

SABINE-NECHES WATERWAY CHANNEL IMPROVEMENT PROJECT, SOUTHEAST TEXAS & SOUTHWEST LOUISIANA

Civil Works Review Board (CWRB) Briefing

Galveston District

May 2010

Colonel David Weston
Commander
Galveston District



US Army Corps of Engineers
BUILDING STRONG[®]



Briefing Purpose

- Provide an overview of the Sabine-Neches Waterway Channel Improvement Project (SNWW CIP)
- Answer questions and address comments
- Obtain CWRB approval to release report for State and Agency Review
- Discuss the next steps towards the Chief of Engineers' Report



Briefing Outline

- Overview of Feasibility Study and Recommended Plan
 - ▶ Vicinity Map/Project and Study Background
 - ▶ Study Authority
 - ▶ Sponsor, Study Participants, and Project Delivery Team
 - ▶ Study Purpose
 - ▶ Vicinity Map/Study Area Description
 - ▶ Existing Project Dimensions
 - ▶ Plan Formulation
- Recommended Plan
 - ▶ Navigation Features
 - ▶ DMMP
 - ▶ Beneficial Use Plan
 - ▶ Compensatory Mitigation Plan
- Environmental Compliance
- Economic Summary
- Public Involvement
- Agency Technical Review/Independent External Peer Review
- Environmental Operating Principles
- Risk and Uncertainty/Strategic Campaign Plan
- Recommendation
- Questions?



Vicinity/Project Location



Project/Study Background

- Federal involvement in navigation improvements along the SNWW began with the River and Harbor Act (RHA) of 1885.
- On March 3, 1905, the RHA authorized the first major improvement to the waterway, the construction of a channel 9 feet deep and 100 feet wide through Sabine Lake from the mouth of the Sabine and Neches Rivers to the mouth of Taylor Bayou.
- Subsequent depths and various widths were authorized as follows:
 - ▶ 1912 – 25'
 - ▶ 1935 – 35'
 - ▶ 1946 – 36'
 - ▶ 1962 – 40'
 - ▶ USACE and the current non-Federal Sponsor have partnered for channel maintenance since 1963.
- Current Study
 - ▶ Reconnaissance Report was completed in Nov 1998
 - ▶ FCSA signed in May 2000



Study Authority

This feasibility study was conducted in response to the June 5, 1997 congressional resolution from the Committee on Environment and Public Works, House of Representatives.

The Resolution States:

“The Secretary of the Army shall review previous reports on the Sabine-Neches Waterway published as Senate Document No. 80, 83rd Congress, Second Session; House Document No. 553, 87th Congress, Second Session; and other pertinent reports to determine the feasibility of modifying the channels serving the ports of Beaumont, Port Arthur, and Orange, Texas in the interest of commercial navigation.”



Non-Federal Sponsor



- Paul Beard, Chairman, Board of Directors, Sabine Neches Navigation District (SNND)
- Randall Reese, General Manager, SNND
- Clayton Henderson, Assistant General Manager, SNND



Study Participants

- U.S. Army Corps of Engineers - Galveston
- Non-Federal Sponsor – Sabine Neches Navigation District
- Cooperating agencies for environmental review:
 - ▶ US Environmental Protection Agency
 - ▶ US Fish and Wildlife Service
 - ▶ National Marine Fisheries Service
 - ▶ Texas General Land Office
 - ▶ Louisiana Department of Wildlife and Fisheries

