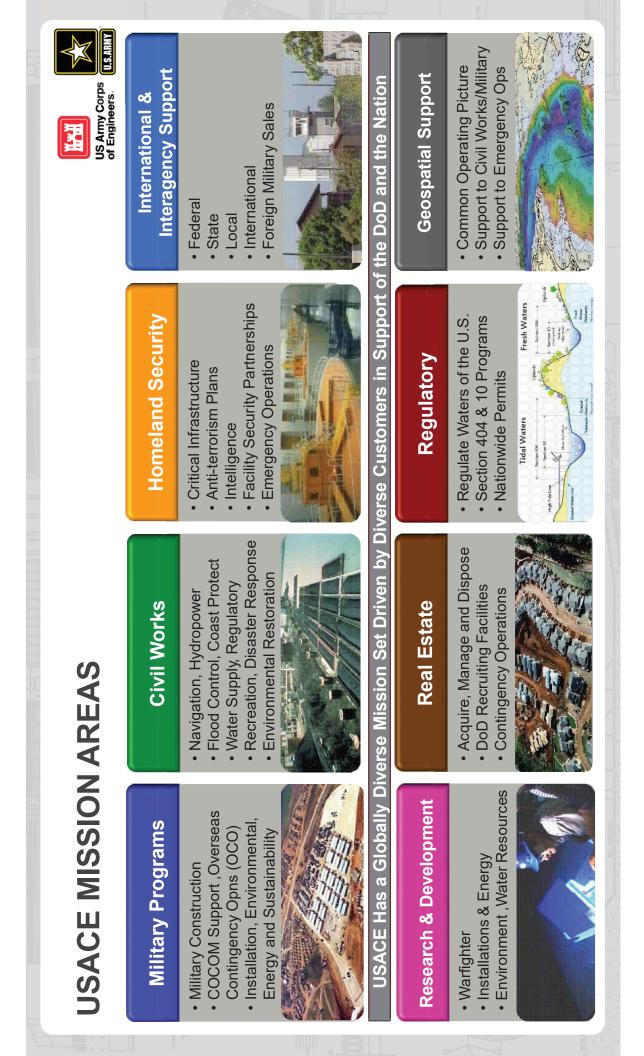
- Mission Areas
- Boundaries
- Workforce
- Puerto Rico

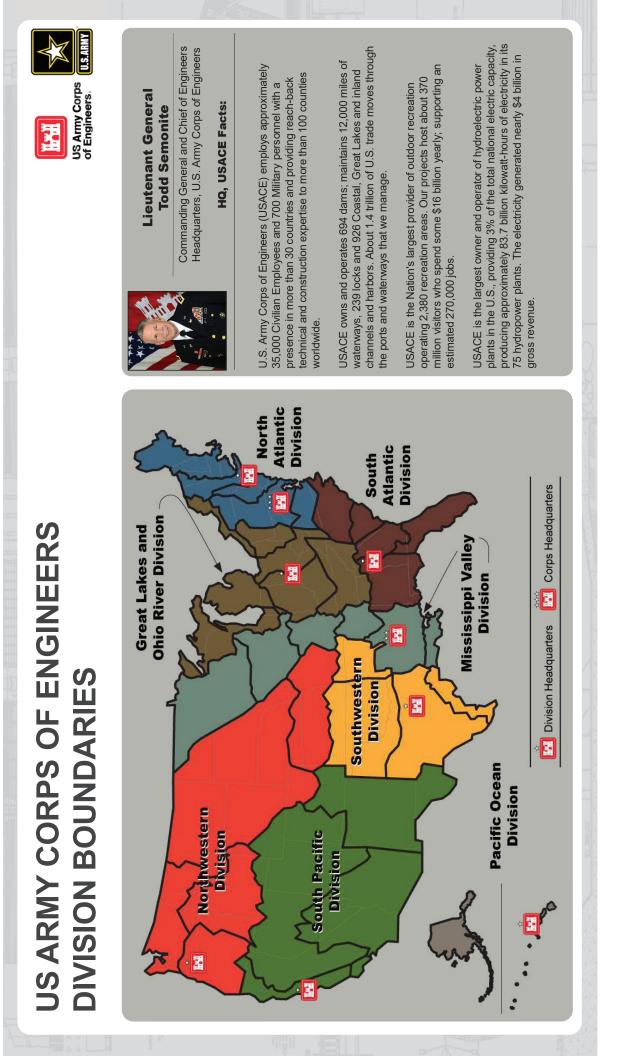


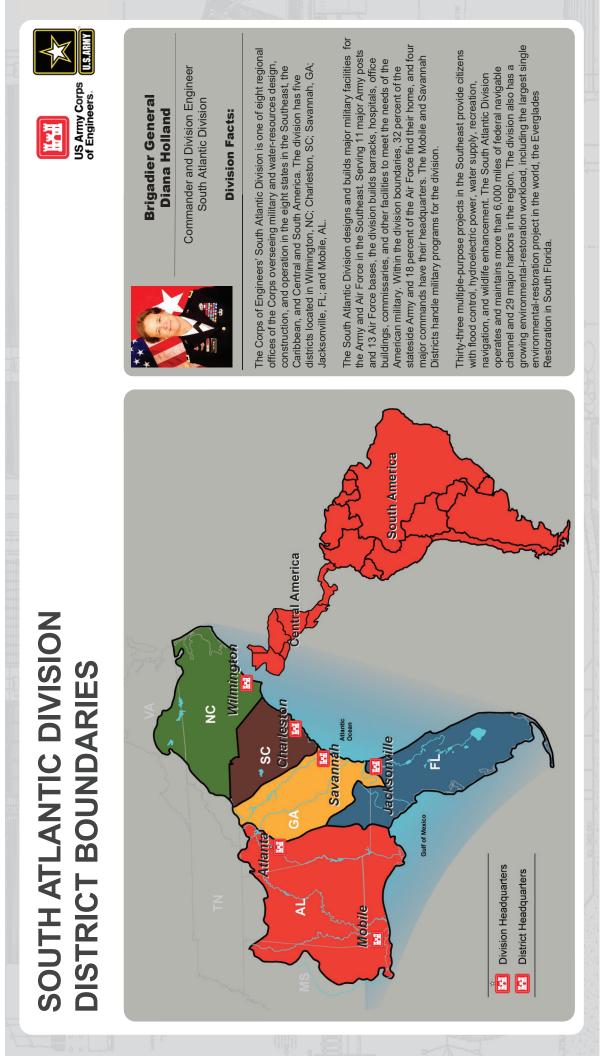


Mobile Harbor GRR

- Project Overview
- Economic Analysis
- Environmental Analysis
- Engineering Analysis
- Dredged Material Placement
- Summary
- What's next
- Questions

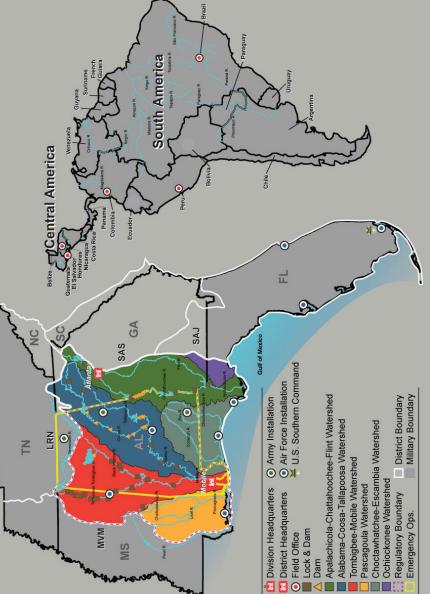








US Army Corps of Engineers.





Commander and District Engineer Mobile District

District Facts:

states of Alabama, Florida, Georgia, Mississippi as well as all Central and Established in 1815, the Mobile District employs 1,100 civilian personnel Works, and International/Inter-agency Support program that responds to South America. The Mobile District manages a \$1 billion Military, Civil and approximately 10 military officers with a presence that covers the environment, and provides facilities for our national defense and interdisasters, manages water resource infrastructure, protects the agency partners.

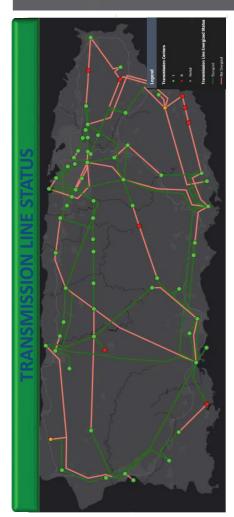
The Civil Works mission includes the operation and maintenance of six deep-water harbors, 21 shallow draft ports, and flood control with over recreation programs in the Federal government with 27 lakes and 464 million of the U.S. Treasury. Mobile also manages one of the largest facilities generate 2.06 billion kilowatts of electricity and return \$44.8 major river systems providing over 2,200 miles of navigation, seven damages over the last ten years. The District's eight hydropower 67 projects that have prevented in excess of \$200 million in flood recreation areas averaging more than 34.1 million visitors a year

federal agencies. The District also provides engineering studies and other technical assistance such as master planning, environmental (SOUTHCOM), and Inter-Agency Support to NASA, FBI and other engineer services to support the Department of Defense Military Mobile District provides project management, construction, and Construction, International support to U.S. Southern Command management and real estate support.



PUERTO RICO POWER GRID REPAIR



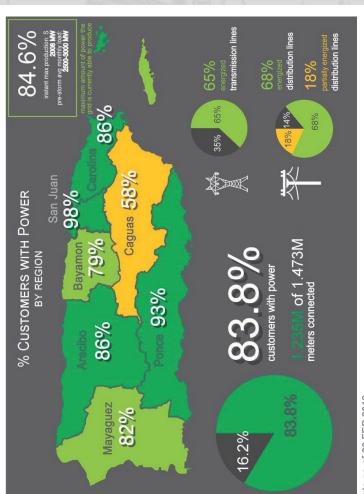


MATERIALS REQUIRED (Not a Complete list)

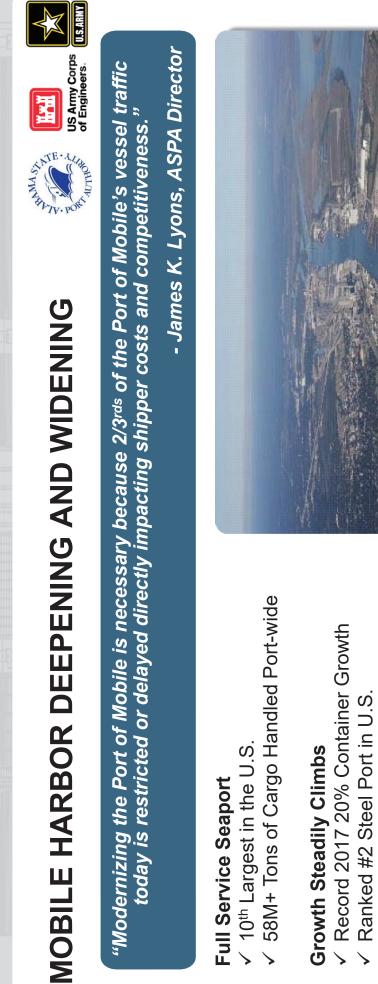
- 20 Million Feet of Conductor (Wire)
 60,000 Power Poles (Wood, Metal, (
- 60,000 Power Poles (Wood, Metal, Concrete)
 - 134,000 Insulators
 - 6,500 Transformers

