

**FINAL  
WORK PLAN**

**for**

**External Peer Review of the  
Sabine-Neches Waterway (SNWW) Channel Improvement Project (CIP)  
Draft Feasibility Report and Draft Environmental Impact Statement**

**by**

**Battelle  
505 King Avenue  
Columbus, Ohio 43201**

**for**

**U.S. Army Corps of Engineers  
Deep Draft Navigation Planning Center of Expertise  
Mobile District  
Kenneth Paul Bradley, P.E.  
ATTN: CESAM-PD-E  
109 St. Joseph Street  
P.O. Box 2288  
Mobile, Alabama 36628-0001**

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

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# FINAL WORK PLAN

for

## **Sabine-Neches Waterway (SNWW) Channel Improvement Project (CIP) Draft Feasibility Report and Draft Environmental Impact Statement**

### **BACKGROUND**

Under a resolution from the Senate Committee on Environment and Public Works dated June 5, 1997, Congress directed the U.S. Army Corps of Engineers (USACE) to begin investigating the feasibility of modifying the existing Sabine-Neches Waterway (SNWW) channels serving the ports of Beaumont, Port Arthur and Orange, Texas, in the interests of commercial navigation. As authorized by the 1997 resolution, USACE has reviewed previous USACE reports on the SNWW and other pertinent reports to determine the feasibility of modifying the SNWW channels. In March 2000, the USACE joined in an agreement with Jefferson County Waterway and Navigation District (JCWND) to conduct a feasibility study and prepare a Feasibility Report and Draft Environmental Impact Statement (DEIS) for proposed improvements to the Sabine-Neches Waterway.

The proposed SNWW Channel Improvement Project (CIP) is located on the northwest Gulf coast at the state boundary between Texas and Louisiana, and is intended to improve the efficiency and safety of the deep-draft navigation system while fully mitigating impacts to the areas coastal and estuarine resources. The recommended Plan for the SNWW project includes:

- Deepening the entire channel from 40 feet to 48 feet from the Gulf of Mexico to Beaumont
- Widening from 500 feet to 700 feet from the Gulf to Port Arthur, and construction of Turning Basins on the Neches River
- The channel is increased in length from 64 miles to 77 miles (a 13-mile extension in the Gulf of Mexico)
- Approximately 110 million cubic yards (mcy) of new work material will be dredged (nearly 44 mcy in the Gulf)
- Maintenance dredging is expected to double (from 7.1 mcy/yr to 14.7 mcy/per yr) with over half the increase from the offshore channels

The recommended Plan also includes marsh and oyster mitigation, and a 50-year dredged material management plan (DMMP) with marsh restoration and nourishment, upland placement areas, and offshore placement. The DMMP features will restore 3,973 acres of degraded marsh and improve 1,412 acres of shallow water habitat on the Neches River, and the mitigation measures will replace 499 acres of marsh projected to be lost as a result of the project and restore an additional 3,003 acres of emergent marsh. In addition, 6 miles of Gulf shoreline will be regularly nourished with maintenance material over the 50-year life of the project. All restoration and nourishment features are part of the base plan.

Because of the national economic and military and importance of this project, an external peer review (EPR) of the SNWW CIP Feasibility Report and DEIS will be conducted. Independent, objective peer review is regarded as a critical element in ensuring the reliability of scientific analyses. The EPR will follow the procedures described in the Department of the Army, U.S. Army Corps of Engineers, guidance *Peer Review of Decision Documents* (EC 1105-2-408) dated May 31, 2005, CECW-CP Memorandum dated March 30, 2007, and the Office of Management and Budget's *Final Information Quality Bulletin for Peer Review* released December 16, 2004.

To accomplish the EPR, subject matter experts will be recruited to participate in an EPR panel. Potential candidates for the peer review panel will be screened for availability, interest, and technical experience in defined areas of expertise. Ultimately, six to eight experts will be selected for the final EPR panel using predetermined criteria related to technical expertise and credentials, relevance to major sections of the Feasibility Report and DEIS, and overall balance. The EPR panel participants will be reimbursed at their hourly rate.

The SNWW CIP Feasibility Report, DEIS, and supporting documents (Appendix A) that the panel will be asked to review will be made available by the USACE on or before June 29, 2007.

Battelle was engaged to conduct the EPR. One of the initial steps in the process is to prepare a detailed work plan (herein) as Task 1.

## **TECHNICAL APPROACH**

### **Task 1. Prepare Work Plan**

Battelle will complete and submit a draft work plan (this document) electronically 15 working days after contract award (TCN07153 was awarded on May 14, 2007). The work plan serves to describe, in detail, the process that will be used to identify and select the EPR panel, conduct the review, and prepare the EPR report. Battelle has also prepared a draft charge to reviewers (see Task 3) and included it as Appendix B of the work plan. A conference call will be conducted to discuss comments from USACE on the draft work plan, and Battelle will address all comments in the final work plan.

### **Task 2. Identify Potential External Peer Reviewers**

Battelle will identify at least 15 available potential experts and their hourly rates for the EPR panel. This includes the following activities: developing selection criteria for selecting the candidate external peer reviewers (see Appendix C), and contacting the reviewers to evaluate technical skills, potential conflict of interest (see Appendix D for draft peer review conflict of interest inquiry), and availability. Preliminary information about the potential reviewers and their hourly rates will be provided to USACE as early as possible. The final list of 15 recommended reviewers, along with their hourly rates and brief biographical information, will be provided to USACE 15 days after contract award (provided herein; Appendix E).

### **Task 3. Prepare and Finalize Charge to External Peer Reviewers**

A “charge” contains the instructions to the peer reviewers regarding the objective of the peer review and the specific input sought. It should focus the review by presenting questions and concerns to the reviewers regarding the technical merit of specific aspects of the report, as well as invite reviewers to offer a broad evaluation of the overall product.

