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# **ENVIRONMENTAL IMPACT STATEMENT**

## **APPENDIX U: Independent Technical Review of Use of Regulatory Standard Operating Procedures**

**SAVANNAH HARBOR EXPANSION PROJECT**  
Chatham County, Georgia and Jasper County, South Carolina

**January 2012**

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**US Army Corps  
of Engineers**  
*Savannah District  
South Atlantic Division*

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**Completion of Independent Technical Review (ITR)  
Deep Draft Navigation Planning Center of Expertise  
Ecosystem Planning Center of Expertise**

**Application of Savannah Districts Regulatory Standard Operating Procedure for  
Development of Mitigation, Savannah Harbor Channel Improvements**

**1. BACKGROUND**

The Savannah River navigation channel is currently maintained at a depth of 42 feet (12.8 meters) MLW. The U.S. Congress, in the 1999 Water Resources Development Act (WRDA), conditionally authorized deepening the channel to a maximum depth of 48 feet (14.6 meters) contingent upon the completion of a General Reevaluation Report (GRR) and Tier II Environmental Impact Study (EIS), a final mitigation plan and an incremental analysis of the channel depths from 42 to 48 feet.

A major environmental consideration in this study is increased salinities caused by the deeper channel and resulting impacts to fresh water marsh within the Savannah National Wildlife Refuge located immediately upstream of the harbor project. This refuge is managed by the U.S. Fish and Wildlife Service. In order to assess the salinity changes caused by the deeper channel increments, the Corps conducted hydrodynamic/salinity model studies. Results of the model studies show substantial impacts to the fresh water marsh with any increment of deepening. As such, the Corps conducted additional model studies to assess the effectiveness of various engineered features that could possibly offset the impacts from the deeper channel. Results of the mitigation feature analysis reveal that additional mitigation would be required beyond implementation of the offsetting hydraulic features.

Neither the Corps, the natural resources agencies, the Stakeholders Evaluation Group, or the NGOs that were consulted could identify other sites in the Savannah River estuary that could potentially be used for restoration or creation of tidal freshwater marsh.

The USFWS confirmed that mitigation actions must be performed within the basin for those actions to be acceptable for the impacts caused to wetlands residing within the Savannah National Wildlife Refuge. The Service also confirmed that restoration, enhancement or creation of salt marsh would not be acceptable as mitigation for those losses. However, they suggested preservation of lands as a possible solution and provided desired locations which are a part of their long term lands acquisition strategy to compliment the Wildlife Refuge.

In order to determine the number of acres appropriate for the preservation feature of the mitigation, the Corps used the Standard Operating Procedures (SOP) used by natural resources agencies in Georgia to evaluate impacts and mitigation on projects requiring Section 404 permits. The Standard Operating Procedure used by Savannah District's Regulatory Division was developed by the interagency Mitigation Banking Review Team (MBRT). That team consists of representatives of EPA Region 4, US Fish and Wildlife

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Service, National Marine Fisheries Service, US Army Corps of Engineers, and the Georgia Department of Natural Resources. The agencies use the SOP to quantify impacts to wetlands from actions described in Section 404 permit applications and determine the type and extent of actions that would provide acceptable mitigation. The SOP has been in existence for several years and is periodically revised when determined necessary by the MBRT.

Although the SOP was developed by the interagency Mitigation Banking Review Team for actions permitted through the Corps' Regulatory Division, it could also serve as a framework to quantify impacts from civil works projects such as this. EPA Region 4 suggested the Corps consider use of the SOP for this project.

The purpose of this ITR is to determine if the SOP is an appropriate method to determine the preservation acreage for impacts from the Savannah Harbor expansion project and comment on the reasonableness of the assumptions and calculations used in applying the SOP. The ITR was lead by the National Deep Draft Navigation Planning Center of Expertise with assistance from the Ecosystem Planning Center of Expertise for selection of appropriate ITR team members.

## **2. CHARGE TO ITR TEAM**

The charge for this Peer review was to review and comment on the use of the Savannah Districts Regulatory Standard Operating Procedure (SOP) to determine preservation acreage necessary to complete mitigation requirements for the Savannah Harbor Expansion Project. There are other elements of mitigation in this study including minimization, and avoidance of impacts along with restoration features. The SOP was used only to determine the amount of preservation acres necessary to offset the remaining acreage impacted after development of alternatives that included the minimization, avoidance and restoration features. The purpose of this peer review was to assess only the use of the SOP. Other elements of the study and mitigation analysis will be assessed by additional ITRs and EPRs. As such the charge for the peer review team was as follows:

Comment on the appropriateness of using the Savannah Districts Regulatory Standard Operating Procedure (SOP) to determine the amount of preservation acreage necessary to complete mitigation requirements for wetland mitigation related to the Savannah Harbor Expansion Project (SHEP).

Comment on the reasonableness of the assumptions and calculations that Savannah District used in applying the SOP for the SHEP.

## **3. CONCLUSION**

All comments in Dr. Checks have been closed out. The ITR team concurs with the use of the SOP to determine the amount of preservation acreage and consider Savannah District's application of the SOP to be reasonable. However, the ITR team has forwarded

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several comments to be considered during ITR of the overall mitigation documentation. These comments relate to mitigation plan development and not use of the SOP. All comments are contained in the enclosed review report.

### **Independent Technical Review Team**

\_\_\_\_\_  
Jeffrey L. Trulick  
Economic and Environmental Team Leader  
Baltimore District

\_\_\_\_\_  
Date

\_\_\_\_\_  
Catherine Rogers  
Ecologist, Environmental Resources Section  
New England District

\_\_\_\_\_  
Date

\_\_\_\_\_  
Martin P. Wargo  
Chief, Environmental Analysis  
Buffalo District

\_\_\_\_\_  
Date

\_\_\_\_\_  
Michele Gomez  
Biologist, Civil Project Development Branch  
Baltimore District

\_\_\_\_\_  
Date

\_\_\_\_\_

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**Independent Technical Review Certification**  
**Application of Savannah Districts Regulatory Standard Operating Procedure for**  
**Development of Mitigation, Savannah Harbor Channel Improvements**

I certify that the project review process required under my responsibility has been completed in accordance with all Corps regulations, requirements, and customer expectations.

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Bernard Moseby  
Acting Deputy Director  
Deep Draft Navigation Planning Center of Expertise  
Mobile District

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Date

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David A. Vigh  
Ecosystem Planning Center of Expertise  
Vicksburg District

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Date

05/07/08 WED 10:24 FAX 3346902727

US ARMY COE

004

Rx Date/Time MAY-07-2008(WED) 09:13  
05/07/2008 09:22 410-962-4698

USACE PLANNING

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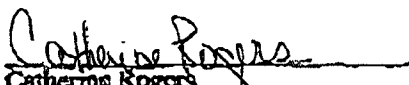
004

several comments to be considered during ITR of the overall mitigation documentation. These comments relate to mitigation plan development and not use of the SQP. All comments are contained in the enclosed review report.


# Independent Technical Review Team

  
Jeffrey A. Trickett  
Economic and Environmental Team Leader  
Baltimore District

5-6-08  
Date

  
Catherine Rogers  
Ecologist, Environmental Resources Section  
New England District

May 7, 2008  
Date

  
Martin P. Wargo  
Chief, Environmental Analysis  
Buffalo District

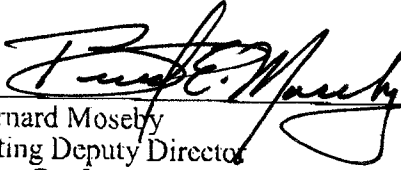
MAY 8, 2008  
Date

  
Michele Gomez  
Biologist, Civil Project Development Branch  
Baltimore District

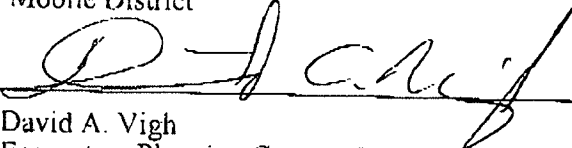
20 April 2008  
Date

**Independent Technical Review Certification**  
**Application of Savannah Districts Regulatory Standard Operating Procedure for**  
**Development of Mitigation, Savannah Harbor Channel Improvements**

I certify that the project review process required under my responsibility has been completed in accordance with all Corps regulations, requirements, and customer expectations.

  
Bernard Moseby  
Acting Deputy Director  
Deep Draft Navigation Planning Center of Expertise  
Mobile District

6/11/2008  
Date

  
David A. Vigh  
Ecosystem Planning Center of Expertise  
Vicksburg District

5/21/08  
Date



**Charge to the Peer Reviewers  
for  
Savannah Harbor Expansion Project, Wetlands Mitigation, Use of SOP for  
Wetlands Preservation Determination**

**CHARGE**

The charge is to review and comment on the use of the Savannah District's Regulatory Standard Operating Procedure (SOP) to determine preservation acreage necessary to complete mitigation requirements for the Savannah Harbor Expansion Project. There are other elements of mitigation in this study including minimization, and avoidance of impacts along with restoration features. The SOP was used only to determine the amount of preservation acres necessary to offset the remaining acreage impacted after development of alternatives that included the minimization, avoidance and restoration features. The purpose of this peer review is to assess only the use of the SOP. Other elements of the study and mitigation analysis will be assessed by other ITRs and EPRs. As such the charge for the peer review team is as follows:

Comment on the appropriateness of using the SOP to determine the amount of preservation acreage necessary to complete mitigation requirements for wetland mitigation related to the Savannah Harbor Expansion Project (SHEP).