PERSONNEL

- 4445 Distribution Workers
- **1034** Transmission Workers
 - 5479 TOTAL Field Workers



Data as of 20 FEB 2018



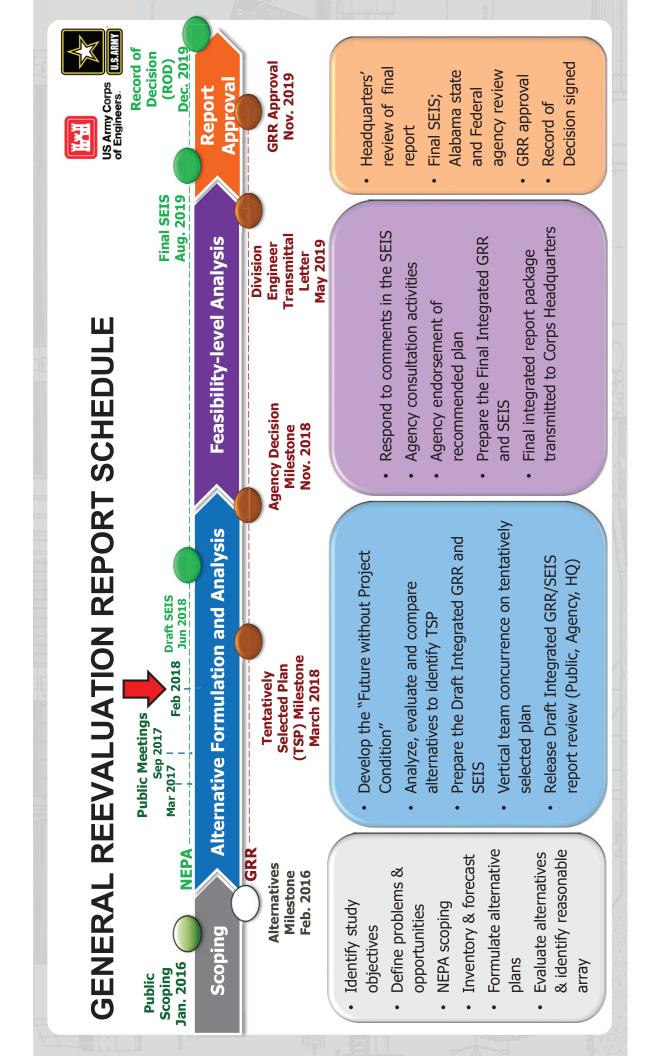
Contributes Significantly to the Economy 153,000+ Jobs

Strong Exporter of U.S Materials and Goods

Ocean Carriers continue to add service

\$25.1B in economic value

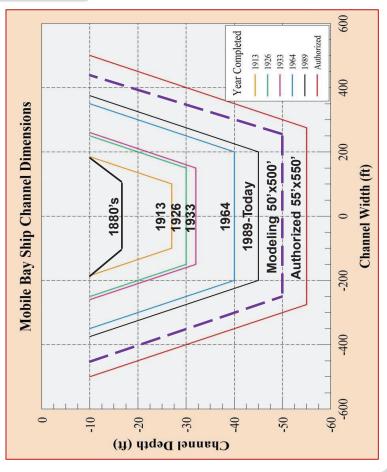




MOBILE HARBOR GENERAL REEVALUATION REPORT

3

4-year \$7.8M STUDY Began Nov 2015 Complete Nov 2019



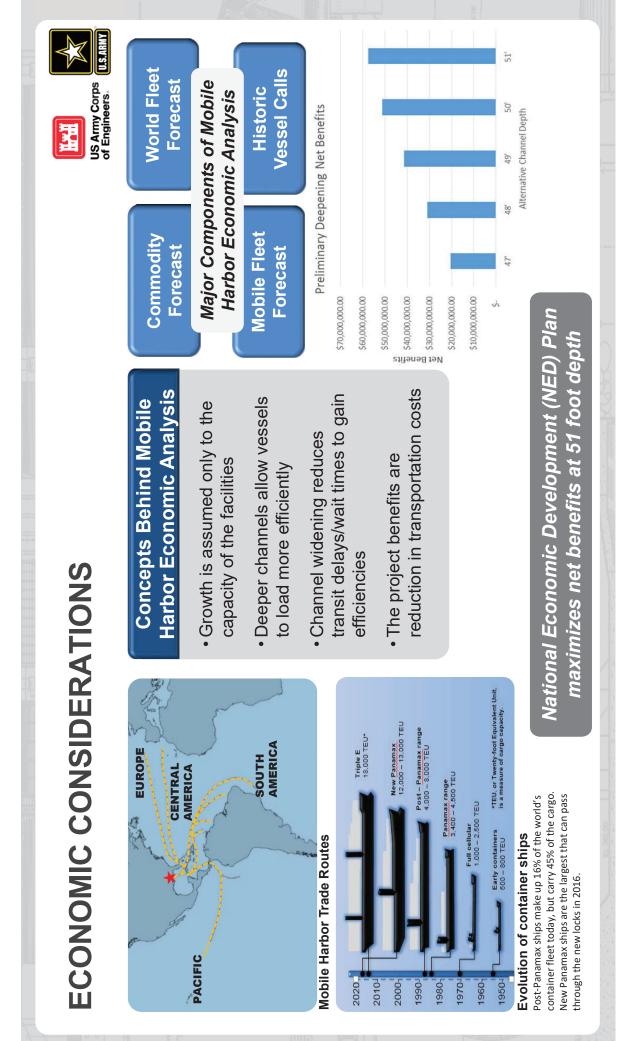
Current Measures Under Consideration

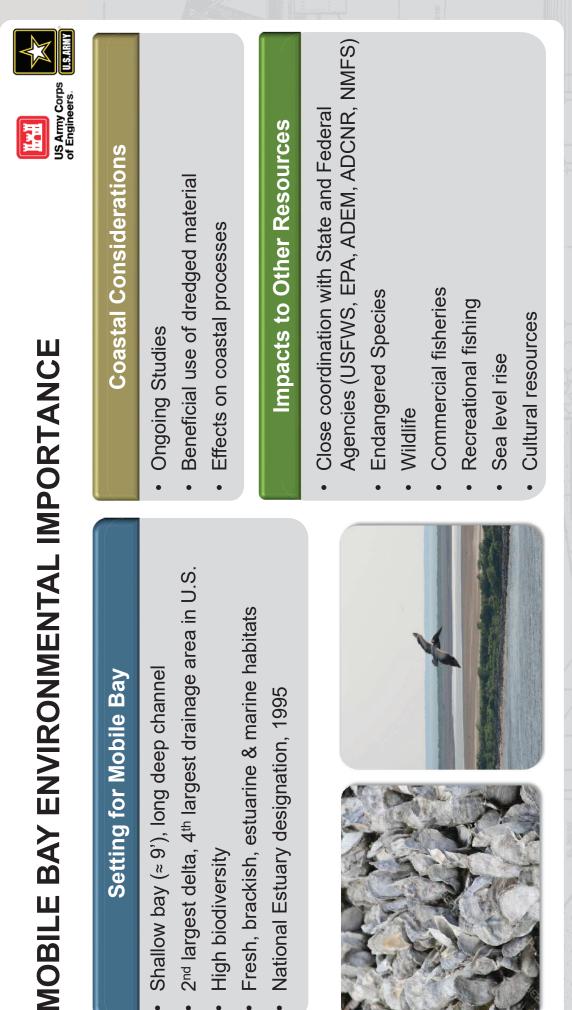
- Deepening: 48' to 50' (50' to 52' at entrance)
- Widener: 100' (3 miles)
- Bend Easing
- Turning Basin Modification

Tentatively Proposed Placement Locations

- Formerly mined relic shell areaSand Island Beneficial Use
 - Area (SIBUA)
- Pelican/Sand Island Complex
 Ocean Dredged Material Disposal Area Site (ODMDS)
- Release of Draft Supplemental Environmental Impact Statement scheduled for June 2018





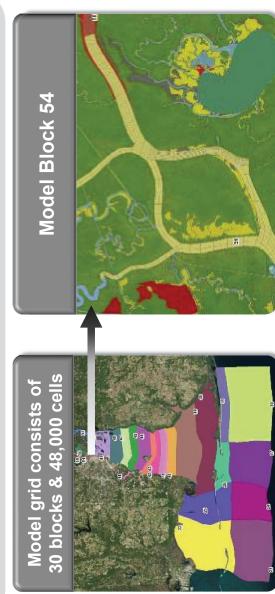


MOBILE BAY ENVIRONMENTAL IMPORTANCE

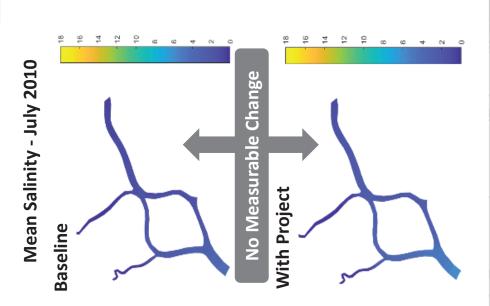
AQUATIC RESOURCES ASSESSMENT

Overview

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







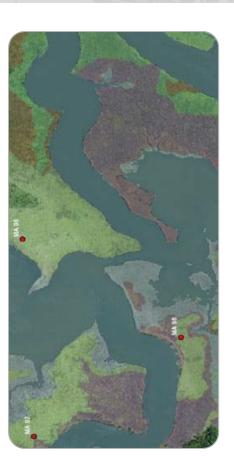


US Army Corps US Army Corps of Engineers.

Approach

- Wetland mapping 77,000 ac mapped; 43 community types; >800 on-site samples
- Assessed potential exceedance of salinity thresholds

- No wetland losses anticipated
- All vegetation within acceptable environmental tolerance ranges
- All wetlands within ideal growth conditions
- Sea level rise will result in substantial inundation of existing wetlands
- Project impacts remain negligible under 0.5 meter sea level rise scenario







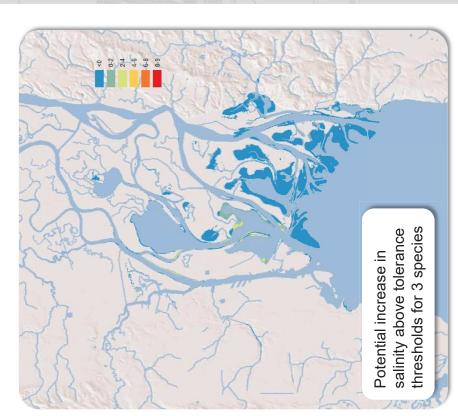
SUBMERGED AQUATIC VEGETATION (SAVs)

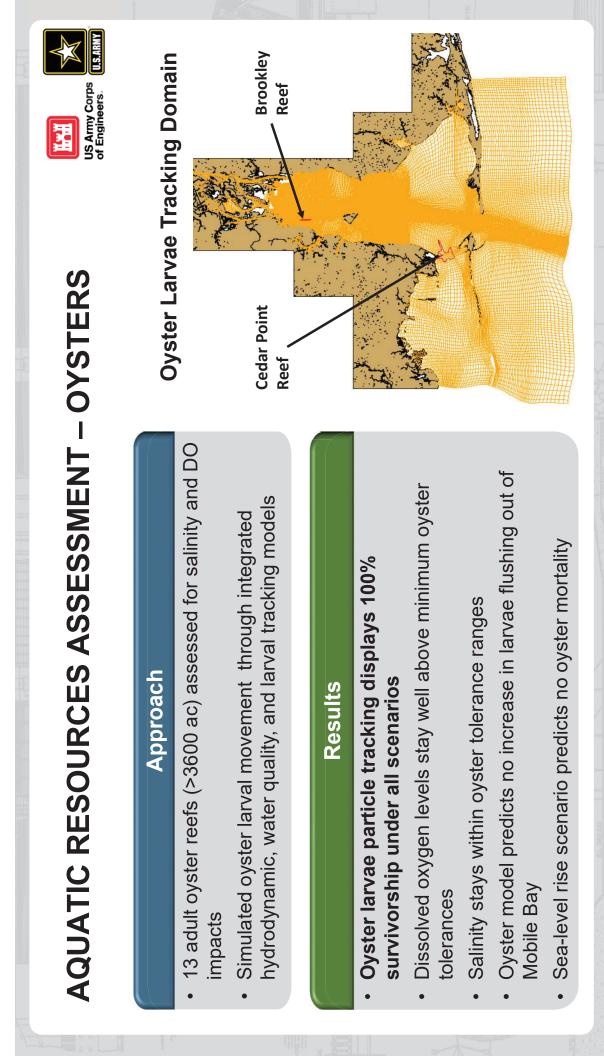
US Army Corps US Army Corps of Engineers.