Guidance provided in the Department of the Army, U.S. Army Corps of Engineers’ guidance *Peer Review of Decision Documents* (EC1105-2-408) and the Office of Management and Budget’s *Final Information Quality Bulletin for Peer Review* released December 16, 2004 will be followed in the development of the charge.

Battelle will revise the charge (included in draft form in Appendix B of this document) to peer reviewers of the SNWW CIP Feasibility Report and DEIS based on technical direction received from USACE. In addition, when the final draft Feasibility Study and DEIS are received on or before June 29, 2007, Battelle will review the contents for major changes from the preliminary drafts (which have been previously provided to Battelle) that may impact the content of the charge. The charge then will be finalized and submitted to USACE for final approval and distribution to the external peer reviewers.

### **Task 4. Select and Contract with Final External Peer Review Candidates**

Battelle will meet with the USACE (via teleconference) to select the final list of peer reviewers. At the meeting, Battelle will present the list (developed under Task 2) of at least 15 potential reviewers and their qualifications, and provide our recommendations for final peer reviewers. At the meeting, up to eight peer reviewers will be selected for the final peer review panel based on their credentials, and the selection criteria will be documented.

Battelle will prepare scopes of work for each reviewer. A request for quotation, along with the peer reviewer scope of work description and conflict of interest inquiry form (see Appendix D), will be prepared and sent to each reviewer. Upon receipt of the reviewers’ written quotations indicating willingness to participate and the absence of a conflict of interest, Battelle will establish contracts with the peer reviewers at agreed upon rates and hours to ensure/secure participation.

The scope of work for each external peer reviewer will consist of:

- Review of the SNWW feasibility study and DEIS documents (sections appropriate for their areas of technical expertise) and preparation of written comments;
- Preparation for and participation in an EPR panel consensus meeting (via teleconference);
- Review of the consensus meeting summary;
- Review of final draft EPR report (including provision of final feedback on USACE responses to EPR comments).

In addition, one of the external peer reviewers will be designated as Lead Technical Peer Reviewer and will have additional scope of work consisting of:

- Review of the SNWW feasibility study and DEIS documents (sections appropriate for his/her areas of technical expertise) and preparation of written comments;
- Preparation for and facilitation of an EPR panel consensus meeting (via teleconference);
- Preparation and revision of the consensus meeting summary in coordination with Battelle;
- Review of final draft EPR report (including provision of final feedback on USACE responses to EPR comments).

### **Task 5. Conduct External Peer Review**

Battelle will facilitate and manage the individual review of the SNWW Feasibility Report, DEIS, and supporting documents by EPR panel members. Battelle will provide the peer reviewers with copies of the reports and the final charge (prepared under Task 3) by July 2, 2007, assuming that the SNWW documents are provided to Battelle by USACE by June 29, 2007 via ftp. Battelle will prepare and deliver a summary letter to instruct the peer reviewers to undertake and complete the review by July 30, 2007. The letter also will outline the steps and deadlines. This will include approximately four weeks for the review of the SNWW documents, preparation of individual written comments, participation in a consensus meeting, review of a consensus meeting document, and providing final feedback on USACE's responses to EPR review comments (see Task 7). Working with USACE, Battelle will respond to any reviewer questions or information requests during the review process.

Written comments from individual peer reviewers will be provided to USACE Galveston District as received, and in an anonymous "raw" (i.e., verbatim) format to be forwarded to the authors of the SNWW CIP Feasibility Report and DEIS (see Task 7). In addition, Battelle will compile all written comments from individual reviewers into one document of anonymous/non-attributed comments, organized by report section and/or topic area (hereafter, EPR merged comments document). This EPR merged comments document will be the format included in the final EPR Report to be released publicly; it will also be used for discussion at the consensus discussion of the EPR panel, as described below (Task 6).

### **Task 6. External Peer Review Panel Consensus Discussion**

Following the four-week review period, Battelle will share the EPR merged comments document (see Task 5) with the entire EPR panel. Battelle, in coordination with the Lead Technical Peer Reviewer, will shortly thereafter plan and convene one group teleconference or LiveMeeting with the EPR panel to discuss the panel's comments. The goal of the EPR teleconference is to ensure the exchange of technical information among the panel experts, many of whom will be from diverse scientific backgrounds. This information exchange ensures that the EPR report represents the synergy of the panel and avoids separated or stovepiped information and analyses. At the conclusion of this meeting, Battelle will support the Lead Technical Peer Reviewer in the preparation of a report documenting the consensus findings of the EPR panel, as well as any dissenting or diverging comments. This consensus report will be provided to the EPR panel

within four days of the teleconference for a brief two- to three-day review period to ensure that the EPR panel is in agreement with the consensus report.

### **Task 7. Response to EPR Team Comments**

Battelle will submit to the USACE the anonymous “raw” comments from the peer reviewers (Task 5) on August 1, 2007 at the latest, or earlier if submitted by external peer reviewers prior to the July 30, 2007 deadline. The USACE project team will be given 15 business days to prepare responses to the “raw” comments, which will be incorporated into the draft EPR report. The USACE’s responses to “raw” external peer review comments will be provided to Battelle by August 22, 2007.

### **Task 8. Prepare Draft External Peer Review Report**

Battelle will prepare a draft EPR report that includes:

- A summary of EPR panelists and their qualifications,
- A summary of the EPR methodology used,
- A summary of the EPR panel’s comments,
- A summary of the EPR panel consensus meeting,
- USACE responses to the individual “raw” (i.e., verbatim) EPR comments
- A brief discussion, and
- An appendix with verbatim (non-attributed) comments, collated and organized by report section (i.e., the EPR merged comments document)

### **Task 9. Coordinate and Prepare Comments on Draft EPR Report**

Battelle will distribute the draft EPR report to the USACE and the EPR panel on August 29, 2007 for concurrent review (see Task 9 below), assuming that USACE’s responses to EPR comments are provided to Battelle by August 22, 2007. The EPR team will be given the opportunity to provide final feedback on the USACE authors’ responses to their “raw” comments and the USACE will review and comment on the EPR Report in general. The USACE and the EPR team will provide feedback to Battelle by September 12, 2007.