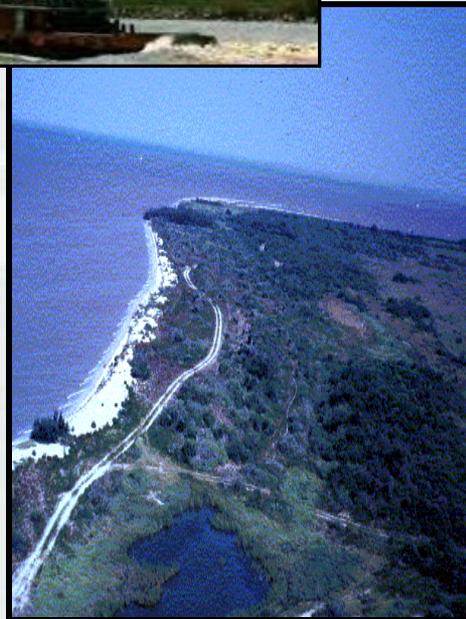


Project Delivery Team Performance

- Multidisciplinary Project Delivery Team (PDT) met monthly at minimum
 - ▶ District team included project management, planning, engineering, environmental, operations, real estate, and cost engineering
 - ▶ Non-Federal sponsor (SNND)
- PDT assisted periodically by:
 - ▶ ERDC technical experts
 - ▶ Environmental contractors
- ICT and ICT Working Groups met periodically throughout study
- DDNPCX provided ATR of two complete draft reports and other products as needed, and ATR backcheck of final documents
- Cost Engineering DX (Walla Walla District) provided ATR of cost estimates and backcheck
- SWD RIT – several progress reviews, draft report reviews (2007, 2008, 2010); bi-weekly video teleconference for last year