Approach

- Mobile Bay SAV extent verified (>6,000 ac) across 55 community types
- Salinity tolerances established for each community and adjusted to local conditions

- No loss of SAV habitat expected
- Sufficient dissolved oxygen present under all scenarios
- Under expected (average) salinity conditions few impacts expected for most species
- Potential stress of Eurasian watermilfoil (invasive species), water celery, and coon's tail for short duration
 - No major differences seen between baseline and postproject conditions under sea level rise scenario







U.S.ARMY

Approach

- 240 samples taken in freshwater, transitional, and upper bay habitats
- Locations of changes in invertebrate communities identified

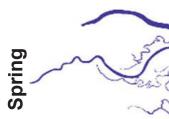
- Community transitions from saline to freshwater will remain similar to baseline conditions.
- Degree of freshwater (river) inputs dictates species transition locations •
- Impacts to fish via prey availability appear negligible













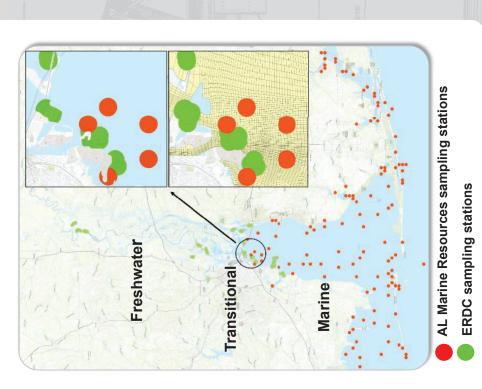
AQUATIC RESOURCES ASSESSMENT – FISH

US Army Corps US Army Corps of Engineers.

Approach

- Data obtained from AL Marine Resources (2005-2015) and supplemented by USACE
- 98,000 individual fish, 140 species
- Linked salinity and abundance of community members

- No impacts expected due to salinity for:
- Freshwater species
- Freshwater species entering estuary
- Resident estuary species
- Marine species entering estuary
- Marine species



AQUATIC RESOURCES ASSESSMENT – SUMMARY

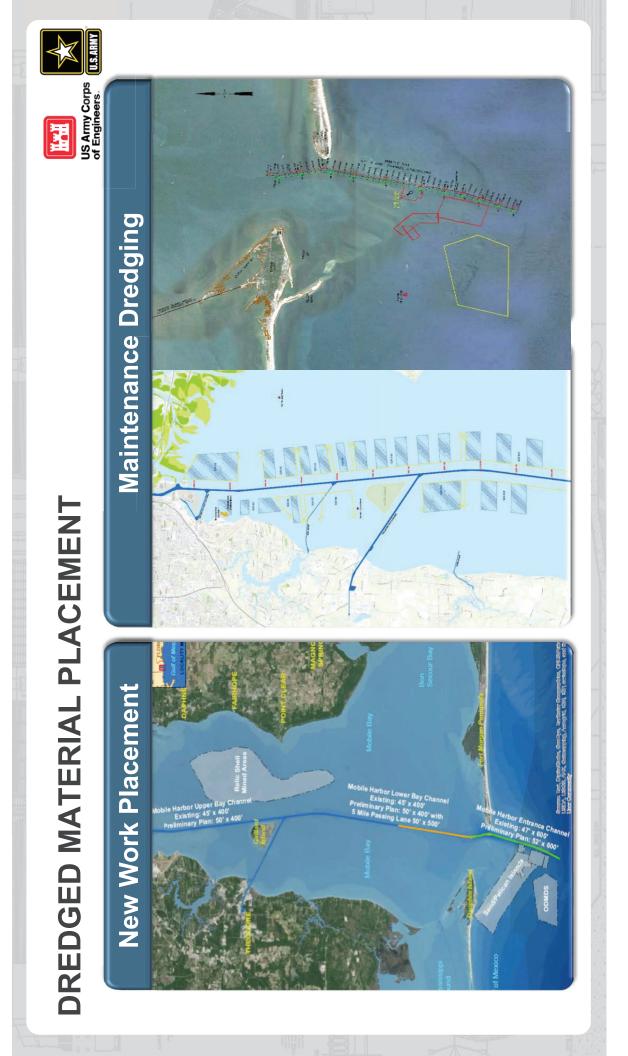
US Army Corps of Engineers.

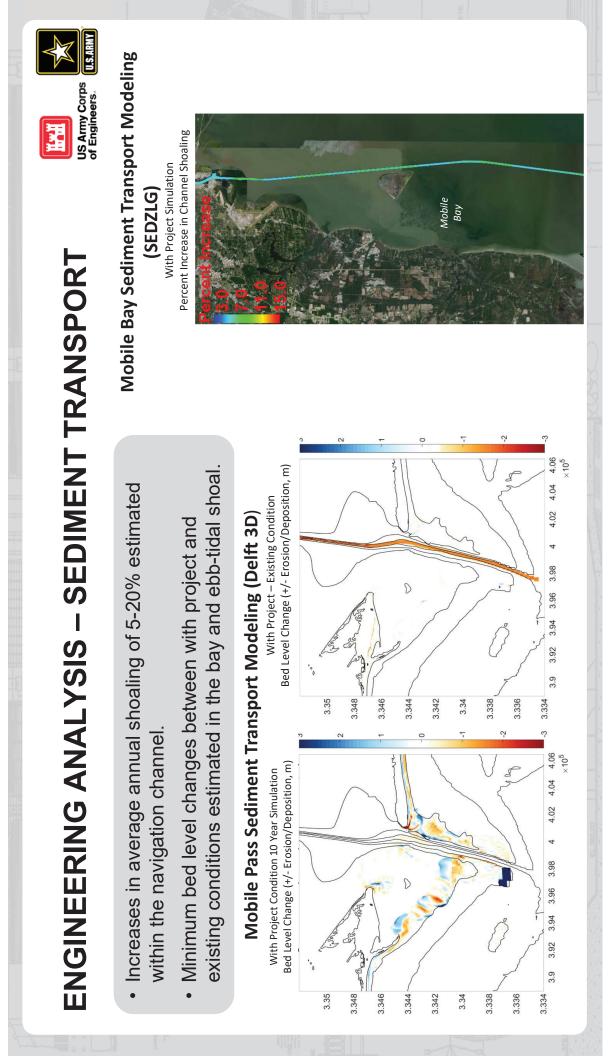
- No major impacts (i.e., loss of resources) anticipated for:
- Vetlands
- < SAV
- < Oysters
- ✓ Benthic Invertebrates
- < Fish
- Project impacts remain negligible under 0.5 meter sea level rise scenario











ENGINEERING ANALYSIS – MOBILE PASS EVOLUTION

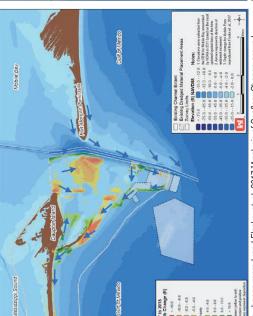


Short and long term representation of sediment movement along the ebb-tidal shoal. Three quadrants showing how sand moves along the system.

Mobile Pass Bed Level Change 1941 to 2002 (+/- Erosion/Deposition, ft)

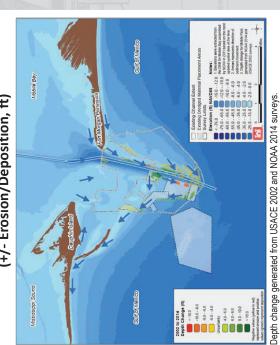
Mobile Pass Bed Level Change 1987 to 2015 (+/- Erosion/Deposition, ft)

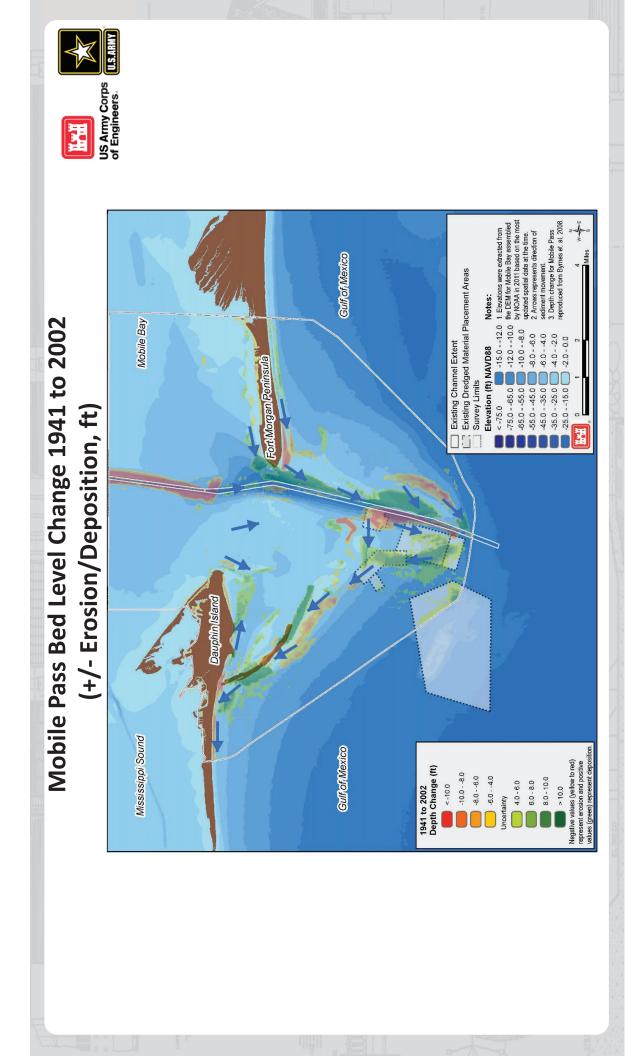
Depth change reproduced from Byrnes et al, 2008 "Evaluation of Channel Dredging on Shoreline Response at and Adjacent to Mobile Pass, Alabama"