### **Task 10. Prepare Final Peer Review Report**

The EPR panel’s final feedback on the USACE response to EPR comments, as well as final comments from USACE on the draft EPR report will be reviewed by Battelle and incorporated into the final EPR Report. This final EPR Report will be provided to USACE and to the EPR panel by September 21, 2007.

As required during the remainder of the project, Battelle will provide support to USACE in interaction with the peer reviewers.

## STAFFING PLAN

The project manager for this project is **Ms. Karen Foster**, a Program Manager in Battelle's Arlington (Crystal City), Virginia Office. Ms. Foster has extensive management experience for the Army Corps of Engineers (Corps), serving as Program Manager for Battelle's three Environmental Services IDIQ contracts with the Corps' New England District for eight years. She has also led the development and managed the execution of Independent Technical Reviews. For example, Ms. Foster was project manager for the Independent Technical Review and Engineering Consultation Report on the Seven Oaks Dam Tunnel Damage and Repair, which involved the selection of a team of experts, site visit and report review, and completion of the ITR report under a very tight time frame in response to Congressional requests. Ms. Foster is also experienced in Environmental Impact Statements, and holds a Bachelors degree in Biology and a Masters degree in Oceanography. Ms. Foster will work closely with the experienced team described below.

**Dr. Jill Engel-Cox**, a Senior Research Scientist, will provide senior technical guidance for the development of the work plan and review panel selection process. She has extensive experience in facilitation of stakeholder processes and the use of scientific review panels. Dr. Engel-Cox served as Battelle task leader for the management of the external peer review of the Corps' Louisiana Coastal Protection and Restoration (LaCPR) preliminary technical report, meeting tight deadlines under a Congressional mandate. Dr. Engel-Cox has a Bachelor and Master degree in Mechanical Engineering and a Ph.D. in Environmental Science.

The work plan development, identification and recruitment of the external peer review panel, and implementation of the review will also be supported by other experienced staff. **Ms. Maureen Wooton**, a Research Scientist, has coordinated and supported numerous projects at Battelle involving peer review and stakeholder input processes, including the development of committee selection criteria, participant recruitment, working with diverse groups of stakeholders, strategic planning to structure and guide committees and workgroups, and the development of documents produced via workgroup consensus. She provided key implementation support for the external peer review of the Corps' LaCPR preliminary technical report, supporting the project from the identification and recruitment of the expert review panel, to the preparation of the final external peer review report. **Ms. Rachel Sell**, also a Research Scientist, has led the coordination and implementation of two peer review projects under very tight timelines for the EPA and the National Institute of Child Health and Human Development, as part of the National Children's Study. Ms. Sell has worked closely with government clients to identify candidate peer reviewers and has extensive experience in recruiting and interacting with a broad range of scientific experts at federal and state levels, academia, and industry. She has experience coordinating the entire peer review process, including disposition of review documents and providing guidance to reviewers, consolidating and incorporating comments, and compiling materials submitted by the peer reviewers for the client.

Scientific expertise for the development of the charge for peer reviewers and related guidance will be provided by **Mr. Thomas Kuchar**, **Ms. Lisa Lefkovitz**, **Mr. Paul Dragos**, and **Ms. Jennifer Field**. Mr. Kuchar holds a Bachelor and Master degree in Civil Engineering. Prior to joining Battelle, he served as the Deputy Commander of the Fort Worth District Corps of



Engineers, served as a Contracting Officer with the Corps, and oversaw the civil works construction of two lock-and-dam projects in the Pittsburgh District. He is also the project manager for an ITR being conducted for the Task Force Hope on the Hurricane Protection System. This project includes a panel of experts on water policy and management, geotechnical engineering, civil engineering, environmental engineering and planning. Ms. Lefkovitz, an environmental chemist with more than 20 years of experience in the design and management of evaluations of sediments and dredged materials, is the current Program Manager for Battelle's environmental services contract with the Corps New England District. Under this contract, Ms. Lefkovitz managed a multimillion dollar project to write an environmental impact statement for the Corps in support of designating a new offshore dredged material disposal location in Rhode Island Sound. She has also been actively involved in numerous Corps dredging projects over the last several years. Mr. Paul Dragos, is a civil engineer with experience in physical oceanography and sediment transport modeling related to dredging. Ms. Field is a biologist/ecologist that has extensive experience in the Gulf of Mexico.

There will be up to 8 **external peer reviewers**, who will be responsible for reviewing and providing comments on the final draft SNWW CIP Feasibility Report and DEIS, providing input on the development of a consensus document, and depending on the schedule, reviewing and commenting on the responses of the report authors. The peer reviewers will be academic and consultant experts in relevant subjects. The criteria for their selection are provided in Appendix D. It is assumed at this time that each reviewer will need approximately 80 hours for the peer review process, including about 60 hours for a four-week document review period and the preparation of individual experts written comments, followed by up to 20 hours for providing input on the development of a EPR consensus document (including participation in one review panel teleconference to be held in late July and review of a consensus/key issues summary document that will be prepared by the review panel chair). If time allows, reviewers will also be given the opportunity to review and comment on responses from USACE report authors

Following is a table estimating the project staff, their roles, and proposed labor hour distribution. Hours are for Task 3 through 10 only and represent a modified contract start date of June 11, 2007 (see Milestones and Deliverables section).