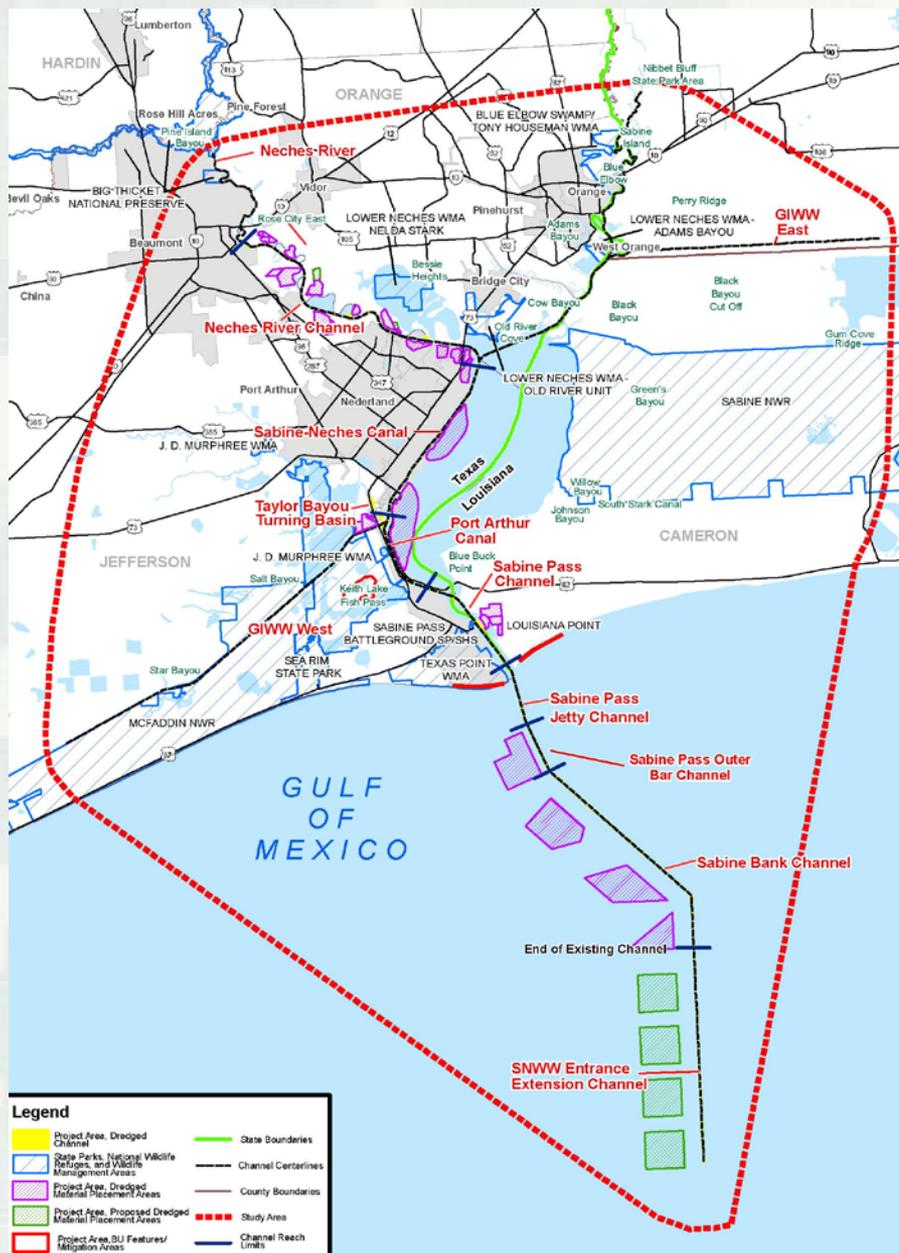
Study Purpose



- Determine feasibility of providing navigational improvements to the SNWW
- Maintain coastal and estuarine natural resources



Study Area Description



- The SNWW is an approximately 64-mile federally authorized and maintained waterway located in Jefferson and Orange counties in southeast Texas and Cameron Parish, southwest Louisiana.
- The area surrounding the waterway is generally referred to as the “Golden Triangle” and is delineated by the seaports of Port Arthur, Beaumont, and Orange, Texas.
- The Sabine Pass, Sabine Lake, and Sabine River together form part of the boundary between the states of Texas and Louisiana.
- 22 miles of the navigation channel are offshore in the Gulf of Mexico
- 4-mile long jetties protect the entrance channel, which transitions inland through Sabine Pass
- The inland 42 miles of navigation channel pass through the Sabine-Neches estuary, hugging the west side of Sabine Lake, and extending up the Neches River to Beaumont.
- The GIWW intersects the SNWW, and coincides with one part of the SNWW on the west and north sides of Sabine Lake.



SNWW Significance

- First in U.S. crude oil imports
- Fourth largest waterway in total tonnage
- Two pipeline terminals supply 55% of Nation's strategic petroleum reserves
- Port of Beaumont is Nation's busiest Strategic Port of Embarkation



Existing SNWW Project Dimensions

Channel Reach	Authorized Depth (ft)	Length (mi)
Sabine Bank Channel	42	14.7
Sabine Pass Outer Bar	42	3.4
Sabine Pass Jetty Channel	40	4.0
Sabine Pass Channel	40	5.6
Port Arthur Canal	40	6.2
Sabine-Neches Canal	40	11.3
Neches River Channel	40	18.6



Problems and Opportunities

■ Navigation and Commerce

- ▶ Existing SNWW designed for vessels with loaded drafts of 36 feet
- ▶ Larger vessels use SNWW today
- ▶ Tankers lighter before entering SNWW
- ▶ Longest deep-draft waterway in Texas
- ▶ Narrow channel reaches
- ▶ Large amounts of dredged material



Problems and Opportunities

■ Environmental

- ▶ Very large study area with complex salinity and circulation patterns
- ▶ Existing and potential increase in salinity intrusion and wetland impacts
- ▶ Need for increase in beneficial use of dredged material