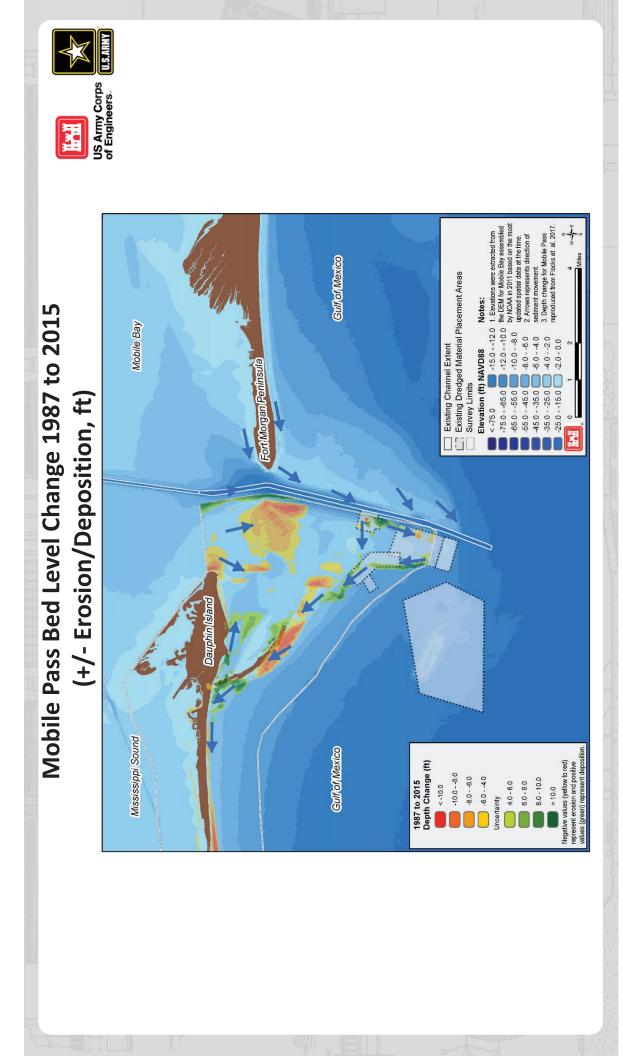


Depth change reproduced Flocks, et. al, 2017 "Analysis of Seafloor Change around Dauphin Island, Alabama, 1987–2015" Open-File Report 2017–1112.

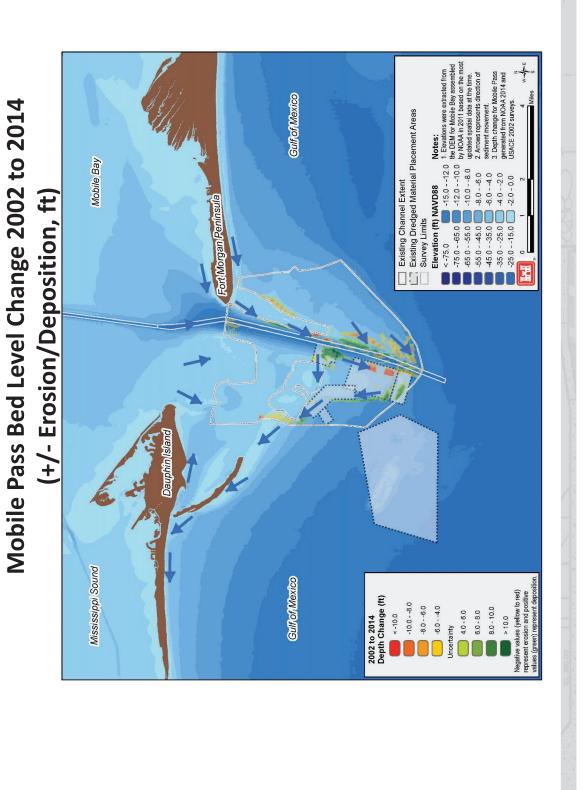
Mobile Pass Bed Level Change 2002 to 2014 (+/- Erosion/Deposition, ft)











US Army Corps of Engineers.



Summary

- Study is evaluating depth of 48 to 50 foot with a 100 foot, 3-mile widener
- Data collection and engineering models complete
- Preliminary analysis indicates that habitat impacts appear to be minimal
- Alternate placement sites are being considered for bar channel maintenance material

What's Next

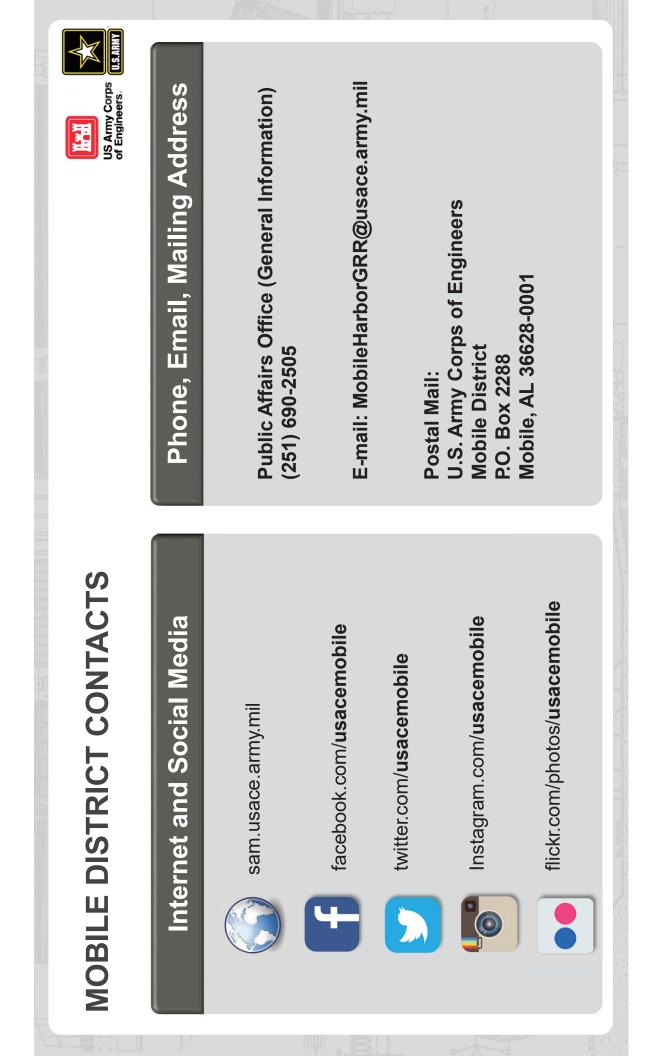
- Initiate mitigation analysis
- Finalize proposed project dimensions
- Update engineering/economic costs based on mitigation assessments
- Present Tentatively Selected Plan
- Complete Draft Report with SEIS
- Release Draft Report June 2018











From: To:	(b)(6)	
Subject:	Agenda Slide.pptx	
Date:	Thursday, February 22, 2018 12:41:00 PM	
Attachments:	Agenda Slide.pptx	

(b)(6) Please replace Agenda slide with the attached.





USACE Overview

- Mission Areas
- Boundaries
- Puerto Rico Update



Mobile Harbor GRR

- Project Overview
- Economic Analysis
- Environmental Analysis
- Engineering Analysis
- Dredged Material Placement
- Summary
- What's next
- Questions



From: To:	(b)(6)
Subject:	RE: Mobile Harbor GRR Funding Status
Date:	Thursday, February 22, 2018 3:28:00 PM

(b)(6)

We added the remaining \$300k in obligation authority. We now have a total of about \$850k remaining and no additional authority remains. In addition to the monthly labor, we anticipate covering costs for the Geotechnical Investigation (\$175k), Cultural Resource Survey(\$50k), VE Study (\$50k), DQC (\$25k), ATR (\$60k), and IEPR(\$125k) with these funds. If we don't receive additional funds on May 01, we may have to delay the ATR and IEPR to cover labor in May.



We have about \$370k remaining in non-obligated Federal ,369.37 Federal Funds Remaining (\$455,041.92 of that amount is obligated on MIPR's ERDC, Fish and Wildlife; and contracts). We anticipate having sufficient funds to carry us through the end of April.

Pls get me the latest on where we stand with available \$, how much more obligation authority we can request and how far we think that'll take us.

Original Message	
From: (b)(6)	
Sent: Wednesday, February 21, 2018 9:25 AM	
To:	(b)(6)
(b)(6)	
Cc: (b)(6)	
Subject: Mobile Harbor GRR Funding Status	

(b)(6) talking with (b)(6) ast night, told him it was getting tight on \$ for the GRR, that we are requesting the remaining +/- \$300K in obligation authority that's available. Also told him I'm concerned if we don't get a bill until 23 Mar and then wait 60 days for a workplan, we may run out of \$. I need to send him a note that he can remind HQ of our status. Pls get me the latest on where we stand with available \$, how much more obligation authority we can request and how far we think that'll take us. Thanks.



From: To:	(b)(6)	
Cc:		
Subject: Date: Attachments:	Post Meeting Public Comments - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting Friday, February 23, 2018 8:08:00 AM Non-DoD Source 1997 Corps HQ directive to Mobile District to conduct investigation under Section 302 authority.msg Fwd Non-DoD Source Thank you.msg	

All: Great job last night! Attached are a couple of e-mails we received after the meeting.



Original Message		
From: (b)(6)		
From: (b)(6) Sent: Thursday, February 22, 2018 10:29	9 AM	
То:	(b)(6)	
	(b)(6)	
	(8)(0)	
	(1)(2)	
Cc:	(b)(6)	
	(b)(6)	



Subject: Final Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Final Slides for tonight's Town Hall are attached.



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

From: (b)(6) Sent: Wednesday, February 21, 2018 3:03 PM	
To:	(b)(6)
	(b)(6)
Cc:	(b)(6)
	(b)(6)

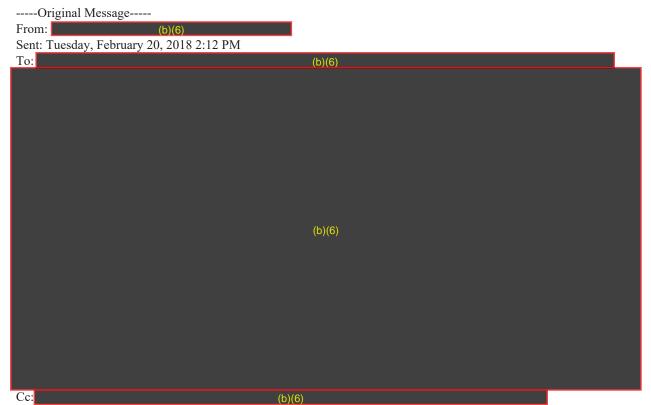
Subject: Latest Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All,

Latest slide set attached. Let me know if you see anything critical by tomorrow at 0900hrs.



(b)(6)



Subject: Q&As - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Latest Q&A's attached. I have also attached the scoping comments along with our responses (and rebuttal).



Original Message	
From: (b)(6)	
Sent: Monday, February 05, 2018 9:49 AM	
То	(b)(6)
(I	(b)(6)



Subject: Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.