**Table 1. Proposed Hours for Tasks 3-10.**

Proposed Labor Hour Distribution by Task											
Staff (Battelle except peer reviewers)	Labor Category	Role	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	TOTAL
Karen Foster	Project Manager	Project Manager	10	20	16	30	4	20	2	18	120
Jill Engel-Cox, Ph.D.	Sr Scientist	Technical guidance / quality review	2	2		2		2		2	10
Thomas Kuchar, P.E.	Sr Scientist	Charge preparation lead, consensus process	24	6		28		2		2	62
Ms. Lisa Lefkowitz, Mr. Paul Dragos, and Ms. Jennifer Field	Sr Scientist	Charge preparation, scientific expertise	6	6		6				6	24
Maureen Wooton	Mid Scientist	Peer review panel coordination and preparation of review package and peer review report		24	20	10	2	20	2	10	88
Rachel Sell	Mid Scientist	Peer review panel coordination and preparation of review package and peer review report		24	20	10	2	20	2	10	88
Susan Wolkow	Admin Asst	Prepare requisitions for peer reviewer subcontracts		24							24
External Peer Reviewers (assumes 7 reviewers)	Subcontractor	Peer review (assumes average of 80 hours per peer reviewer)			420	70			70		560
Lead Technical Peer Reviewer	Subcontractor	Peer review, facilitation of peer review meeting, consensus summary preparation			60	30			10		100
Linda Judd (hours not included in pricing)	Admin Asst	Administrative assistance with deliverables	2			2		2		2	8
<b>Total Labor Hour Estimate</b>			<b>44</b>	<b>106</b>	<b>536</b>	<b>188</b>	<b>8</b>	<b>66</b>	<b>86</b>	<b>50</b>	<b>1084</b>

## **MILESTONES AND DELIVERABLES**

The due dates for milestones and deliverables in the table below assume the receipt of all documents for review, specifically the draft SNWW CIP Feasibility Report and DEIS, from the USACE by June 29, 2007 and a contract modification (to conduct Tasks 3 through 10) execution start date of June 11, 2007. If the documents for review are received later, the due dates and/or scope will shift accordingly after discussion with the USACE. All deliverables will be sent electronically in Microsoft Office or PDF format.

**Table 2. Milestones and Deliverables by Activity.**

Activity Number	Deliverable or Milestone	Activity	Due Date
1	M	USACE approves final (6-8) peer reviewers; Battelle notifies final peer reviewers (Task 4)	NLT June 8, 2007 (0900-1100 Central/1000-1200 Eastern)
2	D	Battelle submits draft Work Plan to USACE	June 5, 2007
3	M	NTP for Modification 1 Awarded	June 11, 2007
4	M	USACE provide comments on Draft Work Plan (includes Draft Charge)	June 11, 2007
5	D	Battelle submits Final Work Plan, including Draft Final Charge to USACE for review (Tasks 1 and 3)	June 22, 2007
6	M	USACE provides comments on Draft Final charge to Battelle (Task 3)	June 26, 2007
7	M	Peer Reviewers under contract with Battelle (Task 4)	June 29, 2007
8	M	USACE provides final documents for EPR Team on fip site (Task 5)	June 29, 2007
9	M	Battelle conducts kick-off conference call with EPR team	June 29, 2007
10		Battelle produces Final Charge based on USACE's comments and final documents for review (Task 3)	July 2, 2007
11	M	Battelle submits Final Charge and USACE approves Final Charge (Task 3)	July 2, 2007
12	M	Battelle provides final documents to be reviewed and Final Charge to peer reviewers (Task 5)	July 2, 2007
13	M	Peer Reviewers complete review and provide comments (Task 5)	July 30, 2007 (19 business days)
14	D	Battelle submits anonymous "raw" EPR team individual comments to the USACE (in table format) for review. (Task 5)	August 1, 2007
15	M	Battelle collates peer reviewers comments and distribute to the EPR team for their review. (Task 6)	August 2, 2007
16	M	Battelle conducts consensus discussions	Week of August 6-10, 2007
17	M	Battelle provides meeting notes from consensus discussion to EPR team. (Task 6)	NLT August 14, 2007
18	M	EPR Team provides comments on consensus discussion notes. (Task 6)	August 21, 2007
19	M	USACE provides responses to EPR team anonymous "raw" comments. (Task 7)	August 22, 2007
20	M	Battelle submits the Draft EPR Report to the USACE for comments (note: focus is on all sections except EPR team comments, which USACE has already responded to). (Task 8)	August 29, 2007
21	D	Battelle submits the Draft EPR Report (individual comments, consensus discussion, USACE responses to comments) to the EPR Team to respond to the USACE comments from the individual peer reviewers (anonymous "raw" comments). (Task 8)	August 29, 2007
22	M	EPR Team provides responses to USACE comments and provides comments on other portions of the Draft EPR report, as appropriate. (Task 9)	September 12, 2007
23	M	USACE provides comments on Draft EPR Report (Task 9)	September 12, 2007
24	D	Battelle submits the Final EPR report (Task 10)	NLT than September 21, 2007

D = Deliverable, M = Milestone

## APPENDIX A

### SNWW CIP Feasibility Study, DEIS, and Supporting Documents to be Reviewed by the External Peer Review Panel

Document for review, as listed in Original SOW	Filename (currently located in USACE ftp; to be replaced, as appropriate by June 29, 2007)
Draft Feasibility Report	SNWW Final Draft Feasibility Report April 2007.pdf
- Economic Appendix	SNW-EconAppen Mar2007.pdf
- Real Estate Plan	SNWW Real Estate Plan.pdf
- Cost Estimate	Waver request for EGM 05-01.pdf- SNWW Cost Estimate Summary \$1.12.pdf
Draft Environmental Impact Statement	SNWW PDEIS Vol 1_20070316.pdf
Revised Draft Engineering Appendix	SNWW Engineering Appendix-april07.log [This is just a SAS log with errors at this point]
MII Cost Estimate	Incorporated into the feasibility study or EIS
Hydrodynamic-Salinity Modeling for the SNWW Project (including Desktop Off-Channel Wetland Salinity Mitigation Model)	Incorporated into the feasibility study or EIS
Coastal Shoreline Impacts Study	SNWW Appendix G_20070316.pdf [Biological Assessment for Impacts to Endangered and Threatened Species]-
Desktop Study for Sediment Related Problems at SNWW	Incorporated into the feasibility study or EIS
Vessel Effects Before and After SNWW Deepening	Incorporated into the feasibility study or EIS
Ship Simulation	Incorporated into the feasibility study or EIS
Ecological Modeling Report	SNWW Appendix C_20070316.pdf
Ocean Dredged Material Disposal Study Report	SNWW Appendix D_20070316.pdf [Dredged Material Management Plan]  SNWW Appendix B_20070316.pdf [EIS - Ocean Dredged Material, Disposal Site Designation]  SNWW Appendix E_20070316.pdf [Section 404 (b) (1) Evaluation]  SNWW Appendix I_20070316.pdf [Compliance with Goals and Policies –Dredging and Dredged Material Disposal and Placement]