Comment on the reasonableness of the assumptions and calculations that Savannah District used in applying the SOP for the SHEP.

**BACKGROUND**

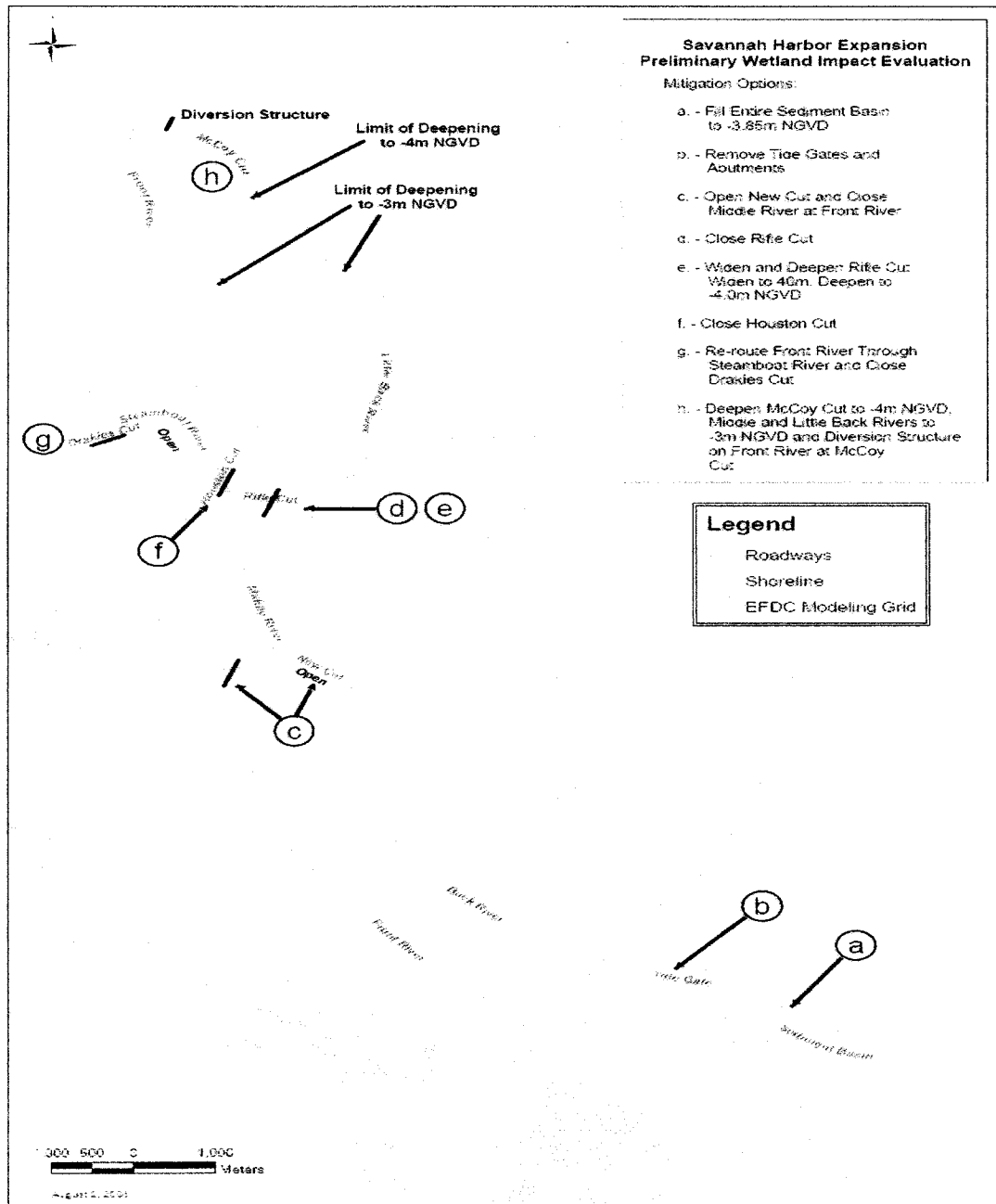
The Savannah River navigation channel is currently maintained at a depth of 42 feet (12.8 meters) MLW. The U.S. Congress, in the 1999 Water Resources Development Act (WRDA), conditionally authorized deepening the channel to a maximum depth of 48 feet (14.6 meters) contingent upon the completion of a General Reevaluation Report (GRR) and Tier II Environmental Impact Study (EIS), a final mitigation plan and an incremental analysis of the channel depths from 42 to 48 feet.

A major environmental consideration in this study is increased salinities caused by the deeper channel and resulting impacts to fresh water marsh within the Savannah National Wildlife Refuge located immediately upstream of the harbor project. This refuge is managed by the U.S. Fish and Wildlife Service. In order to assess the salinity changes caused by the deeper channel increments, the Corps conducted hydrodynamic/salinity model studies. Results of the model studies show substantial impacts to the fresh water marsh with any increment of deepening. As such, the Corps conducted additional model studies to assess the effectiveness of various engineered features that could possibly offset the impacts from the deeper channel. The specific features and location are shown on figure 1 and table 1 show s the combinations that were modeled. As shown in table 2, results of the mitigation feature analysis reveal that additional mitigation would be required beyond implementation of the offsetting hydraulic features.

# FIGURE 1

## SAVANNAH HARBOR EXPANSION PROJECT

### COMPONENTS OF WETLAND MITIGATION PLANS



**TABLE 1  
MITIGATION PLANS MODLED**

	McCoy Cut Division Structure	Channel Deepening on McCoy Upper Middle and Little Back River	Fill Entire Sediment Basin	Close Rifle Cut	Close Lower (western) Arm at McCoy Cut	Remove Tidewater Abutments and Piers	
Plan 3	x	x	x	x			Plan 3
Plan 3a	x	x	x	x	x		Plan 3a
Plan 3b	x		x	x			Plan 3b
Plan 3c	x		x	x	x		Plan 3c
Plan 6	x	x	x	x		x	Plan 6
Plan 6a	x	x	x	x	x	x	Plan 6a
Plan 6b	x		x	x	x	x	Plan 6b

**Table 2  
MITIGATION PLANS  
FW WETLAND IMPACTS (acres)**

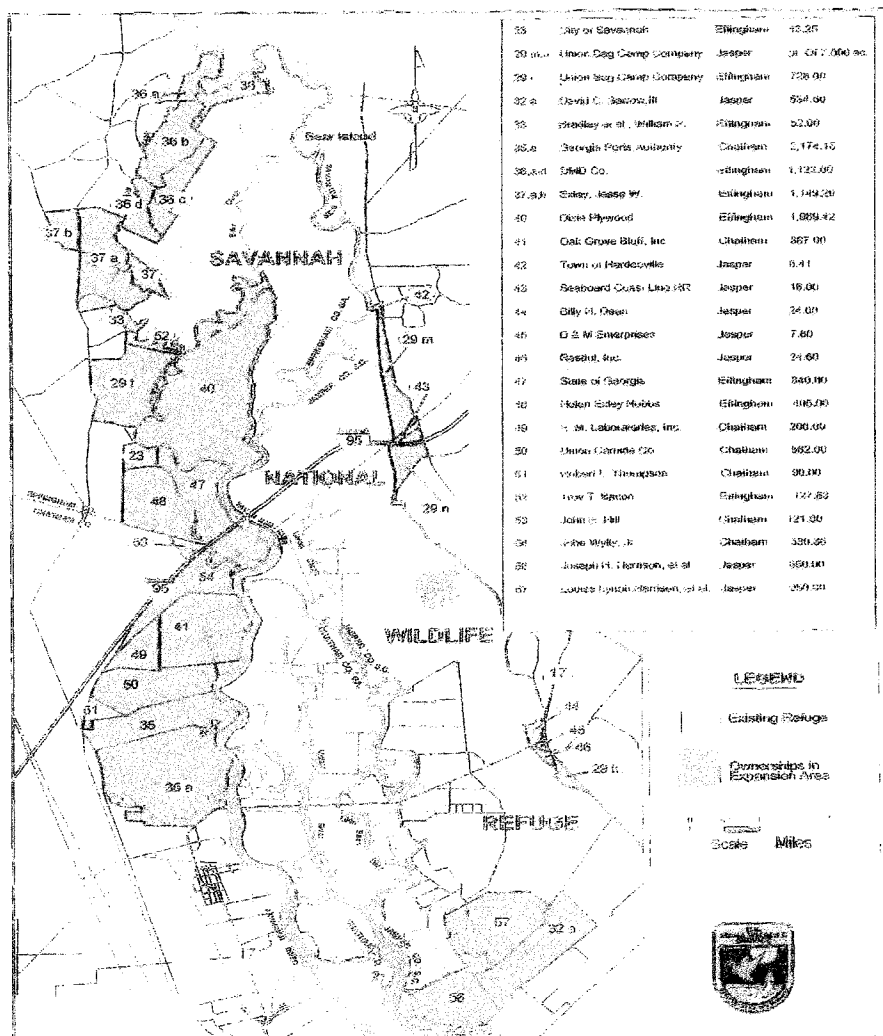
	W/O MIT	PLAN 3	PLAN 3A	PLAN 3B	PLAN 3C	PLAN 6	PLAN 6A	PLAN 6B	PLAN 7
44- FOOT	576	21	99	251	200	720	772	322	----
45- FOOT	967	354	274	500	446	34	32	207	----
46- FOOT	1057	319	232	551	473	255	201	462	213
48- FOOT	1212	488	541	666	689	357	337	462	300

Neither the Corps, the natural resources agencies, the Stakeholders Evaluation Group, or the NGOs that were consulted could identify other sites in the Savannah River estuary that could potentially be used for restoration or creation of tidal freshwater marsh.