(b)(6)	

	(b)(6)		
From:		(b)(6)	
Sent:	Friday, Februa	ary 23, 2018 2:29 AM	
То:	Mobile Harbo		
Subject:	-	[Non-DoD Source] 1997 Corps HQ directive to Mobile District to conduct investigation under Section 302 authority	
Attachments:		d SAD ltrs to SAM directing SAM to implement Sec 302 of WRDA of 6 and 1996 Mobile Harbor authorization and amendment.pdf	

(b)(6)

This is to follow-up our conversation tonight after the Mobile Harbor public meeting. As promised, attached are: (1) Corps HQ May 30, 1997 directive to the Mobile District; (2) SAD's subsequent endorsement; and (3) a related July 3, 1997 email from (b)(6) of SAD to (b)(6) of SAM. All three items of correspondence from Corps higher direct the District to investigate the authorized Mobile Harbor maintenance plan under the authority provided by Section 302 of the WRDA of 1996 (also attached). In conducting the investigation, the District was also directed to involve ALL stakeholders in a partnership agreement and to determine if the Mobile Harbor project Federal Standard should be adjusted by comparing the cost of alternatives to beneficially use dredged material, including environmental restoration; to the cost of disposal in deep Gulf waters as had been required in the WRDA of 1986 Mobile Harbor project authorization..

It was this correspondence that served as the basis for my comment at tonight's meeting. I am unaware of any investigation that may have been conducted by the District to comply with the Corps HQ directive and the accompanying SAD endorsement. As I said in my comment tonight, and as I have maintained since the initial Project Scoping Meeting over two years ago, the GRR Study should include an evaluation of an alternative(s) to comply with the discretionary Section 302 authority granted to the Corps, and now to the recently discovered 1997 directive from Corps higher authority to do so.

It is becoming increasingly unclear to a growing number of the concerned public why the Mobile District continues to refuse to evaluate alternatives allowed by Section 302 to counter the Dauphin Island erosion issue -- particularly since the District revealed tonight that beach quality sands (around 14 million cubic yards) placed in the Sand Island Beneficial Use Area (SIBUA) since 1999 are accumulating at a considerably faster rate than are being carried away from the site. Based on the 50% accumulation percentage reported by the District staff tonight, of the approximately 500,000 cubic yards of dredged sands placed in the SIBUA on an average annual basis, around 250,000 cubic yards remain in the site -- in effect being permanently removed from the littoral drift system. Thus, during the almost two decades since the District began placing sand in the SIBUA in 1999, around 7 million cubic yards of valuable beach quality sands have been effectively removed from the littoral drift system. That volume represents a significant loss of naturally provided nearshore sands. Further, that loss directly supports the observed decrease in depths within the SIBUA; the steady disappearance of the Sand/Pelican Island complex; and the continuing recession of the Dauphin Island shoreline and the decline in topography of Dauphin Island's west end.

As the District admitted tonight, the high sand accumulation/retention rate is also reducing the remaining capacity of the SIBUA to receive future dredged volumes, necessitating the need to extend the limits of the site to the northwest. The Mobile District stated it must make that change in the size and limits of the SIBUA even if the existing Outer Bar Channel dimensions are not increased as is presently proposed to occur. What the public would like to see is the SIBUA actually extended into more shallow waters of the ebb tidal delta shoal which would allow larger quantities of the sands to be reincorporated into the littoral drift system to rebuild the Sand/Pelican Island complex and to nourish Dauphin

Island's eroding shoreline. Such an alternative(s) must be identified and investigated in order to identify the true operational costs and to determine the effect on the Mobile Harbor project Federal Standard, as Corps HQ directed the Mobile District to do by letter of May 30, 1997. In view of what we learned tonight, further refusal by the Mobile District to conduct an evaluation of such alternatives does not represent a responsible action and will only weaken the GRR and its integrated SEIS when it is released for public review. Lastly, based on what we learned tonight, the Mobile District should discontinue referring to the SIBUA as a "beneficial use area", instead renaming it to the Sand Island Disposal Area.

BTW, this was the most informative public meeting the District has conducted to date the GRR Study. I recommend the District follow the same format for the public meeting that is typically held in connection with the release of the Draft GRR and SEIS.

Thanks





DEPARTMENT OF THE ARMY U.S. Army Corps of Engineers WASHINGTON, D.C. 20314-1000

REPLY TO ATTENTION OF:

CECW-P/O

3 0 MAY 1997

MEMORANDUM FOR Commander, South Atlantic Division

SUBJECT: Implementation of Section 302 of the Water Resources Development Act of 1996 (WRDA 96) - Mobile Harbor, Alabama

1. Section 302 of WRDA 96 amends Section 201(a) of WRDA 86 on dredged material disposal from Mobile Harbor, Alabama project. The new legislation authorizes that the Secretary, after compliance with applicable laws and after opportunity for public review and comment, may consider alternatives to disposal of dredged material from Mobile Harbor in the Gulf of Mexico, including environmentally acceptable alternatives for beneficial uses of dredged material and environmental restoration. The intent of section 302 is to allow alternatives to deep water disposal in the Gulf of Mexico that would be environmentally and economically beneficial.

2. Maintenance dredging should be accomplished in the most cost effective, efficient, and environmentally sound manner. However, the Mobile District should evaluate alternative disposal options for placement of dredged material from Mobile Harbor. Any examination of other alternatives to Gulf disposal should involve a multi-agency coordination team including Federal, State, and local resource agencies. Mobile District should make efforts to use District Engineer authority to make adjustment to the Federal standard to accommodate section 302 direction as well as, authorities under Section 204 of WRDA 92, and 207 of WRDA 96.

FOR THE COMMANDER:

CHARLES M. HESS Chief, Operations, Construction and Readiness Division Directorate of Civil Works

G. EDWARD DICKEY Chief, Planning Division Directorate of Civil Works

Author: Dennis W Barnett SAD at X400 Date: 7/3/97 2:23 PM Priority: Normal Receipt Requested TO: Roger A Burke at sampd_po Subject: Mobile Harbor, Section 302

Roger,

I have attached our endorsement to the HQ memorandum on the subject issue as an advance copy. We had given you a copy of the HQ memo when you were recently up here. I think you will find that our endorsement encourages you to look for opportunities to change the O&M plan without putting too many constraints or conditions on you.

Please share with others, especially Operations, as appropriate.

Dennis Barnett

CESAD-ET-P\C (CECW-P\O\30 May 97) (1105-2-10b) 1st End Mr. Barnett\bjg\404-331-4580\Mr. Deveaux\404-331-6742 SUBJECT: Implementation of Section 302 of the Water Resources Development Act of 1956 (WRDA 96) - Mobile Harbor, Alabama

Commander, South Atlantic Division, U.S. Army Corps of Engineers, Room 322, 77 Forsyth Street, S.W., Atlanta, Georgia 30303-3490

FOR COMMANDER, MOBILE DISTRICT

1. Section 302 of WRDA 96 affords an excellent opportunity to revisit the authorized plan for maintenance of Mobile Harbor in the interest of environmental protection and restoration and economic efficiency. Coupled with the high cost of maintaining the project as currently authorized and changing attitudes among environmental interests regarding the value of dredged material as a resource, Section 302 may allow you to develop a "master plan" for maintenance of lower Mobile Harbor that incorporates many positive environmental features and saves 0&M funds.

2. As O&M funds for the Mobile Harbor project will permit, you should investigate opportunities to modify the authorized maintenance plan in accordance with Section 302. Any investigations you undertake in this regard should address appropriate adjustments to the "Federal standard" (or Base Plan) for channel maintenance along with any opportunities for use of Section 1135 and 204 authorities to implement pertinent features of the modified maintenance plan.

3. It is paramount that any efforts to modify the authorized maintenance plan for Mobile Harbor be developed in close partnership with the project sponsor, Federal and state resource agencies, environmental groups, and all other stakeholders. In the interest of efficiency and to avoid duplication of effort, we strongly recommend that you use any existing interagency forums, like the Mobile Bay National Estuary Program, as a means to engage stakeholders in the development and evaluation of alternative dredged material management strategies.

FOR THE COMMANDER:

CARL R. POSTLEWATE Director of Engineering and Technical Services

MOBILE HARBOR, ALABAMA

Project Authority: Section 201(a) of the WRDA of 1986 (100 Stat. 4090), as amended by Section 302 of the WRDA of 1996 (110 Stat. 3711)

Complete amended wording of project authority follows:

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. In disposing of dredged material from such project, the Secretary, after compliance with applicable laws and after opportunity for public review and comment, **may consider alternatives to disposal of such material in the Gulf of Mexico, including environmentally acceptable alternatives for beneficial uses of dredged material and environmental restoration**.

Actual wording of the two laws is contained on the two following pages

100 STAT. 4082

Public Law 99–662 99th Congress

An Act

Nov. 17, 1986 [H.R. 6]

To provide for the conservation and development of water and related resources and the improvement and rehabilitation of the Nation's water resources infrastructure.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Water Resources Development Act of 1986. 33 USC 2201 note.

SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Water Resources Development Act of 1986".

TITLE II—HARBOR DEVELOPMENT

SEC. 201. DEEP-DRAFT HARBOR PROJECTS.

Harbor Development and Navigation Improvement Act of 1986.

(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, except as otherwise provided in this subsection:

MOBILE HARBOR, ALABAMA

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; except that if non-Federal interests construct a bulk material transshipment facility in lower Mobile Bay, the Secretary, upon request of such non-Federal interests, may limit construction of such project from the Gulf of Mexico to such facility and except that, for reasons of environmental quality, dredged material from such project shall be disposed of in open water in the Gulf of Mexico in accordance with all provisions of Federal law. Notwithstanding any other provision of law, no dredged or fill material shall be disposed of in the Brookley disposal area, referred to in such report of the Chief of Engineers.

PUBLIC LAW 104-303-OCT. 12, 1996

Public Law 104–303 104th Congress

An Act

Oct. 12, 1996 [S. 640]

To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Water Resources Development Act of 1996. the United States of Åmerica in Congress assen SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

33 USC 2201 note. (a) SHORT TITLE.—This Act may be cited as the "Water Resources Development Act of 1996".

TITLE III—PROJECT-RELATED PROVISIONS

. .

SEC. 302. MOBILE HARBOR, ALABAMA.

The undesignated paragraph under the heading "MOBILE HAR-BOR, ALABAMA" in section 201(a) of the Water Resources Development Act of 1986 (100 Stat. 4090) is amended by striking the 1st semicolon and all that follows and inserting a period and the following: "In disposing of dredged material from such project, the Secretary, after compliance with applicable laws and after opportunity for public review and comment, may consider alternatives to disposal of such material in the Gulf of Mexico, including environmentally acceptable alternatives for beneficial uses of dredged material and environmental restoration.".

From: To: Cc:	(b)(6)
Subject:	RE: Post Meeting Public Comments - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting
Date:	Friday, February 23, 2018 9:45:00 AM

Thanks, (b)(6) and all good comments. I think that is a great idea to have the team sign a card.

Original Message		
From: (b)(6)		
Sent: Friday, February 23, 2018 9:24 AM		
To:	(b)(6)	
Cc:	(b)(6)	
CI: OF D AN C DII C	E 1 00 0010 M 1 1 H 1 CDD T	TT 11 X

Subject: RE: Post Meeting Public Comments - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

Great job to you guys that spoke and answered questions! Luckily I didn't have any pressure on me!....How about (b)(6) He did an amazing job too, expressing understanding for the audiences' concerns prior to explaining his models on a level most or all could understand. From the slides I had seen previously supplied, I was surprised and impressed that he could be so technical and speak on my level!