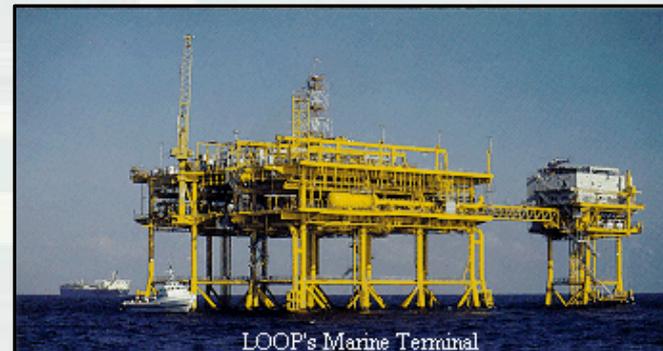
■ Economic

- ▶ Transportation efficiency



Alternatives Considered

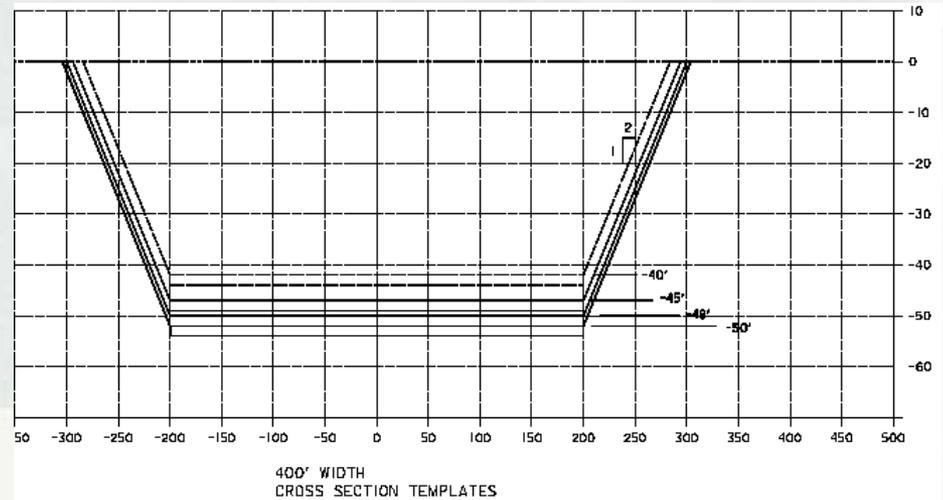
- No Action Alternative
- Nonstructural Alternatives
 - ▶ Vessel Traffic Service
 - ▶ Relaxation of Pilots Rules
 - ▶ Alternative Mode of Commodity Transport
 - Existing Louisiana Offshore Oil Port (LOOP)
 - Inactive proposal for Bulk Oil Offshore Transfer System (BOOTS)



Alternatives Considered

■ Structural Alternatives

- ▶ More than 120 combinations of different channel depths and widths
- ▶ Deepening to 43, 45, 46, 47, 48, 49, 50, 53, and 55-foot depths
- ▶ Widening from 500 to 700 feet for all depths



NED Evaluation Results

(\$1,000 of Dollars; 4.375 %; October 2009 price levels)

	Project Cost	BCR
45'	\$ 798,920	1.2
46'	\$ 889,906	1.2
47'	\$ 980,891	1.2
48'	\$ 1,071,877	1.3 (LPP - recommended)
49'	\$ 1,152,079	1.3 (NED)
50'	\$ 1,232,280	1.3



Recommended Plan Features

- Plan consists of:
 - ▶ Deepening to 48-foot channel
 - ▶ Dredged Material Management Plan
 - ▶ Beneficial Use Plan
 - ▶ Compensatory Mitigation Plan



Navigation Features



- Deepening SNWW to Beaumont to 48 feet (50 feet in offshore channels)
- Extending the Entrance Channel 13.2 miles further offshore
- Deepening and widening Taylor Bayou channels and turning basins
- Adding/enlarging 3 turning basins (TB) and/or anchorages (TBA) along Neches River Channel (TBA 1; TBA 4; and AB 8)
- Bend easing on Sabine-Neches Canal and Neches River Channel
- Bridge reinforcements



Dredging Quantity Estimates

- **New work (construction) quantity – 98 mcy**
 - ▶ 54.5 million cubic yards (mcy) from hopper dredging extension and deepening of offshore navigation channels
 - ▶ 43 mcy from hydraulic pipeline deepening of inshore navigation channels and basins
 - ▶ All unconsolidated sediments
- **Maintenance dredging quantities**
 - ▶ 50-yr total increases from 405 to 650 mcy
 - ▶ Average annual quantity increases from 8.1 mcy to 13.0 mcy
 - ▶ Average annual cost increase from \$36 to \$68 million