The USFWS confirmed that mitigation actions must be performed within the basin for those actions to be acceptable for the impacts caused to wetlands residing within the Savannah National Wildlife Refuge. The Service also confirmed that restoration, enhancement or creation of salt marsh would not be acceptable as mitigation for those losses. However, they suggested preservation of lands as a possible solution and provided desired locations which are a part of their long term lands acquisition strategy to compliment the Wildlife Refuge. The location of these lands are shown on figure 2.

## Figure 2 SAVANNAH NATIONAL WILDLIFE REFUGE ACQUISITION MAP

APPROVED EXPANSION - May 29, 1998



In order to determine the number of acres appropriate for the preservation feature of the mitigation, the Corps used the Standard Operating Procedures (SOP) used by natural resources agencies in Georgia to evaluate impacts and mitigation on projects requiring Section 404 permits. The Standard Operating Procedure used by Savannah District's Regulatory Division was developed by the interagency Mitigation Banking Review Team (MBRT). That team consists of representatives of EPA Region 4, US Fish and Wildlife Service, National Marine Fisheries Service, US Army Corps of Engineers, and the Georgia Department of Natural Resources. The agencies use the SOP to quantify impacts to wetlands from actions described in Section 404 permit applications and determine the type and extent of actions that would provide acceptable mitigation. The SOP has been in existence for several years and is periodically revised when determined necessary by the MBRT.

Although the SOP was developed by the interagency Mitigation Banking Review Team for actions permitted through the Corps' Regulatory Division, it can also serve as a framework to quantify impacts from civil works projects such as this. EPA Region 4 suggested the Corps consider use of the SOP for this project. The SOP uses several factors to quantify the ecological impacts and benefits expected from various project actions. For impacts, those factors include the type of impact, the duration of the impact, the type of vegetation being impacted, and the preventability of the impact. For restoration, the factors include the improvement in hydrology and vegetation, timing of the restoration, maintenance that is expected to be needed, monitoring which would be performed, and control over the land to reduce future impacts. For preservation, the factors include the degree of threat to the identified lands, the type of vegetation occurring on the lands, and the control over the land to control future impacts.

The Corps took the impact data produced by the approved hydrodynamic model as the starting point for the SOP. The output included acreage for wetlands at different levels of salinity. They evaluated the output after the flow-altering features had been included. They decided to consider wetlands that would experience a loss in net acreage as ones that would experience an adverse impact. In a similar manner, wetlands that would experience an increase in net acreage as ones that would benefit from and be restored by the project. They grouped the output into 3 classifications of wetlands – Freshwater (<0.5 ppt), Brackish (0.5 to 4.0 ppt), and Saltmarsh (>4.0 ppt).

Using that approach, adverse impacts could be experienced to wetlands classified as Freshwater, Brackish and/or Saltmarsh, while restoration could occur in either Freshwater or Brackish marsh. The flow-altering features were the primary means through which the net acreage in Freshwater and Brackish marsh would increase. In the 44-foot depth alternative, the flow-altering features of Plan 6B would result in net increases in both Freshwater and Brackish marsh acreage, with a corresponding decrease in Saltmarsh acreage. Since the Freshwater and Brackish marshes had been determined to be more valuable than Saltmarsh for this project, the flow-altering features fully mitigated for the

effects on wetlands for the 44-foot depth alternative. Therefore, the Corps did not apply the SOP for that alternative.

The SOP considers many factors in its calculations of the ecological extent of a project's impact, and the value of the restoration and/or preservation features. Those factors are summarized as follows:

FACTORS	FACTORS INCLUDED		
	ADVERSE IMPACTS	RESTORATION	PRESERVATION
Type of Impact	X		
Duration of Impact	X		
Existing Condition	X		
Type of Habitat	X		
Preventability	X		
Rarity of Habitat	X		
Improvement in Vegetation		X	
Improvement in Hydrology		X	
Timing of Restoration		X	
In-Kind Vs Out-Of-Kind Mitigation		X	X
Maintenance Requirements		X	
Monitoring Plan		X	
Type of Control		X	X
Degree of Threat			X

One of the factors considered in the SOP is the degree of protection one would have over the lands to be acquired and preserved. That is the issue addressed in the factor titled "Control". Lands that are owned in fee or by a government agency are considered more protected from future adverse impacts than are lands protected only by a restrictive covenant or conservation easement. A conservation easement can sometimes be obtained from a private owner without the government needing to resort to condemnation. However, additional lands with an easement would be needed to provide the same total habitat value as would fewer lands provided under government ownership. The Corps consulted the natural resource agencies to determine the type of real estate interest the agencies that they believed would be most appropriate in this situation. The USFWS stated it believed that fee ownership would be required.

The Corps applied the SOP to this project, using the acreages output from the hydrodynamic model at various salinity levels. It also evaluated the extent of the impact that would occur to existing marshes -- conversion of one intertidal marsh type to another, and the benefit that would occur to marshes as a result of the flow-altering

features. We also considered development pressures that are on waterfront properties in this estuary. Using the SOP, the 48-foot alternative would result in 7,368 units of adverse impacts to wetlands. Those must be mitigated by at least an equal number of restoration and preservation units. In Georgia, the agencies' policy is that acceptable mitigation should consist of at least 50 percent restoration. For this project, restoration through the flow-altering features would comprise 66 percent of the total wetland mitigation for the 48-foot alternative, 80 percent for the 46-foot alternative, and 100 percent for the 44-foot alternative. The SOP calculations determine the minimum number of acres that need to be acquired and preserved to acceptably mitigate for wetland impacts. For the project, those numbers are shown in Table 3.

Table 3

**PRESERVATION NEEDS  
AS DETERMINED BY SOP CALCULATIONS  
FOR WETLAND IMPACTS**

DEPTH ALTERNATIVE	MINIMUM ACRES NEEDED
44-FOOT	0
45-FOOT	993
46-FOOT	1083
48-FOOT	2094

The following table summarizes the results of the SOP calculations for the 48-foot alternative. The details of the SOP application for each depth are shown with the supplemental reference materials provided with this charge.

Table 4  
**SUMMARY OF SOP CALCULATIONS  
48-FOOT ALTERNATIVE**

	FRESHWATER	BRACKISH	SALTMARSH	TOTAL
<b>ADVERSE IMPACT</b>				
Acres	337		730	
Units	2696		4672	7368
<b>RESTORATION</b>				
Acres		1156		
Units		4855.2		4855.2 (66%)
<b>PRESERVATION</b>				
Acres		2094		
Units		2512.8		2512.8 (34%)

## **DOCUMENTS PROVIDED**

The following documents have been provided to the peer reviewers:

Briefing package provided to reviewers and discussed on 19 November telephone conference.

Web site for Standard Operating Procedure.

## **SCHEDULE**

- Peer Review Team Briefing 19 November, 2007
- Review Charge to Peer Reviewers 6 December, 2007
- Peer Reviewers submit comments to PCX 14 December, 2007

## **GENERAL CHARGE GUIDANCE**

1. If desired, ITR panel members can contact each other or Savannah District POC William (Bill) Bailey.
2. Please contact the Planning Center for Deep Draft Navigation project manager (Paul Bradley) for requests of additional information.
3. In case of media contact, notify the project manager immediately.
4. Your name will appear as one of the panelists in the peer review. Your comments will be included in the peer report. Attributed comments will be shared with the U.S. Army Corps of Engineers, Savannah District staff.

Please submit your comments in Dr. Checks, no later than Friday, 14 December , 2007

## **POINT OF CONTACT**

The point of contact for this review is Paul Bradley at the Planning Center of Expertise for Deep Draft Navigation, Mobile, Alabama at e-mail address

[paulbradley@san.usace.army.mil](mailto:paulbradley@san.usace.army.mil) or phone number 251-694-4101



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Use the form below to select criteria for the report

a. Comment Type (req.) ☒ Any ☐ Critical

b. Evaluation Status (opt.)

c. Discipline (opt.)

d. Keyword(s) (opt.) 

e. Start Date (opt.)

f. End Date (opt.)

## Review of Standard Operating Procedure

Displaying 26 comments for the criteria specified in this report.

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1729457	n/a'	n/a	n/a

[This item is flagged as a critical issue.]

A(ppropriateness)1. Regarding the appropriateness of using the Savannah District's Regulatory SOP for Compensatory Mitigation to assess the amount of preservation acreage 1. Was the SOP developed jointly with all of the review and resource agencies? In other words, is there an interagency team with representatives from each agency that has concurred on the development and implementation of the SOP for use in determining compensatory mitigation? And have they agreed that the use of the SOP can also apply to Civil Works projects as well as Regulatory projects?

Submitted By: [Michele Gomez](#) (410-962-5175). Submitted On: 11-Dec-07

Revised 19-Dec-07.