## APPENDIX B

### DRAFT Charge to the Peer Reviewers for Sabine-Neches Waterway (SNWW) Channel Improvement Project (CIP) Draft Feasibility Report and Draft Environmental Impact Statement

#### BACKGROUND

The primary work efforts of the SNWW CIP will focus on improving the efficiency and safety of the deep-draft navigation system while fully mitigating impacts to the areas coastal and estuarine resources. This will include:

- Deepening the entire channel from 40 feet to 48 feet from the Gulf of Mexico to Beaumont,
- Widening from 500 feet to 700 feet from the Gulf to Port Arthur, and construction of Turning Basins on the Neches River.
- Increased the channel in length from 64 miles to 77 miles (a 13-mile extension in the Gulf of Mexico)
- Dredging approximately 110 million cubic yards (mcy) of new work material (nearly 44 mcy in the Gulf)
- Maintenance dredging is expected to double (from 7.1 mcy/yr to 14.7 mcy/per yr) with over half the increase from the offshore channels
- Marsh and oyster mitigation
- 50-year dredged material management plan (DMMP) with marsh restoration and nourishment, upland placement areas, and offshore placement.
  - The DMMP features will restore 3,973 acres of degraded marsh and improve 1,412 acres of shallow water habitat on the Neches River, and the mitigation measures will replace 499 acres of marsh projected to be lost as a result of the project and restore an additional 3,003 acres of emergent marsh.
  - In addition, six miles of Gulf shoreline will be regularly nourished with maintenance material over the 50-year life of the project. All restoration and nourishment features are part of the base plan.

#### DOCUMENTS PROVIDED

The following documents will be provided to the peer reviewers (refer to Table 1):

##### Primary Documents

- Draft Feasibility Report (includes the Economic Appendix, Real Estate Plan, and Cost Estimate)
- Draft Environmental Impact Statement

## **Reference Documents**

- Revised Draft Engineering Appendix
- MII Cost Estimate
- Hydrodynamic-Salinity Modeling for the SNWW Project (including Desktop Off-Channel Wetland Salinity Mitigation Model)
- Coastal Shoreline Impacts Study
- Desktop Study for Sediment-Related Problems at SNWW
- Vessel Effects Before and After SNWW Deepening
- Ship Simulation
- Ecological Modeling Report
- Ocean Dredged Material Disposal Study Report

## **SCHEDULE**

- |  |                           |
|--|---------------------------|
| 1. Battelle confirms final selection of candidates   | NLT June 8, 2007          |
| 2. All peer reviewer contracts finalized   | June 29, 2007             |
| 3. SNWW documents distributed to EPR Panel with charge<br>[19 business days for review]  | July 2, 2007              |
| 4. EPR Panel submits technical review comments to Battelle   | July 30, 2007             |
| 5. Battelle distributes merged EPR comments to panel   | August 2, 2007            |
| 6. Facilitated teleconference on key issues/consensus  | Week of August 6,<br>2007 |
| 7. EPR Panel reviews key issues/consensus document   | August 14, 2007           |
| 8. EPR Panel submits comments on key issues/consensus document to<br>Battelle  | August 21, 2007           |
| 9. USACE authors respond to EPR Panel comments   | August 22, 2007           |
| 10. Battelle provides the Draft EPR Report <sup>a</sup> to EPR panel for final<br>feedback (including review of USACE responses to EPR comments) | August 29, 2007           |
| 11. EPR Panel submits any final comments to Battelle   | September 12, 2007        |
| 12. Battelle submits final EPR report to USACE   | NLT September 21,<br>2007 |

(NLT = no later than)

## **CHARGE FOR PEER REVIEW**

Members of this peer review are asked to determine whether technical approach and scientific rationale presented in the SNWW CIP Feasibility Report and DEIS are credible and whether the conclusions are valid. The reviewers are asked to determine whether the modeling work is technically adequate, competently performed, properly documented, satisfies established quality requirements, and yields scientifically credible conclusions. The peer reviewers are not being asked whether they would have conducted the work in a similar manner. In addition, the

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<sup>a</sup> Battelle Draft EPR Report will include a summary of panelists and their qualifications, verbatim (anonymous) comments organized/collated by report section, USACE responses to comments, and a brief discussion based on the key issues/consensus document prepared as a result of the consensus meeting.

reviewers are asked to determine whether the models and the associated findings are appropriate to help answer the following principal study questions that USACE will consider in its decision-making process for the site:

Specific questions for the peer reviewers, by report section, are provided below.