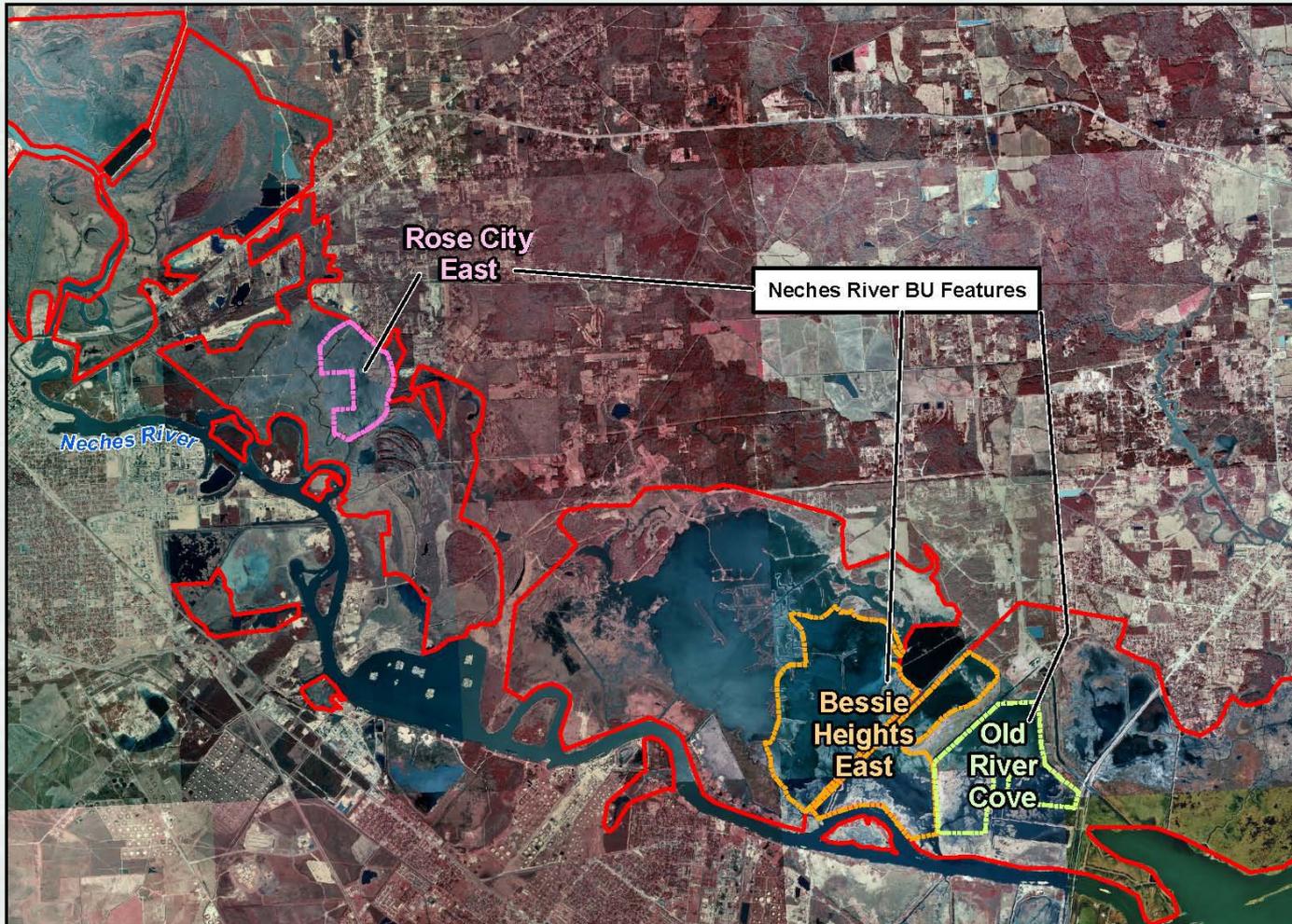


50-Yr Dredged Material Management Plan

- Offshore channels
 - ▶ 4 existing and 4 new Ocean Dredged Material Disposal Sites (ODMDS)
 - ▶ New sites to be established by EPA using ODMDS EIS prepared by USACE and approved by EPA
 - ▶ Material determined suitable for unconfined ocean disposal by EPA
 - ▶ All sites are dispersive and have unlimited future capacities
- Inshore channels
 - ▶ Regular levee lifts at 16 existing upland placement areas
 - ▶ 2 expanded upland placement areas (PA 18A and PA 24A)
 - ▶ 2 least-cost Beneficial Use (BU) features
 - Neches River BU Feature
 - Gulf Shore BU Feature