**1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential Time Impact **For Information Only****

The SOP was developed jointly with the Federal and State natural resource agencies that evaluate Corps regulatory permits in Georgia. They have approved of its use to determine compensatory mitigation on regulatory projects. EPA, one of those agencies, suggested we use the SOP for that purpose on this project. We have not yet asked all the agencies if they agree with its use on this civil works project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation **Open Comment****

With the size and scope of the impact and the mitigation planning, it would have been beneficial to coordinate the use of the SOP with the resource agencies prior to developing a plan. At least one agency was involved as EPA was the proponent of using the SOP, so why not coordinate with the rest? You will either have to coordinate with the agencies prior to developing the mitigation plan or after when they read about it in the report. If they were coordinated with in the beginning, you would have buy in from the agencies with the mitigation plan that was developed. It seems like this is risk not to have coordinated on this in advance.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 23-Jan-08

**1-2 Backcheck Recommendation **Close Comment****

Anticipate resolution during ITR and public review of the Draft GRR/SEIS

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation **Concurred****

There is risk either way. If we coordinated with the agencies first, the Corps could later determine it unsuitable. If we conduct the ITR first to see if the Corps believes it is acceptable, the agencies could disagree. There is risk in either approach. We have informed the agencies that we intend to use the SOP to determine the acreage to be acquired. We have not received any responses saying that such an approach would be unacceptable. The USFWS has verbally said that use of the SOP is a reasonable approach. They

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

The project would result in the loss of roughly 10 acres of saltmarsh. Half of those are within the National Wildlife Refuge. The USFWS has stated that they would like us to mitigate by either providing additional freshwater tidal marsh or acquiring and preserving lands adjacent to the Refuge. No sites acceptable to the USFWS were identified where tidal freshwater marsh could be created or restored. Additional wetlands would be impacted (converted), but not lost. The ecological values of the lands that would be acquired would be enhanced by their acquisition and preservation. Responses to other comments by this reviewer list the 4 avenues through which ecological values would be enhanced by the preservation. The SOP calculates how many acres would need to be acquired to equal the ecological loss of the impacted acreage. We have coordinated with the natural resource agencies extensively during the course of this project and would coordinate with them on this application of the SOP if the Corps believes the SOP is a reasonable approach.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
<b>1740235</b>	n/a'	n/a	n/a
A 5. The mitigation plan needs to be consistent with the President's Wetland Initiative (Conserving America's Wetlands 2007, CEQ, April 2007). The preservation of the lands may be consistent with the President's goal to preserve National Wildlife Refuge System. If it is this should be stated clearly in the GRR and EIS to facilitate HQTRS, ASA and OMB review.			

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation Concurred**

We believe the plan would be consistent with the President's 2004 goal by preserving valuable existing wetlands. The USFWS previously identified those properties as being sites whose wildlife habitat values could be increased by Federal ownership. We will

have questions about how we intend to apply it -- what specific values we would use, but those are details that we would work through when we coordinate with all the agencies.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1729471	n/a'	n/a	n/a
A2. Most Regulatory branches have developed an SOP or guidance paper on compensatory mitigation in coordination with the resource agencies. And as these resource agencies also review Civil Works projects, it seems appropriate that the same tool would be used to assess compensatory mitigation required for these projects.			

Submitted By: Michele Gomez (410-962-5175). Submitted On: 11-Dec-07

**1-0 Evaluation Concurred**

This SOP was developed in coordination with the natural resource agencies. Most of the technical specialists in those agencies are the same reviewers on this civil works project, so they would be familiar with this approach.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Close Comment**  
Closed without comment.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 23-Jan-08

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1740194	n/a'	n/a	n/a

**[This item is flagged as a critical issue.]**

**Coordinating Discipline(s):** Environmental,Environmental

A 3. The overall goal of compensatory mitigation is to replace the functions being lost (functional equivalency) by the impact. Was a functional assessment conducted for each wetlands system to be impacted? Was a functional assessment conducted on the wetlands acreage that is being preserved? Is the entire area to be preserved wetlands? If not, what is the break down of habitat type: wetlands (pristine condition, disturbed/manipulated), uplands (natural: forested, grasslands or disturbed: developed, pervious surfaces, agricultural), open water or waterways? Are the functions of these areas comparable with the functions that are to be impacted by the project? What functional assessment protocol was used to determine the functions of these areas?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

Revised 19-Dec-07.

#### **1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential Time Impact For Information Only**

The SOP includes a limited functional assessment of the lands to be impacted, those that would be restored, and those that would be protected. The "Rarity Ranking" in the impact calculation considers whether the wetland is Rare (possessing some special quality), Uncommon (not ordinarily encountered, or Common (frequently occurring). The areas to be preserved are predominantly wetlands, but the bottomland hardwood forests may contain high ground areas. The SOP includes a factor titled "Kind" to differentiate In-kind and Out-of-kind mitigation. We proposed the bottomland hardwoods be considered midway between those two, therefore receiving less credit and requiring additional mitigation acreage and In-kind mitigation.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

#### **1-1 Backcheck Recommendation Open Comment**

A limited functional assessment does not properly address mitigation planning for a project of this magnitude. To determine if you are actually replacing the functional value of the wetlands lost, a more detailed functional assessment should be conducted on both the wetlands to be impacted, to determine what you are losing, and on the wetlands to be preserved, to determine the functions that remain. However, that being said, what are we gaining overall? Wetlands and their functions are still being lost because we are not replacing them.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 23-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

I agree that detailed functional assessments are usually conducted for large projects. However, in this case the natural resource agencies have indicated that those evaluations may not be warranted. The net ecological effect of converting one type of marsh to another would be somewhat subjective. We can identify the wetland functions that would be affected, but weighing a loss in one function against a gain in another to develop the net ecological effect would likely result in different answers from different experts. Roughly 10 acres of wetlands would be excavated and lost with the project. The extent of those impacts do not warrant detailed functional assessments.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 08-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1740231	n/a'	n/a	n/a

**[This item is flagged as a critical issue.]**

A 4. The charge that we were given is so narrow in focus and only addresses if it is appropriate to use preservation and were the assumptions reasonable. It does not allow us to consider whether proper mitigation sequencing was used. Part of determining if it is appropriate to go to preservation for mitigation of the impacts is understanding the entire mitigation sequencing that has occurred for this project. Aside from avoidance and minimization, assumed to have been conducted, what has occurred to address compensation? Is no net loss being accomplished and how? Are other compensatory mitigation options being required? Does the plan address both direct and indirect impacts to wetlands? Functional capacity of the wetlands to be impacted needs to be replaced in the mitigation plan. It needs to be explained how the preservation proposed provides the replacement of the functional capacity. Does the preservation protect the wetlands in the refuge system? Does the preservation of these parcels protect wetlands and their

functions?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential Time Impact For Information Only**

The mitigation plans would include flow-altering features that would reduce salinity levels from those that would occur with just a channel deepening. These features reduce the adverse effects of deepening the harbor. The flow-altering plans target areas that the agencies identified as being particularly valuable. The impact analysis addresses impacts from direct excavation of wetlands (turning basin expansion and bend wideners) and impacts from salinity intrusion further into the estuary. The SOP includes a limited functional assessment, so the functional values of the impacted wetlands are being considered. The areas being considered for preservation are adjacent to the National Wildlife Refuge and its wetlands. The USFWS has stated that existing laws are insufficient to prevent significant degradation of the sites' wildlife resource values. Preserving these areas would fulfill many of the Refuge's wildlife habitat management needs. Protection of these adjacent areas would decrease expected secondary impacts on marshes and tidal creeks from development of private high ground lands.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Open Comment**

The response does not address the comment. Was no net loss achieved? How? A functional assessment should have been conducted. Coordination with the agencies is crucial. Preservation of one wetlands or upland does not replace the functions that will be lost from the impacted wetland. Preservation of the lands will fulfill the Refuge's habitat needs, but how does it address the loss of the impacted wetlands and its functions and values?

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

include this information in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

#### **1-1 Backcheck Recommendation Close Comment**

In the discussion in the EIS regarding the mitigation plan being consistent with the President's Wetland Initiative, you need to discuss more than the wildlife habitat values. The mitigation plan should properly address that there is no net loss and you are replacing all lost wetland functions due to the impact.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1740236	n/a'	n/a	n/a

**[This item is flagged as a critical issue.]**

R(easonableness)1.Regarding Figure 2, the Refuge Acquisition Map, dated May 29, 1998, why are the properties highlighted in yellow? Explain why these properties were highlighted to be included in future expansion of the refuge. What documentation has the USFWS provided that demonstrates that these lands will protect the long term ecological productivity of the marsh system?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

#### **1-0 Evaluation For Information Only**

The areas highlighted in yellow are the lands which the Refuge has identified as its proposed and desired expansion. The Refuge prepared an EA and Land Protection Plan when they proposed acquisition of those properties. Those documents describe why and how the USFWS believes acquiring and preserving those sites would be beneficial to the goals for which Congress authorized that particular Refuge. The documents received public review prior to the Service obtaining approval to add those sites to their acquisition plan.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08



**1-1 Backcheck Recommendation Open Comment**

This answer does not address whether the preserved lands will be protected to ensure the long term ecological productivity of the marsh system. If you cannot document this, then how do we know if the "loss" of acreage and functions of the wetlands impacted from the project are being replaced and protected?