### **General Charge Guidance**

1. Please answer the scientific and technical questions listed below and conduct a broad overview of the SNWW CIP Feasibility Study and DEIS. Please focus on your areas of expertise and technical knowledge.
2. Identify, explain, and comment on assumptions that underlie economic, engineering, or environmental analyses.
3. Evaluate the soundness of models and planning methods as applicable and relevant to your area of expertise. Comment on whether models explain past events and how models will be validated.
4. Evaluate whether the interpretations of analysis and conclusions are reasonable.
5. Please focus review on scientific information, including factual inputs, data, the use and soundness of models, analyses, assumptions, and other scientific and engineering matters that inform decision makers.
6. If appropriate, you can offer opinions as to whether there are sufficient analyses upon which to base a recommendation for construction, authorization, or funding.
7. Please **do not** make recommendations on whether a particular alternative should be implemented, or whether you would have conducted the work in a similar manner. Also please **do not** comment on or make recommendations on policy issues and decision making.
8. If desired, EPR panel members can contact each other. However, EPR panel members **should not** contact anyone who is or was involved in preparing the draft SNWW CIP Feasibility Study and DEIS or that were part of the Internal Technical Review.
9. Please contact the Battelle project manager (Karen Foster, [foster@battelle.org](mailto:foster@battelle.org)) for requests or additional information.
10. In case of media contact, notify the Battelle project manager immediately.
11. Your name will appear as one of the panelists in the peer review. Your comments will be included in the peer report verbatim, but will remain anonymous. Attributed comments will be shared with the U.S. Army Corps of Engineers, Galveston District staff.

**Please submit your comments in electronic form to Karen Foster, [foster@battelle.org](mailto:foster@battelle.org), no later than Monday, July 30, 2007, 7 pm EDT,**



## **Specific Charge and Focus Questions**

### **Preliminary Draft Environmental Impact Statement (DEIS) - Charge**

#### **Executive Summary**

Comment on the completeness and clarity of the Executive Summary. Has the cumulative environmental impacts of this project been appropriately addressed?

#### **1.0 Need for and Objectives of Action**

Comment on whether you agree upon the needs and planning objectives. Has the increased volume of traffic and type of traffic been clearly defined and does it match projections involving the design life of this project?

#### **2.0 Alternatives**

Comment if you agree with how the preferred alternative was derived. Are all four accounts (NED, RED, EQ, and OSE) addressed in the report?

#### **3.0 Affected Environment**

Comment on whether you agree with the general analysis of the affected environment within the study area. For your particular area of expertise, provide an in-depth review of the DEIS analysis.

#### **4.0 Environmental Consequences**

Discuss whether you agree and why with the environmental consequences on the no-action alternative and preferred alternative. For your particular area of expertise, provide an in-depth review of the DEIS analysis.

Comment on whether any estuary shoreline erosion issues have been adequately addressed. While Texas Point National Wildlife Refuge shoreline will be improved by beach nourishment, was the likelihood of shoreline erosion caused by hydrodynamic changes in the waterway. Will the deeper and wider channel by itself or in conjunction with the changed hydrodynamics of the waterway cause slumping of sediments near the shore down into the channel and thereby cause erosion of the shoreline?

Comment on the applicability, accuracy, and completeness of the analysis of wave climate and sediment transport changes caused by the deepening and widening of the offshore channel and their predicted effect on the adjacent gulf coast shoreline as presented in the Shoreline Impacts Study.

Comment on the adequacy of the analyses of salinity intrusion, hydrodynamics, wave climate, and shoreline erosion. How important are the episodic effects of tropical storms and

hurricanes to this deepening and are they of concern? If they are important and of concern, have they been adequately addressed?

## 5.0 Mitigation

Explain if you are in agreement with the mitigation plan, including mitigation of direct and indirect impacts.

Is the relationship between mitigation and restoration properly explained and appropriately addressed in the mitigation plan?

Is the mitigation methodology appropriate and reasonable?

Discuss the appropriateness of the modeling efforts (H-S and Ecological) used in the mitigation development.

Does the report adequately address incremental justification for the mitigation plan? Does the proposed mitigation only account for impacts caused by the proposed modifications to the existing project?

## 6.0 Consistency with other State and Federal Regulations

Has the DEIS adequately been prepared to satisfy the requirements of all applicable environmental laws and regulations?

## 7.0 Any Adverse Environmental Impacts Which Cannot Be Avoided Should the Preferred Alternative be Implemented.

Explain if you agree with the DEIS in that there are no adverse impacts associated with the implementation of the preferred alternative

## 8.0 Any Irreversible or Irretrievable Commitments of Resources Involved in the Implementation of the Recommended Plan

Explain if you agree with the DEIS position on irreversible or irretrievable commitments of resources.

## 9.0 Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity

Explain if you agree with the DEIS position on the above relationship.

## 10.0 Energy and Natural or Depletable Resource Requirements and Conservation Potential of Various Alternatives and Mitigation Measures

Explain if you agree with the overall assessment of energy (fuel) requirements.

## Appendix A. Coordination

Section 5. Were the program objectives of the public involvement program properly developed and were the program objectives met?

## Appendix B. Ocean Dredged Material Disposal Sites (ODMDS) Draft Environmental Impact Statement

Explain whether or not you are in agreement with the preferred ocean dredged material disposal sites alternative.

Comment on the validity of the engineering assumptions used for disposal.

Comment on the hydrodynamic and sediment transport related information in the SNWW Ocean Dredged Material Disposal Site EIS as appropriate keeping in mind that this is intended as a dispersive site.

Comment on whether the Site Management and Monitoring Plan (SMMP) of ODMDS is adequate enough to provide protection to the human health and the environment.

Comment on the selection of disposal site size and location.

## Appendix C. Wetlands Value Assessment Ecological Modeling Report

Please comment on the selection of the Wetlands Value Assessment models for this study (including the Emergent Marsh Community Models, the Swamp Community Model, and the Bottomland Hardwood Community Model). Are these models appropriate for this project? Why or why not? Are there other habitat models that should be considered?

Please comment on the data parameterization efforts for each of the Wetlands Value Assessment Models. Are they appropriate? Why or why not?

Comment on the applicability, accuracy, and completeness of the hydrodynamic-salinity model with regard to predictions of any significant changes to the spatial salinity structure. Were, in your opinion, simplifying assumptions reasonable, and were all relevant factors considered (e.g., sea level rise)?

## Appendix D. Dredged Material Management Plan (DMMP)

Were sound-engineering practices and principles used in the development of the DMMP? If not, explain.

Comment on the validity of the engineering assumptions for dredging and disposal.