My lessons-learned/ suggestions for future meeting are:

Maybe we should consider business cards with the Mobile Harbor social media/ email contact information since we shouldn't give our information out.

Several sides were really hard to read: chart on econ slide, arrows on slide with sediment transport should be different color...I couldn't see the blue arrows, I couldn't ready any text with white shadowed lettering, etc.

By the way, I'm going to try to get (b)(6) address, would you like the Mobile Harbor team to send her a gift card and supportive card. Regardless, I'm sending her a card, if I can get the address to where she is staying.

Original Message	
From: (b)(6)	
Sent: Friday, February 23, 2018 8:08 AM	
To:	(b)(6)
	(b)(6)

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

Subject: Post Meeting Public Comments - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Great job last night! Attached are a couple of e-mails we received after the meeting.



Original Message From: (b)(6) Sent: Thursday, February 22, 2018 10:29 AM	
То	(b)(6)
	(b)(6)
	(b)(6)
Cc:	(b)(6)
	(b)(6)

Subject: Final Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All: Final Slides for tonight's Town Hall are attached.





Original Message	
From: (b)(6) Sent: Wednesday, February 21, 2018 3:03 PM	
To:	(b)(6)
	(b)(6)
Cc	(b)(6)
	(b)(6)

Subject: Latest Slides - Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

All,

Latest slide set attached. Let me know if you see anything critical by tomorrow at 0900hrs.

(b)(6)	

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

From:	(b)(6)
Sent: Tuesday,	February 20, 2018 2:12 PM
To:	



All: Latest Q&A's attached. I have also attached the scoping comments along with our responses (and rebuttal).



Original Message From: (b)(6) Sent: Monday, February 05, 2018 9:49 AM To:	(b)(6)
	(b)(6)

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

Subject: Feb 22, 2018 Mobile Harbor GRR Town Hall Meeting

Attached is the public notice and the proposed attendees list for the Mobile Harbor GRR Town Hall Meeting to be held February 22, 2018 from 6-8pm. If you cannot attend, or, if you know of someone that will attend that is not on the list, please let me know.



((b)(6)
From: Sent: To: Cc:	(b)(6) Friday, February 23, 2018 7:16 AM DeLapp, James Andrew (Jim) COL USARMY CESAM (US)
Subject:	(b)(6) Fwd: [Non-DoD Source] Thank you
FYI	
	b)(6)
Date: February 22, 201	
То:	(b)(6)
Subject: [Non-DoD Sou	rce] Thank you

(b)(6)

Please pass my deep appreciation to the Colonel and to all the staff at the Army Corps of Engineers Mobile District for conducting the public meeting this evening. I know there was a tremendous amount of preparation that went into hosting that gathering and certainly appreciate everything that all of you did to make it such a successful engagement.

Attendees, for the most part, were respectful and felt comfortable not only sharing, but also learning. The only question that I was trying to ask before the time ran out related to when the models and data use for the five environmental considerations--wetlands, oysters, SAV, etc.--are going to be released for public review. Can you let me know a general timeline for that? (By the way, Chris Nelson is an advisory council member for the Alabama Coastal foundation so I am particularly interested in hearing more about the potential impact regarding adult oysters.)

Also, please let me know when you have when the next public meeting scheduled this summer so we can help get the word out again.



(b)(6)

Alabama Coastal Foundation 250 Conti Street, 2nd Floor PO Box 1073 Mobile, AL 36633

(b)(6)

From: To:	(b)(6)	
Subject:	Check list A for Mobile Harbor GRR 02-26-2018.doc	
Date:	Monday, February 26, 2018 3:34:00 PM	
Attachments:	Check list A for Mobile Harbor GRR 02-26-2018.doc	

Can you guys meet in the small pm conference room in the morning at 0800hrs to review the attached checklist for Mobile Harbor?



Project Study Issue Checklist

Mobile Harbor Mobile, Alabama General Reevaluation Report

1. Will the report clearly articulate how the selected plan will be consistent with each of the Chief of Engineers Actions for Change for Applying Lessons Learned during Hurricanes Katrina and Rita issued 24 August 2006? YES____ NO__*. N/A

2. Will the report clearly articulate how the selected plan will be consistent with each of the USACE Environmental Operating Principles? YES X NO *.

3. Has a NEPA document been completed? YES____ NO___*. Pending

4. Will the NEPA Documentation be more than 5 years old at the time of PCA signing or construction initiation? YES_* NO_X_.

5. Will the ESA Findings be more than 3 years old at the time of PCA signing or construction initiation? [Note: Findings refers to Corps documentation and/or US Fish and Wildlife Service's opinions and recommendations] YES__* NO_X_.

6. Is ESA coordination complete? YES____NO__*. Pending

7. If an EIS/EA was completed for the selected plan, will anything prevent signing the Record of Decision (ROD) or Finding of No Significant Impact (FONSI)? YES_* NO_X_.

8. Is the selected plan consistent with the ROD/FONSI? YES____NO___*. Pending

9. Have there been any changes in Federal environmental laws or Administration or Corps policy since original project authorization that make updating necessary; e.g., change to the Clean Air Act status for the project area going from attainment to non-attainment? YES_* NO_X_.

10. Are the feasibility-level planning, selection and justification of mitigation plans for fish and wildlife, induced flood damages, cultural or historic preservation, or recreation incomplete or deferred to the PED Phase? YES_* NO___. Pending

[Issue papers must describe what is being mitigated, the likely mitigation plan, the likely cost of mitigation, and why the analyses are being deferred.]

11. For reevaluations that conclude further authorization is unnecessary, are the proposed mitigation plan(s) for fish and wildlife, induced flood damages, cultural or historic preservation, or recreation the same as the previously authorized plan? YES_____NO__* Pending

12. Is there an incremental analysis/cost effectiveness analysis of proposed fish and wildlife mitigation features based on an approved method and using an accepted model? YES_____NO___*. Pending

13. Were cost risk analysis methods applied to develop contingencies for the estimated total project costs (see Engineering and Construction Bulletin issued 10Sep07)? YES____NO__* Pending

14. Was the peer (technical) review of the cost estimates duly coordinated with the cost estimate center of expertise and addressed in the review documentation and certification? YES___NO__* Pending

15. Would the selected plan cause the previously authorized project's fully funded cost to exceed the cost limit of Section 902 of WRDA 1986? [Note: for coastal storm damage reduction projects there are two separate 902 limits, one for initial project construction and one for periodic renourishment] YES__* NO___ Pending [Issue paper must provide the authorized project cost, price level, and current and fully funded project cost estimates and price levels].

17. Does the selected plan involve CERCLA covered materials? YES <u>*</u> NO <u>Pending</u>

18. Are the proposed project purposes different than the previously authorized project? [Note: different than specifically noted in authorization or noted in Chief's report and is it measured by project outputs] YES_* NO_X.

19. Are there any scope changes proposed for the previously authorized project? YES_* NO___. **Pending** [Issue paper must describe the authority that would enable the project to proceed without additional Congressional modification].

20. If the selected plan includes crediting a non-Federal entity for in-kind services provided either before or after authorization, has a request for a Secretary determination of credit eligibility been forwarded to HQUSACE? [Note: In order to credit a non-Federal sponsor for in-kind services, the credit must be based upon a particular Congressional authority and ASA(CW) must approve a credit eligibility request before the services are provided. The issue paper must describe the scope of the in-kind services, the schedule for providing the services, the authority for providing credit, the status of the request for ASA(CW) approval, and the resulting elements of the non-Federal cost-share (LERRD, cash and credit). If the credit is based on an existing authority, the issue paper must include a copy of the authority if it is not a general authority such as Sec 215. If there is no existing authority to credit the in-kind services, as determined by Counsel, the issue paper should present the rationale for recommending such credit in the decision document for specific Congressional authorization.] YES_____N/A

21. Would the project cost sharing involve reimbursement to the sponsor? [Note: The issue paper must identify the circumstances and authority for recommending reimbursement.] YES_* NO_X_.

22. Is an Ability to Pay cost sharing reduction included in the selected plan? [If yes, fully describe the proposal in the issue paper, citing how this authority is applicable. Include a table showing the cost sharing by project purpose and expected Ability to Pay reductions.] YES_* NO_X_.

23. Is a Locally Preferred Plan recommended without an exception granted by ASA(CW) to recommend plan different from the NED, NER or NED/NER Plan prior to the release of the draft decision document for public review? [Note: if this answer is yes, then a series of questions arise

that will need to be addressed in the issue paper...is plan less costly than NED plan, is the plan more costly with the same cost sharing the same as NED plan (exception), is plan more costly with all costs exceeding the cost of the NED plan at 100% non-Federal cost, or has ASA(CW) already granted an exception] YES_* NO_X_.

24. Was a standard accepted Corps methodology/model used to calculate NED benefits? YES____NO__*. Pending

25. Are non-standard benefit categories used to select or justify the recommended plan? YES__* NO___. Pending

26. Was the planning effort conducted in a systems/watershed context and was this reflected in the presentation of the without-project conditions, problem and opportunity statements, and the plan formulation, evaluation and selection? YES____NO___*. Pending

27. Were the alternatives formulated, evaluated, and selected using the four P&G evaluation accounts – NED, EQ, RED, and Other Social Effects? YES____NO___*. Pending

28. Did the planning effort collaborate with other Federal, state, Tribal, and local entities to develop solutions that integrate expertise, policies, programs, and projects across public entities? YES____NO__*. Pending

29. Were the types and degrees of risk and uncertainty clearly characterized for the selected plan and were the various adjustments included in the selected plan to reduce risk and uncertainty also described clearly? YES_____NO__*. Pending

Navigation Component (Inland or Harbor)

30. Is there a navigation component (inland or harbor) in the selected plan? YES X NO.... If Yes, answer each of the following questions for the selected plan:

32. Is there a single owner and/or beneficiary which are not a public body? [Public body as defined by Section 221 of WRDA 1970] YES_* NO_X_.

33. Are there proposals for Federal cost sharing of Local Service Facilities [e.g., dredging of non-Federal berthing areas] work? YES__* NO___. Pending

34. Is there sediment remediation proposed under Sec. 312 authority? [i.e., Section 312 of WRDA 1990 as amended by Section 205 of WRDA 1996] YES_* NO___. Pending

35. Is there dredged material placement on beaches where the use is not the least costly environmentally acceptable plan? YES_* NO___. Pending

36. Will the dredged material be used for ecosystem restoration where the recommended plan is not the least costly environmentally acceptable plan? YES_* NO___. Pending

37. Are there recreation navigation benefits? YES <u>*</u> NO <u>X</u>.

38. Does the selected plan involve inland navigation harbor development? YES_* NO_X_.

39. Can the resale or lease of lands used for disposal of excavated material recover the cost of the selected improvements? YES_* NO___. Pending

40. Will acquisition of land outside the navigation servitude be necessary for construction of the proposed improvements (either the project or non-Federal facilities that will use or benefit from the project) and will this permit local entities to control access to the project? [The latter case is assumed to exist where the proposed improvement consists of a new channel cut into lands.] YES_* NO___. Pending

Flood Damage Reduction Component

41. Is there a flood damage reduction component in the selected plan? YES____ NO_X_. If Yes, answer each of the following questions for the selected plan:

42. Is the selected plan for protection of a single property or beneficiary? YES_* NO___.

43. Would the selected plan produce land development opportunities/benefits? [Issue paper must describe whether special cost sharing should apply.] YES_* NO___.