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

The preserved lands will be protected. The USFWS has stated that such protection would allow improvements / enhancements in the wildlife functions they provide. The preservation would also protect the ecological productivity of the adjacent estuarine marshes, by removing the potential for those sites to be developed in the future.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

**Current Comment Status: Comment Closed**

**Id**  
**1740238**

**Spec**  
**n/a'**

**Sheet**  
**n/a**

**Detail**  
**n/a**

**[This item is flagged as a critical issue.]**

R 2. When selecting a mitigation site, one must take into account the surrounding land use and future plans for the land. Mitigation sites should be, and continue to be, resistant to disturbance from the surrounding landscape. While preservation of lands adjacent to other large wetlands systems will protect the existing adjacent wetlands systems, how are we compensating for the loss of the impacted wetlands' functions?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential**

### **Time Impact For Information Only**

The sites proposed for acquisition are predominantly wetlands (bottomland hardwoods), so they would directly provide some of the wetland functions now provided by the marshes. Some tradeoffs will occur. The additional quantity of bottomland hardwoods that would be acquired over those that would be impacted makes up for those values that would not be directly replaced. The impacted areas would convert from freshwater marsh to brackish marsh. That conversion would not result in a total loss of many of the functional values of those existing marshes.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

### **1-1 Backcheck Recommendation Open Comment**

What amount of acreage of the freshwater marsh would be converted? Caution must be employed if making these statements in any NEPA/Planning document, especially when you only have best professional judgement to back them up. Using the logic that impacting 337 acres is offset by the preservation of 2,094 acres simply because the preservation acreage is bigger than the impact acreage is not appropriate. Not that these assumptions are necessarily wrong, but only that they may prove difficult to defend under challenge. If not all of the functions/values have been identified and quantified, how then can we claim what is and isn't being lost/replaced? Best professional judgement would better be applied in determining the likelihood of someone challenging these assertions. The level of rigor in the science should be commensurate with the level of risk.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

### **1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

### **2-0 Evaluation Concurred**

The amount of acreage converted to brackish marsh would depend on the depth alternative selected. It would range from a net of 337 acres with the 48-foot alternative to 0 with the 44-foot alternative. The preservation of a certain tract is not being judged as being beneficial just because it is larger than the impacted acreage. The

SOP provides a procedure to evaluate the ecological value of both the impacted site and the site that would be preserved. Sufficient lands must be preserved to provide at least the level of ecological functions that would be adversely impacted. I agree that a quantification of all the functions and values that would be adversely impacted and potentially gained may be of value, but even such detailed quantification is dependent upon the use of professional judgement. I believe wetland experts would arrive at different answers if they were tasked to quantify the ecological loss of converting freshwater marsh to brackish marsh. Some judgement is involved in applying any evaluation procedure. The interagency nature of the civil works review and approval process provides some degree of assurance that values used in the final evaluation of a project will be reasonable and not an unreasonable assumption made by a single individual within an agency. I believe the issue at hand is whether this tool that was developed by an interagency team for this general area and is applied by them on a daily basis can reasonably be used on this project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1740240	n/a'	n/a	n/a

[This item is flagged as a critical issue.]

R3. What systems are currently within the existing Refuge? Is there mapping that shows wetlands/uplands/waters? What documentation do we have on the condition of the refuge lands? Are there vehicles in place for protecting the lands from any future development there regardless of whether they are waters of the U.S. or not?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

#### **1-0 Evaluation For Information Only**

We have maps and aerial photos which show the wetlands, creeks, and uplands. The Refuge lands were included in fishery inventories conducted as part of this study. Two sets of wetland monitoring programs (USFWS and consultant) document the condition across the various portions of the estuary that is

potentially impacted by this project. Acquisition of the sites and inclusion of them into the Refuge would provide them with much more protection than their present private ownership. Most of the sites are used in timber production, where the wildlife values drop substantially when the site is logged. Such use would stop if they were included into the Refuge.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Open Comment**

If most of the sites being acquired are currently in timber production, these sites cannot possibly have the same functions and values of the freshwater tidal wetlands to be impacted by the project. While taking these areas out of production will eliminate continual degradation of the land, what will be done to assure that these areas will actually be restored to wetlands? Simply preserving them will not replace the loss from the impact or restore their wetland functions nor will it replace the loss of the impacted area. You do not state what type of lands are currently in the refuge adjacent to where the preservation is proposed.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

Refuge lands adjacent to the sites proposed for preservation are wetlands, primarily bottomland hardwoods and some small areas of tidal marsh. As you state, wetland functions would improve when the lands to be acquired are removed from timber production. The USFWS stated they would manage the lands for wildlife purposes, thereby enhancing those ecological values of the sites. These two processes would be the primary means through which ecological values would be gained by preservation of the sites. The other processes would be through protection of the sites from future development and providing additional protection of adjacent Refuge lands. We are not proposing any physical actions on these sites to restore high ground to wetlands. Our experience on nearby lands indicates that property in this part of the estuary receives sufficient hydrology to enable the growth of wetland

vegetation on sites with sufficiently low elevation. So additional water is not needed to restore previously-drained lands.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1740242	n/a'	n/a	n/a

[This item is flagged as a critical issue.]

R 4. What types of wetlands are being impacted? Freshwater tidal marsh: does it include both hardwoods and emergent vegetation? Is there a break down of the different types of wetlands being impacted? In the Baltimore District, when preservation is used, replacement of the impacted wetland is generally required at a 1:1 ratio with preservation being done at a 10:1 ratio. The SOP also states that preservation in the form of "...permanent perpetual protection of existing wetlands, or other water aquatic resources may be an acceptable form of mitigation when these areas are preserved in conjunction with establishment (creation), restoration, and enhancement activities." The areas that are preserved should augment those wetlands being created or restored as well as protect the functional value of the preserved wetlands. Protection in itself does not provide a gain in wetlands acreage or replacement of functional value of wetlands lost. To determine if the use of preservation on this project is appropriate, it is important to understand all other mitigation that is being conducted in conjunction with the preservation of the lands adjacent to the refuge, as well as an inventory of what is being preserved in these parcels. Purchasing uplands, including disturbed uplands, does not replace the acreage or functionality of the wetlands to be impacted.

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential Time Impact For Information Only**

These freshwater tidal marshes are dominated by emergent marshes, but they also include some upland thickets and larger hardwoods (cypress). Preservation is the last of the mitigation steps that were considered. The project avoided impacts as much as possible by limiting the width of the channel to be deepened. The mitigation plans also include flow-altering features that would reduce the salinity levels in specific areas, restoring and enhancing some limited areas. No separate restoration or enhancement sites

ould be identified by the resource agencies, NGOs, or consulted public that met the agencies' criteria -- freshwater wetlands within the Savannah River Basin. The specific sites proposed for acquisition and preservation have been evaluated by the USFWS and identified as being valuable additions to the National Wildlife Refuge.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Open Comment**

No net loss is still not addressed. There will still be a permanent net loss of freshwater wetlands and its ecological functions that never will be accounted for. If you are proposing to mitigate for the loss of the wetlands acreage and the functions of the wetlands, you will need to demonstrate the replacement of the acreage along with the replacement of the functional value of the impacted wetlands. The response above does not provide this information. If there is no way to replace the wetlands and their functions, you need to identify this as an "irretrievable loss" in the report and EIS as per the Planning Guidance.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

The ecological value of the wetlands would be replaced. Increases in salinity will not result in any loss of wetlands, but instead the conversion of one wetland type to another. The actual loss of wetlands from the project would occur when the turning basin is enlarged (and marshes are excavated) and similar excavation of the riverbank. Those losses would occur to saltmarsh and are in the range of 10 acres with each depth alternative. Roughly half of such losses would occur on Refuge lands. The USFWS has stated that it desires that the project replace the ecological values of their lands that would be excavated by either providing additional tidal freshwater marsh or acquiring and preserving lands adjacent to the Refuge. No sites could be identified to provide additional tidal freshwater marsh or improve existing marshes, so preservation is the remaining option. The SOP is a procedure that determines that

the ecological value of impacted wetlands is replaced by the same or similar ecological values elsewhere.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1740256	n/a'	n/a	n/a

[This item is flagged as a critical issue.]

R 5. Have all of the Resource agencies provided documentaiton supporting the decision to use these areas as preservation?

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation For Information Only**

No. We wanted to obtain concurrence within the Corps that this is a technically sound approach before asking the agencies for their opinion.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Open Comment**

For a project with impacts of this scale, it is surprising that there has not been any coordination or documentation from any agency regarding the mitigation plan. From looking at other comments/responses there must have been some coordination and mitigaition discussions with other agencies. When looking at mitigation plans, especially at this magnitude of impact and need for mitigation sites, it would seem that the resource agencies should be involved early on.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 23-Jan-08

**1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

**2-0 Evaluation Concurred**

The resource agencies have been involved in the impact evaluation and mitigation process for about 8 years. However, we have not yet proposed preservation of specific sites to the agencies. We had wanted to obtain Corps agreement and approval first that we are following a reasonable approach to determine how much land would need to be perserved.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1740346	n/a'	n/a	n/a

[This item is flagged as a critical issue.]

**Coordinating Discipline(s):** Environmental

R 6. A breakdown of wetlands impacts by type along with a explanation of the mitigation sequencing and a table explaining how much and what type of mitigation is to be done as well as an explanation of how and where the impacted wetlands functions are being replaced would be helpful in determining if the end result of the preservation of adjacent refuge lands is a reasonable mitigation decision for this project.