Are the disposal alternatives and applicable capacities for dredged material disposal described?

Comment on whether adequate disposal alternative including restoration and beneficial use have been considered.

Comment on whether cumulative effects have been characterized and evaluated.

#### Appendix E. Clean Water Act Section 404(b)(1) Evaluation

Discuss if you agree or disagree that the proposed plan meets the requirements of and guidelines of the Section 404 (b)(1) concerning the discharged of dredged or fill material into the waters of the United States.

#### Appendix F. Draft General Conformity Determination

Explain if you agree with the DEIS position that the proposed SNWW CIP will comply with the requirements of the General Conformity Rule especially as it pertains to nitrogen oxides.

#### Appendix G. Biological Assessment and Biological Opinion

Is the analysis of the direct and indirect impacts on the listed species accurate and complete? Will the voluntary avoidance and conservation measures be effective? Explain.

Please comment on the acceptability of the beach nourishment activities at Louisiana Point and Texas Point in terms of the spatial, temporal, material and design adequacy. Are there any ecological concerns with beach nourishment activities in these areas as proposed by this project? Please describe.

Please comment on the measures to avoid/protect sea turtles during project activities. Are they appropriate? Are there other measures that should be considered? If so, what are those measures?

Please comment on whether the proposed marsh restoration and beach nourishment will be effective in protecting wildlife habitat and fishery nursery areas, including critical habitat for the piping plover.

#### Appendix H. Historic Properties Programmatic Agreement

Provide any suggested improvements to the programmatic agreement regarding compliance with the Section 106 of the National Historic Preservation Act.

#### Appendix I. Compliance with the Texas and Louisiana Coastal Management Programs.

Identify any major areas where the SNWW DEIS does not comply the two state's coastal management programs.

## Draft Feasibility Report - Charge

### Syllabus

Comment on the clarity of the syllabus. Is the syllabus appropriately derived from the analysis of the report?

#### I. Study Information

Comment on the completeness and accuracy of the description of the project area

#### II. Problems and Opportunities

Comment on how well the problems and opportunities are analyzed in terms of safety and economic impact. Is the projection of these problems and opportunities clearly defined to coincide with the project life (50 years) of this proposed project?

#### III. Formulation Objectives, Constraints, and Criteria

Comment on whether or not you agree with the public concerns, planning objectives, planning constraints, and the technical criteria that will be used as a basis for this study.

#### IV. Plan Formulation

Comment on the plan formulation. Should the plan consider other non-structural measures than the two listed?

Are the future conditions expected to exist in the absence of the proposed project logical and adequately described and documented?

Are the changes between the without and with project conditions adequately described?

Is the plan formulation rational for developing screening and combining measures into alternative plans adequately described?

Are risks and uncertainties of benefits, costs, and impacts adequately addressed and described?

#### V. Evaluation of Alternatives

Comment if you are in agreement with the preliminary analysis and how the alternatives for detailed screening were arrived?

Are you in agreement with the reformulation of the screened alternatives?

VI. Economic Evaluation of Alternatives

Comment on whether or not you are in agreement with how the benefits (widening and deepening) and costs (vehicle delay costs and construction costs) were derived for each alternative. Were all factors considered? Are the benefits and costs to the military clearly identified?

Are commodity and fleet forecasts thorough, reasonable and based on well founded assumptions and related to economic factors?

Are all costs, direct and indirect, recognized and discussed?

Comment how safety concerns have been accounted for in this economic evaluation. Should the study include more information analysis of accidents and their impacts?

Comment on the results of the HarborSym model that was used to evaluate widening of the entrance channel.

VII. Description of Selected Plan

Is the description of the Selected Plan provided in enough detail to be clearly understood?

Is the rationale for plan selection adequately described?

VIII. Evaluation of Alternatives for the Management of Dredged Material

Comment on the process used and the analysis conducted in evaluating the dredged material placement alternative and selection of a placement plan. Address initial construction and maintenance material for the following types of placement alternatives: for restoration and nourishment sites, upland placement areas, and Ocean Dredged Material Disposal Sites. Is the selected placement plan adequately described?

IX. Economic Evaluation of Alternatives

Comment on how the mitigation alternatives were evaluated. Discuss whether you agree with the mitigation plan for intertidal marshes and regionally significant oyster reef.

Discuss whether you agree that the mitigation plan is justified.

Are mitigation and restoration properly distinguished and evaluated?

X. Recommended Plan

Provide any recommended suggestions, if any, to improve the description of the recommended plan, which will be provided to Congress. Is it complete and clear?

XI. Plan Implementation

Is the total project cost for the recommended plan appropriate given the future escalation in fuel and construction costs during the construction of the project?

XII. Summary of Coordination, Public Views, and Comments

Is the outreach program sufficient to solicit comments and concerns from the general public, state and Federal resource agencies, and any other interested party?

XIII. Recommendations

Is the recommended plan and associated requirements clearly described?

Appendix A. Economic Appendix

Refer to the charge listed above under IX. Economic Evaluation of Alternatives.

Appendix B. Real Estate Plan

Does the plan adequately address all real estate interests and requirements?

Are the real estate cost estimates reasonable?

Appendix C. Baseline Cost Estimate

N/A.