44. Is there any recommendation to cost share any interior drainage facilities? YES_* NO___.

45. Are there any windfall benefits that would accrue to the project sponsor or other parties? [Issue paper must describe whether special cost sharing should apply.] YES__* NO___.

46. Are there non-structural buyout or relocation recommendations? YES_* NO___.

47. Is the selected plan likely to change the existing allocated storage in lake projects? YES__* NO___.

48. Do the proposed changes to the project include any significant risks to public safety related to uncontrolled flooding? YES__* NO___.

49. Have all the public safety issues related to uncontrolled flooding been fully resolved with the district/MSC Dam Safety Officers? YES____NO__*.

50. Have all the changes in residual public safety risks related to uncontrolled flooding been communicated to the public and incorporated into their emergency response plan? YES____NO__*.

Coastal Storm Damage Reduction Component

51. Is there a coastal storm damage reduction component in the selected plan? YES_____NO_X_. If Yes, answer each of the following questions for the selected plan:

52. Does the selected plan protect privately owned shores? YES____NO____. Prior to construction of the project perpetual, public use easements will be secured from all property owners for areas in which sand is placed thereby guaranteeing public accessibility to the shore protection project

53. Does the selected plan protect undeveloped lands? YES____NO____. Most of the land along the shore has been developed. The few undeveloped parcel s are scattered and relatively small in size. To insure integrity and proper functioning of the shoreline protection work it is necessary to include these areas as part of the project.

54. Does the selected plan protect Federally owned shoreline at Federal cost? [If yes, describe what is to be protected and who bears the Federal cost.] YES_* NO___.

55. Does the selected plan involve tidal or fluvial flooding; i.e., is it clear what the project purpose is and has the project been formulated as a coastal storm damage reduction project or flood damage reduction project? YES__* NO___.

56. Is there any recommendation to cost share any interior drainage facilities? YES__* NO___.

57. Is recreation more than 50% of total project benefits needed to justify the project? YES__* NO___.

58. Are there any parking or public access issues [no public access or none provided within 1/2 mile increments]? YES____ NO____. The plan delineates the location of the parking and access issues and adjusts the project cost share in recognition of the issues.

57. Are easements being provided to ensure public use and access? YES____NO__*.

59. Is there a Sec. 934 of WRDA 1986 extension of the period of authorized Federal participation? YES__* NO___.

60. Are there any Sec. 111 of Rivers and Harbors Act of 1958, as amended proposals? YES__* NO___.

61. Do the proposed changes to the project include any significant risks to public safety related to uncontrolled flooding? YES__* NO___.

62. Have all the public safety issues related to uncontrolled flooding been fully resolved with the district/MSC Dam Safety Officers? YES____NO__*.

63. Have all the changes in residual public safety risks related to uncontrolled flooding been communicated to the public and incorporated into their emergency response plan? YES____NO___*.

Aquatic Ecosystem Restoration Component

64. Is there an aquatic ecosystem restoration component of the selected plan? YES____ NO_X_. If Yes, answer each of the following questions for the selected plan:

65. Has the selected plan been formulated using cost effectiveness and incremental analysis techniques? YES____NO__*.

66. Was "IWR Plan" used to do cost effectiveness/incremental analysis? YES____NO__*.

67. Are the restoration features justified by aquatic habitat restoration benefits (exclude preservation and enhancement benefits, and terrestrial habitat benefits)? YES____NO___*.

68. Is the project purpose for restoration of cultural or historic resources as opposed to ecosystem restoration? YES__* NO___.

70. Are there recommendations for other than restoring a degraded aquatic ecosystem [e.g., creating new habitat where it has never been]? YES__* NO___.

71. Is the significance of the habitat clearly identified using the categories and criteria defined in Section 3.4.3 of Principles and Guidelines and in paragraph 16.b of EP 1165-2-502? YES_____NO <u>*</u>.

72. Has the restoration project been formulated for biological/habitat values as opposed to, for example, water quality? YES____NO__*.

74. Does the selected plan involve land acquisition where the value exceeds 25% of total project cost? YES_* NO___.

75. Are all the proposed recreation features in accord with ER 1105-2-100, Appendix E, Exhibit E-3? YES____NO__*.

76. Are there recommendations to include water quality improvement? YES_* NO___.

77. Is the monitoring & adaptive management period proposal beyond 5 years after completion of construction? YES__* NO___.

78. Does the selected plan involve land acquisition in other than fee title? YES_* NO____.

74. Are there recommendations for non-native species? YES <u>*</u> NO

79. Does the selected plan propose the use of navigation servitude? YES_* NO___.

80. Does the recommendation include monitoring costs greater than 1% of the total first cost of aquatic ecosystem restoration? YES_* NO___.

81. Does the recommendation include adaptive management costs greater than 3% of the total first cost of aquatic ecosystem restoration, excluding monitoring costs? YES_* NO___.

Recreation Component

82. Is there a recreation component of the selected plan? YES____ NO_X_. If Yes, answer each of the following questions for the selected plan:

83. Is the cost of proposed recreation development more than 10 % of the Federal project cost without recreation [except for nonstructural flood damage reduction and coastal storm damage projects]? YES_* NO____. [Issue paper must describe the proposal and whether ASA(CW) approval has been granted.]

84. Are there recreation features located on other than project lands? YES_* NO____.

85. Does the selected plan involve/provide for waterfront development? YES_* NO___.

86. Does the selected plan involve the need to reallocate authorized storage (see Section III, Appendix E, ER 1105-2-100]? YES_* NO_.

87. Does the selected plan include non-standard recreation facilities (refer to ER 1105-2-100, Appendix E, Exhibit E-2)? YES_* NO___.

Water Supply Component

88. Is there a water supply component of the selected plan? YES____ NO_X_. If Yes, answer each of the following questions for the selected plan:

89. Does the component include features other than Corps reservoir storage space for M&I water supply? YES__* NO___.

90. Do the outputs meet other needs other than M&I water supply, such as agricultural water supply? YES__* NO___.

91. Does the selected plan use non-standard pricing for reallocated storage? YES_* NO____.

92. Are there exceptions to model contract/agreement language? YES_* NO___.

Concurrences

Project Manager	 Date:
District Planning and Policy CoP leader	 Date:
District Counsel	 Date:
DDE (PM)	 Date:
MSC Planning and Policy CoP Leader	 Date:
MSC Counsel	 Date:

From: To: Cc:	(b)(6)
Subject:	Mobile Harbor GRR Real Estate Question
Date:	Tuesday, February 27, 2018 10:03:00 AM

(b)(6)

I'm working on the Study Issue Checklist for the Mobile Harbor GRR and came to this question...

40. Will acquisition of land outside the navigation servitude be necessary for construction of the proposed improvements (either the project or non-Federal facilities that will use or benefit from the project) and will this permit local entities to control access to the project? [The latter case is assumed to exist where the proposed improvement consists of a new channel cut into lands.] YES * NO .

The instructions for the checklist state the following...

Any non-pending response with an asterisk (*) requires coordination and issue resolution through the vertical team using an issue paper as outlined in paragraph H-2.f. All issues need to be resolved before requesting approval of the decision document.

I know that we will be excavating parts of Little Sand Island for the Turning Basin, but, I am not sure if that is outside of the navigational servitude. For the purposes of the TSP submittal should I just state "pending"?



From: To:	(b)(6)
Subject:	Emailing: 11 Apr 2017 IPR Presentation Final.pptx
Date:	Tuesday, February 27, 2018 2:38:00 PM
Attachments:	11 Apr 2017 IPR Presentation Final.pptx

(b)(6) this is the latest document that I could find that shows the BCR. I know you had an economics team meeting after this. Did you provide any BCR's for it?

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

11 Apr 2017 IPR Presentation Final.pptx

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.

MOBILE HARBOR GRR

With Integrated Supplemental Environmental Impact Statement

In-Progress Review Prepared by David Newell, P.E. 11 April 2017



"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."





MOBILE HARBOR GRR PURPOSE/BOTTOM LINE UP FRONT

PURPOSE

Keep vertical team apprised of progress on the Mobile Harbor GRR and ensure concurrence with study direction.

BLUF

Study is on schedule and budget

 Initial results indicate depth of 49' to 52' in Bay Channel (51' to 54' at Entrance)

nel ent plans Agency and public acceptance of the project dependent on environmental impacts and, if required, mitigation plans

Not to Scale

Cat Island

Gulfport

Petit Bois Island



45

Dauphin-Island



Bay Minette

US Army Corps of Engineers *

Mobile

-37 miles

Daphne

MOBILE HARBOR GRR MAJOR ACTIVITIES SINCE OCTOBER IPR

Completed data collection for development of engineering models (waves, water quality, discharge data)

Developed existing condition hydrodynamic model

Developed visualization graphics for ship simulation and completed tabletop exercise with ASPA, pilots, and Coast Guard



Developed *preliminary* costs and benefits for deepening



 \checkmark

 \checkmark

 \checkmark

 \checkmark

ENGINEERING

ECONOMICS

ENVIRONMENTAL

OTHER

Completed initial (late summer) aquatic resource sampling; spring sampling scheduled for May 2017



Performed initial screening of beneficial use opportunities and coordinated with resource agencies



 \checkmark

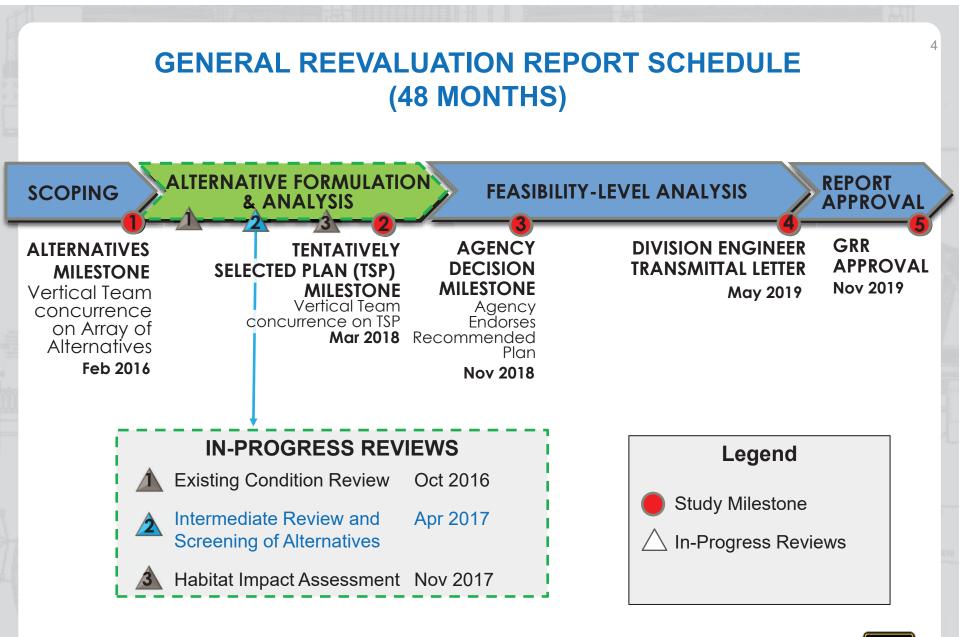
- Continued agency coordination in regards to beneficial use and environmental assessment
- Held public open house 16 Mar 2017