Submitted By: Michele Gomez (410-962-5175). Submitted On: 19-Dec-07

**1-0 Evaluation For Information Only**

Direct losses from enlargement of a turning basin and bend wideners is roughly 10 acres. Conversion of freshwater marshes to brackish marsh would vary by project depth. The wetlands that would be impacted (converted) is shown in the attachment. The lands would be acquired during the construction period -- concurrent with the impact. The wetland functions would be replaced by the functional value preserved in the lands that would be acquired.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08 (Attachment:



## EXPANWetlandImpactsandMitJan08.ppt)

### **1-1 Backcheck Recommendation Open Comment**

Again it is not clear that you are ensuring that there is no net loss of wetlands and that you are replacing the impacted wetlands functions. The functional value of the preserved lands that are acquired is different from that of the impacted wetland. Preservation protects the functional value of those lands but it does not address how you will replace the functions lost by the wetland to be impacted. There is still a long term loss of the tidal freshwater wetlands and their functional value. Will there be temporal loss due to the deepening, over how many years will this occur or will it be instant? Has this been factored into the mitigation plan? In the future, in assessing the appropriateness and reasonableness of using a specific mitigation SOP for the development of a mitigation plan, it would be more beneficial to have the report or EIS available, as it would facilitate and focus our review of the given charge.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 28-Jan-08

### **1-2 Backcheck Recommendation Close Comment**

Anticipate resolution during ITR and public review of the Draft GRR/SEIS.

Submitted By: Michele Gomez (410-962-5175) Submitted On: 03-Mar-08

### **2-0 Evaluation Concurred**

Concur that we would not be replacing the exact wetland functions that the freshwater marshes provide with the enhancements proposed to the bottomland hardwoods. The sites to be acquired and preserved would be enhanced through the following four mechanisms: (1) Removal of the bottomland hardwood sites from timber production and the accompanying periodic drastic loss in wildlife habitat values when the land is cleared and the timber is harvested; (2) Removal of the bottomland hardwood sites from the threat of development by removing them from private ownership and making them part of a National Wildlife Refuge; (3) Enhancement of the wildlife functions of the bottomland hardwood sites through better management by the USFWS when they become part of a National Wildlife Refuge; and (4) Preservation of the bottomland hardwood sites would remove the threat of impacts to adjacent Refuge properties (mostly bottomland hardwoods but also some freshwater marsh) when those private lands are logged and if they were developed in the future. The SOP allows such

enhancements as these to be considered as replacement for functional values that would be lost as a result of the project. The impacts to the freshwater and salt marshes would occur during the time of construction and be permanent. This timing has been factored into the SOP and mitigation plan.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 08-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
<b>1741440</b>	n/a'	n/a	n/a

See attached Word Document.

(Attachment: SOPcomments.doc)

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

#### **1-0 Evaluation For Information Only**

A detailed functional assessment was not conducted to develop the factor scores and ranges applied in the Regulatory SOP. Ranges were established by the interagency Mitigation Banking Review Team when the SOP was developed. The factor scores selected for this project within those ranges are based primarily on the professional judgement of the biologist. Therefore, the determination of acres to be preserved depend heavily on the professional judgement of the staff of the Federal and State reviewers and the SOP protocol that they or their counterparts developed and apply on a daily basis to assess projects proposed by private interests.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

#### **1-1 Backcheck Recommendation Close Comment**

Understood. Whether or not any quantitative assessments are done in the future to support factor scores/ranges will itself ultimately need to be someone's "judgement call." I would strongly recommend this if the SOP will be applied much to non-Regulatory projects in the future. In the case of this particular project (Savannah Hbr Expansion), there appears to be agreement

between all the state and federal agencies involved, so the risk (i.e. likelihood of being challenged on mitigation) of not doing quantitative assessment at this point is likely low...but that's your call.

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**2-0 Evaluation Concurred**

We believe that the SOP is a reasonable tool to quantify the amount of acreage to be acquired and preserved. We intend to use this approach only if it is supported by the other agencies that are making their own evaluations of this project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

**Current Comment Status: Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
<b>1741453</b>	n/a <sup>1</sup>	n/a	n/a
<p>The interim national goal in 1993 of no overall net loss of the Nation's remaining wetlands was accompanied by the long-term goal of increasing the quality (e.g. function) and quantity of the Nation's wetlands. This policy presupposes the existence of an appropriate way to measure quality. With respect to the Savannah Harbor Expansion Project, if the assumption is made that mitigation of aquatic function has been adequately addressed through the proposed restoration component (66%), then the remaining 34% of the mitigation (i.e. preservation) need not provide any added function for the mitigation plan to adequately assist in meeting the national long-term goals. The Savannah District requirement that only 50% of the mitigation units need result in a net gain in acres and/or aquatic function (Section 5.7) suggests the intent by the Savannah District to allow flexibility in its Regulatory decision making process. This is important since there may be instances where a mitigation plan (or component thereof) does not mitigate aquatic function but yet may having high ecological importance to a region. Accordingly, this regional importance should be established for the proposed preservation of 2,094 acres (34% of mitigation plan). Since freshwater and brackish marsh have already been given highest rating of marsh types in the region by the agencies, it may be more difficult to argue that some other type of ecosystem (e.g. bottomland hardwood forest) is of high enough importance to a region to justify out-of-kind preservation. It would thus be important to demonstrate how the out-of-kind preservation compliments the functions and values of adjacent freshwater and brackish marsh. As indicated in Appendix A of the SOP, "preserved resources should augment the functions of ...restored...aquatic resources."</p>			

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

**1-0 Evaluation For Information Only**

The bottomland hardwoods provide some of the wetland functions that marshes provide. These sites would also serve as a protective buffer to the adjacent freshwater marshes. Acquisition and protection of those sites was not the preferred method of mitigation, but the resource agencies or NGOs were not able to identify sites for separable restoration of enhancement that met all the requirements. The SOP -- which the natural resource agencies developed cooperatively -- does allow such Out-of-kind tradeoffs to be made and accounts for their lower ecological value by requiring a larger number of acres to be preserved. We will include information in the EIS that describes how the bottomland hardwoods compliments the adjacent marshes.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

**1-1 Backcheck Recommendation Close Comment**

OK. The documentation was my main concern. The appropriateness of the documentation is a discussion better handled within the EIS.

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**2-0 Evaluation Concurred**

We intend to include that type of information in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

**Current Comment Status: Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1741458	n/a	n/a	n/a

Aside: For the areas of potential preservation, have the owners already expressed a willingness to sell?

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

### **1-0 Evaluation For Information Only**

We have not yet approached the owners. If the owners strongly oppose acquisition of their lands, they should have had opportunity to make those views known, as the USFWS previously identified those properties in a document circulated for public comment as sites they would like to acquire and add to the National Wildlife Refuge.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

### **1-1 Backcheck Recommendation Close Comment**

Interesting. Thanks

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

### **2-0 Evaluation Concurred**

One of the owners has just expressed an interest in allowing his land to be acquired and added to the Refuge.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1741461	n/a'	n/a	n/a

Several of the discussion/emails refer to the SOP being used to determine the amount of preservation needed to compensate for the impact to 337 acres of freshwater marsh. However, based on the calculations on the impact worksheet, the impacts to both freshwater and saltwater marsh are combined to produce a total of 7,368 impact units. Accordingly, the proposed preservation is, in reality, partially mitigating for both freshwater and saltwater marsh impacts. It should not be stated that the preservation is the mitigation for the 337 acres of freshwater marsh, since this is neither accurate nor appropriate.

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

### **1-0 Evaluation For Information Only**

The natural resource agencies have stated they expect mitigation

for impacts to freshwater marshes. They have not viewed increasing salinity at brackish marsh or saltmarsh as an adverse impact. We included it in the SOP in the Adverse Impacts worksheet because the project would have made a physical change (increasing salinity) to those marshes.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

#### **1-1 Backcheck Recommendation Open Comment**

Since there are no recognized impacts to saltwater or brackish marsh that require mitigation, do I correctly understand then that both the restoration and preservation (not just preservation) are mitigating for the impacts to freshwater marsh? If true, then Table 4 of the "Charge to the Peer Reviewers" is misleading since it shows 4,672 impact units to saltmarsh that are included in the calculation for determining how much mitigation is needed. If mitigation is only needed for the Freshwater Marsh impacts, then should the mitigation requirement be based on 2696 impact units instead of 7368 impact units? I suggest modifying the statement to indicate that "The proposed restoration and preservation is the mitigation for 337 acres of freshwater marsh," and then annotate the "Saltmarsh Impacts" column of the Adverse Impacts Table to indicate that these "impacts" did not require mitigation (and explain why in the EIS). Better yet, perhaps the "Saltmarsh Impacts" column could just be removed altogether to avoid confusion.

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

#### **2-0 Evaluation Concurred**

We included the saltmarsh acreage in the SOP calculations to be complete and include all marshes that would be affected by the project. Under the "Dominant Effect" factor, we used 0 for the extent of impacts to saltmarsh to represent our belief that the saltmarsh would not be adversely impacted. We will consider your suggestion further and discuss it with the natural resource agencies when we coordinate our application of the SOP with them. At this time, we do not believe that changing the "Charge to the Peer Reviewers" is necessary.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

#### **2-1 Backcheck Recommendation Open Comment**

OK. My only concern is that leaving it the way it is may lead one

to believe that we are doing more mitigation than necessary. In other words, we are basing our mitigation requirements off of 7368 impact units, even though only 2696 of those units (freshwater) are from true impacts needing mitigation. I understand that you have made the "dominant effect" factor a zero for saltmarsh to account for there being no saltmarsh impacts. However, there were still five other variables used for saltmarsh that, when added together, create an impact coefficient of 6.4. When multiplied by 730 acres of impacted saltmarsh (that really will not be impacted), you produce 4672 impact units. These were then added to the freshwater impact units to determine how much mitigation is required (i.e. 7368 units worth of mitigation). If there truly are no saltmarsh impacts expected, then the impact coefficient for saltmarsh should be zero, not 6.4. Accordingly, mitigation would only be required for the 2696 impact units from freshwater marsh which would already be well accounted for by the proposed restoration, let alone the preservation. Am I misreading this?