Neches River BU Feature



Bessie Heights, Neches River Channel



Oil field development



Former marsh - now eroded
and continuously inundated



Neches River BU Feature

Marsh Restoration

Rose City East

Bessie Heights East

Old River Cove

Total

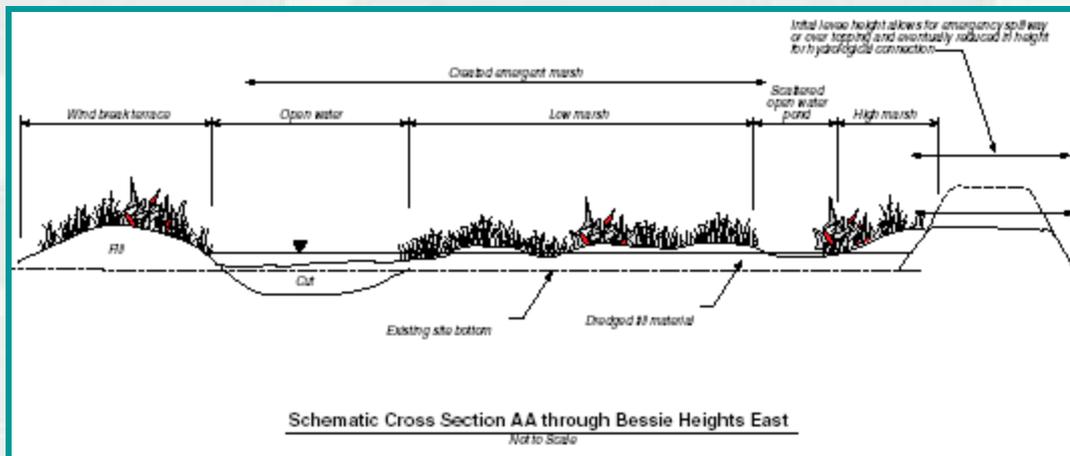
Emergent Marsh Acres

345

1,869

639

2,853



Marsh restoration using new work and maintenance material in a 30-year plan



Gulf Shoreline BU Feature – TX & LA



Gulf Shore BU Feature

- Periodic nourishment of Gulf shoreline using hydraulically dredged and placed maintenance material from Sabine Pass
- Alternating placement in Texas and Louisiana every 3-year maintenance cycle
 - ▶ Texas Point 3 mi
 - ▶ Louisiana Point 3 mi



BU Plan Benefits

- **Neches River BU Feature**
 - ▶ BU feature restores more marsh than would be lost due to all SNWW CIP project impacts in Texas
 - ▶ Contributes to sustainability of most threatened marsh system in Texas
 - ▶ Restores 53% of Texas Coastal Erosion Planning and Response Program (CEPRA) restoration target for the lower Neches River
- **Gulf Shore BU Feature**
 - ▶ Provides sediment to slow erosion in “critical erosion area” – a zone with highest shoreline loss on the upper Texas coast
 - ▶ Contributes Texas CEPRA goals by using dredged material for shore nourishment in critical erosion area
- **Benefits provided as least-cost disposal plans of the DMMP**
- **Offset all project impacts in Texas and some impacts in Louisiana**



Environmental Impact Analysis Interagency Coordination Team

- U.S. Army Corps of Engineers, Galveston District
- Sabine Neches Navigation District
- Environmental Protection Agency
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Natural Resources Conservation Service
- Texas General Land Office
- Texas Commission on Environmental Quality
- Texas Parks and Wildlife Department
- Texas Water Development Board
- Sabine River Authority of Texas
- Louisiana Department of Natural Resources
- Louisiana Department of Environmental Quality
- Louisiana Department of Wildlife and Fisheries