US Army Corps

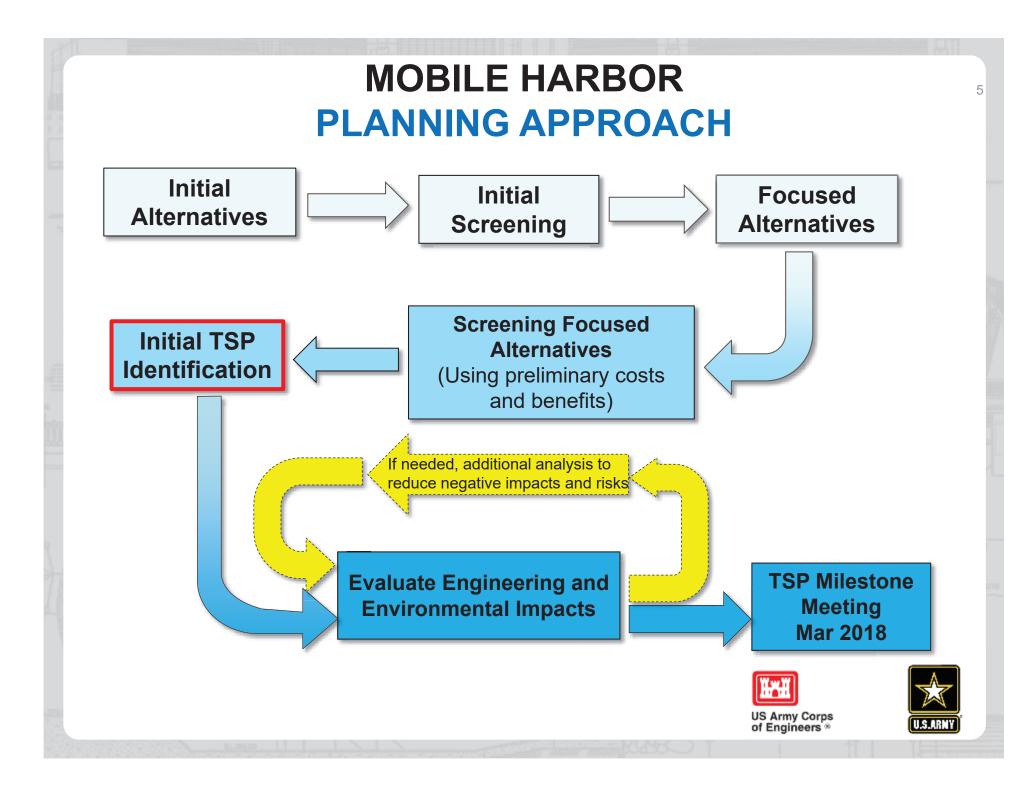
of Engineers *

I S ARM









MOBILE HARBOR GRR APPROACH TO BENEFITS

- Preliminary Benefits estimated using the HarborSym Model
- Origin-to-destination benefits for container and bulk vessels only
 ✓ Within harbor benefits are currently being analyzed
- Bulk coal forecast developed using Annual Energy Outlook 2016
- Containerized growth forecast developed using Global Insight Gulf Coast regional forecast
- Assumptions for containerized commodity and fleet forecast closely coordinated with Houston Ship Channel Studies
- Base tonnage for analysis using 2010-2014 data, forecast period 2015-2045





MOBILE HARBOR GRR APPROACH TO COST ESTIMATING

- Estimated construction costs for plan formulation
 - ✓ Utilized Cost Engineering Dredge Estimating Program (CEDEP) and historical information
 - ✓ Based subsurface material classification on historic boring data (1960-1990)
 - Vetted least cost placement locations with federal and state resource agencies for preliminary concurrence
 - Costs will be refined as TSP is developed.
- Conducted an Abbreviated Risk Analysis (ARA) to determine cost contingencies
 - Estimated relative differences in potential environmental effects/mitigation needs using professional judgement
- Determined annual O&M costs
 - ✓ Based on historical dredging records and estimated future shoaling rates
- Identified associated project costs
 - ✓ Potential pipeline relocations
 - ✓ U.S. Aids to Navigation (ATONs)
 - ✓ Berthing areas





MOBILE HARBOR GRR SCREENED FOCUSED ALTERNATIVES

Further Screened Alternatives

- Initial depth of 49 to 52 feet (51 to 54 feet in Entrance Channel)
- Widths of 500 and 550 feet (Bay Channel)
- Lengths of widening up to 15 miles
- Bend easing (Upper Bar Channel)





MOBILE HARBOR GRR PRELIMINARY DEEPENING BENEFITS, COSTS, NET BENEFITS, AND BCR

	47'	48'	49'	50'	51'	52'
Benefits*	\$27.6 M	\$35.3 M	\$43.0 M	\$50.7 M	\$58.3 M	\$62.7 M
Cost*	\$6.6 M	\$9.6 M	\$12.6 M	\$15.7 M	\$21.1 M	\$29.6 M
Net Benefits**	\$21.0 M	\$25.7 M	\$30.4 M	\$35.0 M	\$37.2 M	\$33.1 M
BCR*	4.2	3.7	3.4	3.2	2.8	2.1

*Benefits and cost in average annual equivalent using FY17 discount rate **Net Benefits are for deepening only

Cost is annualized over 50 year period of analysis and includes construction, PED, mitigation contingency, interest during construction, associated costs, and O&M.





MOBILE HARBOR GRR PUBLIC INVOLVEMENT

Biweekly Social Media Updates



Public Meetings Upcoming • Summer/Fall17



Public Involvement Management Strategy (PIMS)

Public Involvement Management Version: January 12, 2017

Mobile Harbor General Reevaluation Report Public Involvement Management Strategy

January 13, 201

This is a living document and subject to revision based on study needs and public input.

I. Introduction

This Public involvement Management Strategy (PMS) has been updated to support the Supplemental Trivense (ESB) for the Mole Invalor Elevation Report (ESB) of the Mole Invalor General PM Revolution Report (ESB) which will evaluate the proposed indening and depending the term of the second strategy of the second strateg

II. Project Background

Due to traffic changes, vessels began experiencing delays into and out of the port of Mobile. Nearly two-birds of the deep dort vessels transiting the port are light loaded and restricted to enseming or delight on traffic. The AAP which requested the VaCAL, Mobile Exhibit delays. Exhibition of the transition of the transition of the AAP and the delays. Exhibition of the transition of the transition of the AAP and the subsection of the transition of the transition of the AAP and the wave executed on August 14, 0222. After initial analysis and coordination with the AAP and the wave, the delays argument for the LBM was anneed on An and 12, 2014 to account for a change in location for the proposed aidening to include an approximate 5-mile section of the whore they channel to be autohont of which 550 feet and to when an approximate 2-mile and the section of the analysis of which an approximate 5-miles and the analysis of the analysis of the analysis of the SSS feet and the other and provide an approximate 2-miles and the section of the analysis of the section of the analysis of the analysis of the analysis of the section of the analysis of the analysis of the analysis of the analysis of the section of the analysis of the the the text of the analysis of the text of the te





District Project Webpage

Focus Group Meetings Small-group meetings with key stakeholders





ListServe

Registration tool that allows the public to receive announcements and updates



US Army Corps of Engineers ®



MOBILE HARBOR GRR RISK REGISTER

High Risk Study Activities to reach the TSP:

- Additional modeling and environmental analysis may be required to determine the plan that reasonably maximizes net benefits.
- Confirmation of passing rules will be conducted using preliminary Ship simulation testing for validation.





MOBILE HARBOR GRR FEDERAL FUNDING

	FY16	FY17	FY18	FY19	FY20	TOTAL
Original Scheduled	\$1,140,133 (includes FY15 and FY16 actuals)	\$2,088,019	\$1,741,233	\$684,227	\$252,638	\$5,906,250
Actual Scheduled	\$2,088,000	\$1,246,000	\$1,742,000	\$830,250	-	\$5,906,250
Appropriated	\$2,088,001	\$1,246,000	TBD	TBD	TBD	
Carry-in		\$947,868				





MOBILE HARBOR GRR WHAT'S NEXT

- Brief Coastal Alabama Partnership (Apr 17)
- Identify project width (May 17)
- Focus group meeting with Dauphin Island (Mayor and Home Owner Association reps) (May 17)
- Complete engineering existing and future without project condition models (May 17)
- Complete with-project engineering models (Aug 17)
- General Public Meeting (Late Summer/Early Fall 17)
- Complete Habitat Impact Assessment (Oct 17)







From: To: Cc:	(b)(6)
Subject:	Checklist Question for Mobile Harbor
Date:	Tuesday, February 27, 2018 4:20:00 PM

(b)(6) he checklist has the following question:

9. Have there been any changes in Federal environmental laws or Administration or Corps policy since original project authorization that make updating necessary; e.g., change to the Clean Air Act status for the project area going from attainment to non-attainment? YES * NO X.

Since the 1986 WRDA Authorization, there have been new Threatened and Endangered Species, critical habitat, and essential habitat listed. Does that mean that there have been changes in Federal Environmental Laws that will require an Issue Paper?



From: To: Cc:	(b)(6)
Subject:	RE: Checklist Question for Mobile Harbor
Date:	Wednesday, February 28, 2018 8:01:00 AM

That's good news! We did not want to write an issue paper on this one.



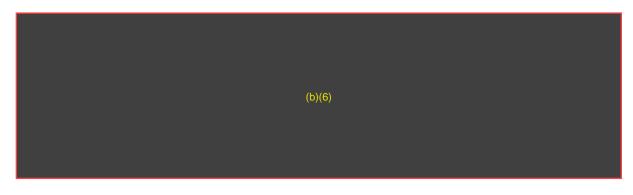
-----Original Message-----

From:	(b)(6)			
Sent: Wednesday, February 28, 2018 7:27 AM				
To:	(b)(6)			
Cc:	(b)	(6)		
	(b)(6)			

Subject: RE: Checklist Question for Mobile Harbor

(b)(6)

In my opinion adding species to the threatened and endangered list, or adding habitat is not a change in law or policy. That action is done under authority of the existing law - The Endangered Species Act. I don't think they add those by legislative act.



Original Message				
From: (b)(6)				
Sent: Tuesday, February 27, 2018 4:21 PM	<u>Л</u>			
To:	(b)(6)			
Cc:	(b)(6)			
(b)(6)				
(b)(6)				

Subject: Checklist Question for Mobile Harbor

(b)(6) The checklist has the following question:

9. Have there been any changes in Federal environmental laws or Administration or Corps policy since original project authorization that make updating necessary; e.g., change to the Clean Air Act status for the project area going from attainment to non-attainment? YES * NO X.

Since the 1986 WRDA Authorization, there have been new Threatened and Endangered Species, critical habitat, and essential habitat listed. Does that mean that there have been changes in Federal Environmental Laws that will require an Issue Paper?