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**3-0 Evaluation Concurred**

You correctly understand how the SOP works. Without consulting the Interagency Team, we did not believe it would be proper to exclude one of the 3 dominant marsh types in the area that could be affected by the proposed project. You are correct that a major portion of the requirement for preservation stems from the way the SOP numbers work out on saltmarsh. We would certainly point that out to the Interagency Team during our discussions about the application of the SOP on this project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 03-Mar-08

**3-1 Backcheck Recommendation Close Comment**

OK. Got it. I still wonder that we are doing too much mitigation, but that's not in the purview of the ITR. Almost would seem that we are inventing fictitious impacts (i.e. saltmarsh) to justify doing extra mitigation (i.e. preservation) so that USFWS can expand their refuge, as condition for them to have buy-in on the project. Good luck!

Submitted By: Martin Wargo (716-879-) Submitted On: 05-Mar-08

Current Comment Status: **Comment Closed**

**Id**

**Spec**

**Sheet**

**Detail**

1741465

n/a'

n/a

n/a

If not done already regarding the proposed preservation, consideration should be given to the management strategy of the USFWS for these potential preservation areas and how it may either contribute or detract from the intent of their being preserved. For example, if portions of the land are eventually developed by the USFWS for refuge roadway, buildings, or even opened to waterfowl hunting, this may detract from some of the functions and/or values warranting their preservation.

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

**1-0 Evaluation For Information Only**

We have reviewed the Land Protection Plan under which the Service would manage these lands. They would use these sites for wildlife habitat. They expect to include hunting, which would further one of the goals for which the Refuge was created.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Close Comment**

OK. Thanks

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**2-0 Evaluation Concurred**

Concur

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

**Id**  
**1741468**

**Spec**  
**n/a'**

**Sheet**  
**n/a**

**Detail**  
**n/a**

Aside: Will the restoration areas be provided with any upland buffer, as generally required in Section 5.6.1? If yes, did this buffer area contribute toward the mitigation units?

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07



### 1-0 Evaluation For Information Only

We are not proposing to acquire any additional buffer lands. We intend to acquire entire properties whenever possible, so acquisition of small tracts bordering these sites would probably not be easy or necessarily beneficial.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

### 1-1 Backcheck Recommendation Close Comment

Closed without comment.

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

### 2-0 Evaluation Concurred

Comment closed

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1741472	n/a'	n/a	n/a

The "Kind" factor must be based on of a functional assessment. If this were not done, theoretically mitigating impacts to an invasive species-dominated scrub-shrub wetland by the preservation of native forested wetlands would result in a low (0.2) coefficient, even though this would likely be appropriate out-of-kind mitigation.

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

### 1-0 Evaluation For Information Only

Theoretically, that is possible. However, the SOP relies on professional judgement when selecting appropriate factor scores. We applied such judgement when we selected the values we propose to use. That selection was based on years of environmental experience working on projects in Savannah Harbor, as well as detailed wetland field studies performed for this project. Those studies documented the diversity, abundance and seasonal variability of wetland vegetation across the range of the

estuarine marsh communities. The interagency review will provide a collective professional judgement that is broader and deeper than that of any single individual. That multi-agency review should result in a final decision that is science and experience-based, rather than the theoretical application of a rigid procedure.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

**1-1 Backcheck Recommendation Close Comment**

OK. Your call. Reference my previous comments. There is no doubt that BPJ is more flexible, especially when assessment tools have not yet been adapted to a particular region.

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**2-0 Evaluation Concurred**

OK

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1741475	n/a'	n/a	n/a

Aside: Since two major concerns of the natural resource agencies are impacts to the habitat of shortnose sturgeon and striped bass, was the Habitat Evaluation Procedure (HEP) used in evaluating the existing habitat quality for these species for comparison against the ability of the restored areas to provide the same habitat quality?

Submitted By: Martin Wargo (716-879-). Submitted On: 20-Dec-07

**1-0 Evaluation For Information Only**

HEP was not used in this project to evaluate fishery habitats. instead, the interagency Fisheries Coordination Team developed procedures to identify and quantify acceptable habitat for selected species (including these 2) in the Savannah River estuary. We are using the hydrodynamic and water quality models to identify changes expected to specific aquatic parameters (velocity, D.O.,etc.). We then apply the definitions of acceptable habitat to

identify areas that will change as a result of the channel deepening and flow-alterng features. The goal is to end with no reduction in the volume of acceptable habitat for these important species.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

**1-1 Backcheck Recommendation Close Comment**

OK. Thanks

Submitted By: Martin Wargo (716-879-) Submitted On: 07-Feb-08

**2-0 Evaluation Concurred**

Comment closed

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

*Backcheck not conducted*

**Current Comment Status: Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1741773	n/a'	n/a	n/a

Regarding the first charge, appropriateness of using the SOP for the SHEP: it would seem reasonable to use a SOP used by Regulatory as a guideline for Civil Works projects. Although some differences between regulatory and civil works projects can exist such as the complexity and policy differences (i.e. length of monitoring currently allowed for civil work projects) between regulatory and civil works projects.

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

Revised 20-Dec-07.

**1-0 Evaluation Concurred**

EPA suggested we use it on this project to quantify the remaining preservation needs.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Close Comment**

Closed without comment.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 22-Jan-08

Current Comment Status: **Comment Closed**

<u>Id</u>	<u>Spec</u>	<u>Sheet</u>	<u>Detail</u>
1741905	n/a'	n/a	n/a

Some statements appear to be contradictory in the Charge to the Peer Reviewers. For example, on the 1st page, 3rd para. it is stated that a major consideration of this study is that increased salinities caused by the deeper channel would result in impacts to freshwater wetlands. Yet on the bottom of the 5th page, it states that adverse impacts could be experienced to not only freshwater wetlands but brackish wetlands and salt marsh. How would increasing salinity impact salt marshes? If saltmarshes are adversely impacted than why would they not be mitigated for in-kind? We are not given back-up on the decision to value freshwater and brackish wetlands higher than saltmarsh.

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

#### **1-0 Evaluation For Information Only**

The section on page 5 is speaking more on a theoretical basis. Actual identifiable impacts to saltmarsh from increased salinity would be difficult to identify and quantify. The Georgia/South Carolina coast has experienced some areas of saltmarsh die-off during recent droughts as a result of a number of factors, including high salinity levels. Such an occurrence is not expected at this site because of the large tidal exchange that occurs each day. We showed adverse impacts to saltmarsh when applying the SOP to this project because we did not want to include this important vegetative community. Actual impacts to that community are expected to be minimal. We reflected that in the SOP quantification by including 0 as the "Dominant Effect" on saltmarsh. The main impact of concern to natural resource agencies is a potential loss of freshwater marsh. The EIS will contain further documentation of this collective interagency decision which was made early in the study process.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

#### **1-1 Backcheck Recommendation Open Comment**

The meaning behind the 5th sentence above is not clear. It would appear that to follow the SOP then the impacts (functions/values

lost) to saltmarsh would need to be described as accurately as possible either through an approved method and/or professional judgement. If minimal impacts are expected to salt marsh then it would seem more accurate to provide the back-up that the impacts are minimal. The information provided to us indicates that 682 acres of saltmarsh would be impacted by the 48' alternative. And an additional 48 acres if the "mitigation plan" is implemented for a total of 730 acres. I doubt any agency would describe that as a minimal impact! Also, a description in the EIS of why (functional assessment) converting saltmarsh to freshwater wetlands is preferable is suggested. While the agencies maybe more concerned about the loss of freshwater wetlands over saltmarsh wetlands, this conversion would not appear to follow the SOP/national policy in providing in-kind mitigation first where possible/practicable.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 30-Jan-08

## **2-0 Evaluation Concurred**

The 5th sentence is confusing. It should have read "We showed adverse impacts to saltmarsh when applying the SOP to this project because we did not want to EXCLUDE this important vegetative community." Approximately 10 acres of saltmarsh would be lost as a result of the project. This would occur as a result of enlarging a turning basin and excavating small areas along the riverbank. We included all the saltmarsh that would be impacted by increases in salinity in the SOP calculations. It is impacts from those increases in salinity that I meant when I stated that the impacts to saltmarsh would be minimal. Under the "Dominant Effect" factor in the SOP calculations, we included a value of "0" for the expected impacts to saltmarsh as a result of the expected increase in salinity. The salinity would increase over a large acreage of saltmarsh, but we do not believe that those increases would reduce their ecological value. Roughly half of the impacts to saltmarsh would occur on lands within the Refuge. The USFWS has stated that it does not want us to provide in-kind mitigation (provide or enhance other saltmarsh) to compensate for those losses. They prefer either additional tidal freshwater marsh or bottomland hardwoods adjacent to the Refuge. We could not identify any other acceptable site to create or restore tidal freshwater marsh, so we moved to preservation.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