## APPENDIX C

### **Sabine-Neches Waterway (SNWW) Channel Improvement Project (CIP) Draft Feasibility Report and Draft Environmental Impact Statement External Peer Review (EPR) Panel - Considerations and Proposed Selection/Exclusion Criteria -**

According to the draft SNWW CIP Feasibility Study, the overall scope includes:

- Navigation channel enhancement
- Habitat management and restoration

#### **Technical Criteria /Areas of Expertise for Potential External Peer Reviewers**

Technical areas related to **channel enhancement**:

- Engineering (civil, cost, geotechnical)
- Hydraulics/sedimentation with oceanography and numerical modeling expertise
- Hydrology/coastal hydrology with oceanography and numerical modeling expertise
- Deep-draft navigation planning
- Deep-draft navigation economics

Technical areas related to **habitat management and restoration**:

- Biology/ecology with Gulf Coast experience
- Habitat evaluation/ecological modeling

Other desirable areas of technical expertise:

- Dredging and dredged materials management
- Economic analysis (resource economics) and real estate planning
- Experience with review of Environmental Impact Statements and Coastal Shoreline Impacts assessments
- Hydrodynamic-salinity modeling
- Ship simulation and vessel effects
- Sediment transport modeling

**Other considerations:**

- Participation in previous USACE technical review committees
- Other technical review panel experience
- Gulf Coast experience

**Reviewer Categories** [candidate may fit into more than one category]

- Academic
- Consultant (company-affiliated)
- Consultant (independent)
- Industry
- Non-governmental organization
- Governmental organization



## **Potential Exclusion Criteria/Conflicts of Interest**

- Involved in producing the draft feasibility report or supporting materials
- Current USACE employee
- Involvement in any USACE/southeast Texas area projects
- Other USACE affiliation [Scientist employed by the USACE (except as described in NAS criteria, see EC 1105-2-4 section 9d)]<sup>b</sup>
- Current or future financial interests in SNWW-related contracts/awards from USACE<sup>a</sup>
- Other possible perceived conflict of interest for consideration, e.g.,
  - Former USACE employee
  - Repeatedly served many times as USACE technical reviewer

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<sup>b</sup> Note: Battelle will be evaluating whether scientists in universities and consulting firms that are receiving USACE-funding have sufficient independence from USACE to be appropriate peer reviewers. See the OMB memo p. 18, "...when a scientist is awarded a government research grant through an investigator-initiated, peer-reviewed competition, there generally should be no question as to that scientist's ability to offer independent scientific advice to the agency on other projects. This contrasts, for example, to a situation in which a scientist has a consulting or contractual arrangement with the agency or office sponsoring a peer review. Likewise, when the agency and a researcher work together (e.g., through a cooperative agreement) to design or implement a study, there is less independence from the agency. Furthermore, if a scientist has repeatedly served as a reviewer for the same agency, some may question whether that scientist is sufficiently independent from the agency to be employed as a peer reviewer on agency-sponsored projects."

## APPENDIX D

### Draft Peer Review Conflict of Interest Inquiry

Dear (Peer Reviewer -- insert name):

You have been requested by the U.S. Army Corps of Engineers (USACE) to serve as an external peer reviewer for the Sabine-Neches Waterway (SNWW) Channel Improvement Project (CIP) Draft Feasibility Report and Draft Environmental Impact Statement. Your participation in this review will be greatly appreciated. However, it is possible that your personal affiliations and involvement in particular activities could pose a conflict of interest or create the appearance that you lack impartiality in your involvement for this peer review. Although your involvement in these activities is not necessarily grounds for exclusion from the peer review, you should consult the contact named below or other appropriate official to discuss these matters. Affiliations or activities that could potentially lead to conflicts of interest might include:

- a) current work or arrangements concerning future work in support of industries or other parties that could potentially be affected by developments or other actions based on material presented in the document (or review materials) that you have been asked to review;
- b) your personal benefit (or benefit of your employer, spouse or dependent child) from the developments or other actions based on the document (or review materials) you have been asked to review;
- c) any previous involvement you have had with the development of the document (or review materials) you have been asked to review;
- d) any financial interest held by you (or your employer, spouse or dependent child) that could be affected by your participation in this matter; and
- e) any financial relationship you have or have had with USACE such as employment, research grants, or cooperative agreements.

If you have any concerns over a potential conflict of interest, please contact Ms. Rachel Larson, Battelle, at [larsonr@battelle.org](mailto:larsonr@battelle.org), (614) 424-7317, to discuss any potential conflict of interest issues at your earliest convenience, but no later than two (2) days after receiving this request.

If you agree to be on this peer review panel, please check one of the following boxes, sign this form, and fax to Ms. Maureen Wooton, Battelle, at (614) 458-4890 no later than two (2) days after receiving this request. She may be reached with questions at (614) 424-4890 or [wootonm@battelle.org](mailto:wootonm@battelle.org).

*This form does not constitute an authorization to participate in this review; authorization for performance will come from Battelle's Government Subcontracts office.*

- I have no known existing or potential conflicts of interest associated with this task.
- I have identified and disclosed in writing all known existing or potential conflicts of interest associated with this task.

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*Signature*

*Date*

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*Printed Name*

## APPENDIX E

### Recommended External Peer Reviewers

Over 40 potential reviewers were identified as part of Task 2. Of that total, 22 external peer review candidates confirmed their interest and availability for the July timeframe for 60 hours of effort. Six other potential reviewers were contacted but did not confirm their interest/availability. Fourteen candidates were contacted and declined either due to the schedule and anticipated level of effort, or because of disclosed conflicts of interest.

Of the 22 confirmed peer reviewer candidates, the majority are academic affiliates, but there are also candidates that are independent or company-affiliated consultants. Of the 22 confirmed peer reviewer candidates, 19 submitted their hourly rate, *Curriculum Vitae*, and any potential conflicts of interest or scheduling issues.

A conference call was held on June 8 with USACE to discuss the final list of recommended reviewers. Of the proposed reviewers identified in Table 3, eight peer reviewers were selected: 1) Ken Casavant, Washington State University; 2) Dan Smith, The Tioga Group, Inc.; 3) Don Boesch, University of Maryland Center for Environmental Science; 4) Denise J. Reed, University of New Orleans; 5) John Wells, Dean of the School of Marine Science and Director of the Virginia Institute of Marine Science; 6) Billy Edge, Texas A&M University; 7) Bruce Taylor, Taylor Engineering, Inc.; and 8) Greg Baecher, University of Maryland. Of those eight, five reviewers are affiliated with academic institutions and the remaining three reviewers are company-affiliated consultants.