## **2-1 Backcheck Recommendation Close Comment**

The reason given above for assigning a value of "0" to the

"Dominant Effect" factor in the SOP calculations appears to differ from the reason given in the Adverse Impact Worksheet. The worksheet states that the saltmarsh is being converted to more valuable brackish marsh vs. the discussion above which states that the impact from the expected increase in salinity to salt marsh is minor and not expected to effect the salt marsh's ecological value. If the explanation given above (insignificant increases in salinity) is the reason for assigning "0" to the "Dominant Effect" factor for salt marsh, then it is not clear that there is a need for salt marsh mitigation. However, based on the worksheet calculations, 730 acres of salt marsh would be converted to brackish marsh if Mitigation Plan 6A is used. Assigning a value of "0" to the "Dominant Effect" for the adverse impact worksheet and the values assigned for the Restoration Worksheet gives brackish marshes a higher value than salt marshes, yet an explanation is not given for assigning a higher value to brackish marshes. If the district wishes to use the Regulatory SOP for Preservation Determinations, then it would seem reasonable to use the remaining Regulatory guidelines in conjunction with the SOP. For example, in the Memorandum to the Field "Model Compensatory Mitigation Plan Checklist for Aquatic Resource Impacts under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act" it states under section 3(b) that the description of how the mitigation project will compensate for the functions identified in the Mitigation Goals section 1(c). Also, if the proposed mitigation is off-site and/or out-of-kind, explain why on-site on in-kind options are not practicable or environmentally preferable (section 3(f)). And, under "Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404...and Section 10..." that districts will determine what level of mitigation is "appropriate" based upon the functions lost or adversely affected as a result of impacts to aquatic resources..., districts are encouraged to increase their reliance on functional assessment methods (pg. 2). However it states on pg. 3 that "in the absence of more definitive information on the functions of a specific wetland site, a minimum one-to-one acreage replacement may be used as a reasonable surrogate for no net loss of functions (I assume that they would be referring to in-kind replacement). These 404 concepts would seem to place a burden on the agencies to justify why freshwater wetlands should replace salt marsh without a functional assesement or a one-to-one acreage replacement. This might increase the available mitigation options and/or more accurately mitigate the appropriate impacts.

Submitted By: Catherine Rogers (978-318-8231) Submitted On:

19-Feb-08

Current Comment Status: **Comment Closed**

**Id**  
**1741985**

**Spec**  
**n/a'**

**Sheet**  
**n/a**

**Detail**  
**n/a**

It is stated in the "Charge to the Peer Reviewers" and in the "Position of Agencies on Mitigation Measures" that agencies have not been able to identify any sites where tidal freshwater marsh could be restored. This gives additional importance to preservation of freshwater wetlands in the project area. However, it is unclear if the calculations take into account the possibility that restoration may need to occur outside the impact watershed area and how that would "reasonably offset authorized impacts" (5.9.2 of the SOP).

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

Revised 20-Dec-07.

**1-0 Evaluation For Information Only**

The USFWS has stated it will not accept mitigation outside the basin for this project. They are of the 4 Federal agencies that must approve this conditionally-authorized project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation Open Comment**

See response to comment #1742170.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 30-Jan-08

**2-0 Evaluation Concurred**

The USFWS has provided guidance on what they would consider acceptable mitigation for this project. That guidance does limit the options from which we can develop an acceptable mitigation plan. Although such specific limitations may not be typical, it is common for an agency to find some proposed mitigation action to be unacceptable. Since the Dept of Interior must approve this project for it to proceed, the USFWS has more input to the final results of this project than in most. From Comment #1742170 ..... The USFWS has stated that mitigation outside the basin is unacceptable for this project. I believe this is at least partially based on their feeling that since it is Refuge lands that are impacted, that the mitigation should be within or adjacent to the

Refuge. Their procedures (Refuge Compatibility Determination) require they conclude that a proposed use of Refuge lands supports the purpose for which Congress created that Refuge. Out-of-basin mitigation would make such a determination more difficult, as that Refuge would not benefit from mitigation in another basin. We did follow the normal steps of mitigation. We first looked at avoidance, then minimization, then restoration and enhancement, and finally preservation. We were unable to identify an acceptable site to further restore or enhance freshwater marshes in the basin. That entire process may not have been in the information you received, but it will be in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

## **2-1 Backcheck Recommendation Close Comment**

See comment 1741905.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 19-Feb-08

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
1742089	n/a'	n/a	n/a

Without the backup, it is not possible to determine if the number selected for each factor is reasonable. Assuming the numbers selected are accurate, then the calculations seem reasonable.

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

## **1-0 Evaluation Concurred**

We intend to provide some additional explanations when we describe this approach in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

## **1-1 Backcheck Recommendation Close Comment**

Closed without comment.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 22-Jan-08



Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
<b>1742103</b>	n/a'	n/a	n/a

Recheck the restored brackish marsh acreage number. I believe it should be 1068 instead of 1156. The change would be due to the slight decrease of acreage in the 2.1 to 4.0 salinity range under Plan 6A.

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

**1-0 Evaluation Concurred**

Correct. I will revise the spreadsheet accordingly. Thank you for catching that.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 15-Jan-08

**1-1 Backcheck Recommendation Close Comment**

Closed without comment.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 22-Jan-08

Current Comment Status: **Comment Closed**

<u><b>Id</b></u>	<u><b>Spec</b></u>	<u><b>Sheet</b></u>	<u><b>Detail</b></u>
<b>1742111</b>	n/a'	n/a	n/a

A statement is made in the "Charge to the Peer Reviewers" that "additional lands with an easement would be needed to provide the same total habitat value as would fewer lands provided under government ownership." Is there evidence for this distinction?

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

**1-0 Evaluation For Information Only**

That statement is based on the content of the SOP, particularly how the agencies chose to quantify the effects of various levels of "Control" over a property. For this project, the USFWS has stated it would not consider habitat preserved through easements as being acceptable mitigation. Since they are one of the 4 Federal agencies that need to approve this project, we would acquire all lands in fee,

not through easements.

Submitted By: William G. Bailey (912-652-5781) Submitted On:  
15-Jan-08

**1-1 Backcheck Recommendation Open Comment**

See response to comment #1742170

Submitted By: Catherine Rogers (978-318-8231) Submitted On:  
30-Jan-08

**2-0 Evaluation Concurred**

The USFWS has provided guidance on what they would consider acceptable mitigation for this project. That guidance does limit the options from which we can develop an acceptable mitigation plan. Although such specific limitations may not be typical, it is common for an agency to find some proposed mitigation action to be unacceptable. Since the Dept of Interior must approve this project for it to proceed, the USFWS has more input to the final results of this project than in most. From Comment #1742170 ..... The USFWS has stated that mitigation outside the basin is unacceptable for this project. I believe this is at least partially based on their feeling that since it is Refuge lands that are impacted, that the mitigation should be within or adjacent to the Refuge. Their procedures (Refuge Compatibility Determination) require they conclude that a proposed use of Refuge lands supports the purpose for which Congress created that Refuge. Out-of-basin mitigation would make such a determination more difficult, as that Refuge would not benefit from mitigation in another basin. We did follow the normal steps of mitigation. We first looked at avoidance, then minimization, then restoration and enhancement, and finally preservation. We were unable to identify an acceptable site to further restore or enhance freshwater marshes in the basin. That entire process may not have been in the information you received, but it will be in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On:  
06-Feb-08

**2-1 Backcheck Recommendation Close Comment**

Closed without comment.

Submitted By: Catherine Rogers (978-318-8231) Submitted On:  
19-Feb-08

Current Comment Status: **Comment Closed**

**Id**  
**1742170**

**Spec**  
**n/a'**

**Sheet**  
**n/a**

**Detail**  
**n/a**

As the agencies could not identify potential sites for restoration or creation of tidal freshwater marsh, then it would seem reasonable to mitigate for in-kind saltmarsh, if sites are available.

Submitted By: Catherine Rogers (978-318-8231). Submitted On: 20-Dec-07

**1-0 Evaluation Potential Scope Impact Potential Cost Impact Potential Time Impact **For Information Only****

The USFWS stated that restoration or enhancement of saltmarsh would not be acceptable mitigation for loss of freshwater marsh. The USFWS is one of 4 Federal agencies that must approve the project.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 14-Jan-08

**1-1 Backcheck Recommendation **Open Comment****

This comment is also relevant for comment numbers 1742111 and 1741985. The responses to these three comments center on the USFWS position regarding mitigation. It would appear that they have skipped to preservation of freshwater wetlands without giving consideration to out-of-kind mitigation or mitigation outside the Savannah basin. According to the SOP, creation, enhancement or restoration is to be given higher priority than preservation. Creation, enhancement and restoration mitigation are to complement preservation of wetlands. Preservation is to be an exception.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 30-Jan-08

**2-0 Evaluation **Concurred****

The USFWS has stated that mitigation outside the basin is unacceptable for this project. I believe this is at least partially based on their feeling that since it is Refuge lands that are impacted, that the mitigation should be within or adjacent to the Refuge. Their procedures (Refuge Compatibility Determination) require they conclude that a proposed use of Refuge lands supports the purpose for which Congress created that Refuge. Out-of-basin mitigation would make such a determination more difficult, as that

Refuge would not benefit from mitigation in another basin. We did follow the normal steps of mitigation. We first looked at avoidance, then minimization, then restoration and enhancement, and finally preservation. We were unable to identify an acceptable site to further restore or enhance freshwater marshes in the basin. That entire process may not have been in the information you received, but it will be in the EIS.

Submitted By: William G. Bailey (912-652-5781) Submitted On: 06-Feb-08

## **2-1 Backcheck Recommendation Close Comment**

Closed without comment.

Submitted By: Catherine Rogers (978-318-8231) Submitted On: 19-Feb-08

Current Comment Status: **Comment Closed**

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