Primary Project Impact

An increase in salinity caused by the deeper navigation channel

Leading to

- a decrease in marsh productivity
- an increase in marsh land loss

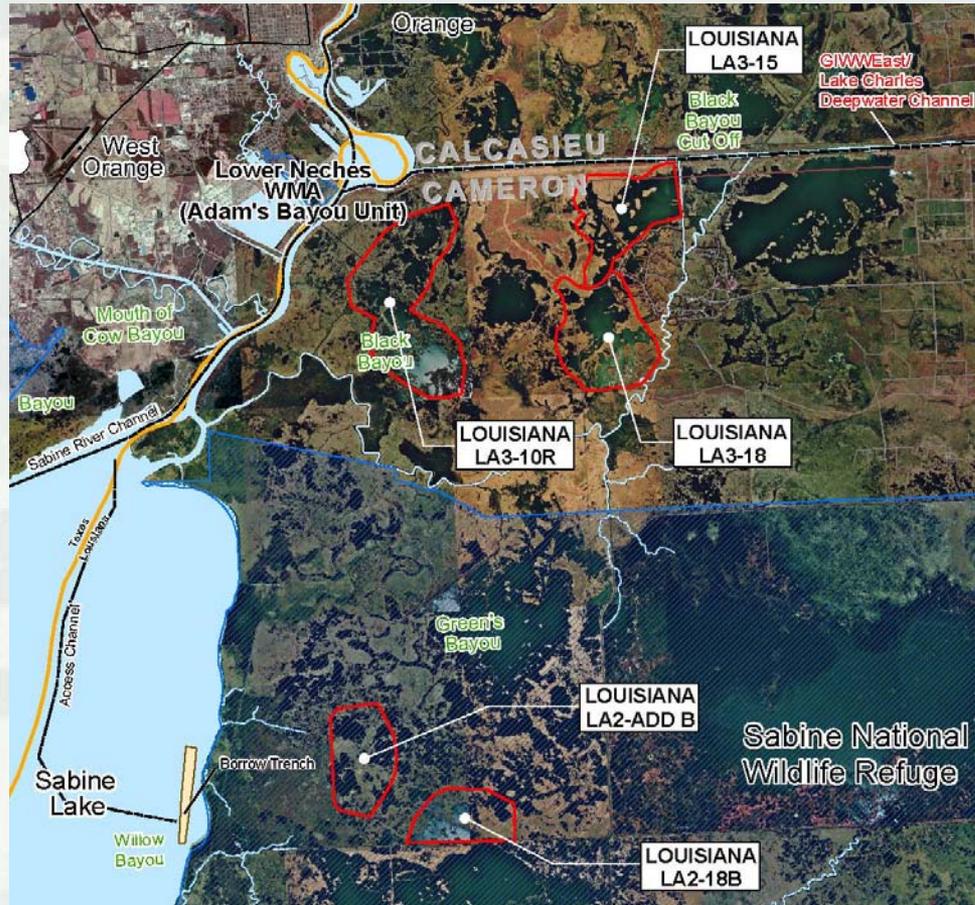


Mitigation Plan

- BU features offset all Texas impacts
- Gulf Shore BU feature offsets some LA impacts
- Unavoidable impacts in Louisiana mitigated by restoration of 5 large degraded marshes
 - ▶ 2 in Willow Bayou watershed
 - ▶ 3 in Black Bayou watershed



Mitigation Measures



Emergent Marsh
Acres Restored

Willow Bayou

- LA 2-18B 251
- LA 2-ADD B 436

Black Bayou West

- LA 3-10R 792

Black Bayou East

- LA 3-15B 683
- LA 3-18B 621

Total Acres 2,783



Environmental Compliance

- Draft Feasibility Report (DFR)/Draft EIS (DEIS) released in December 2009
- Received highest rating (lack of objections) from USEPA
- Section 7 Endangered Species Act consultation complete
- Section 401 Water Quality Certification received from TX and LA
- Historic Properties Programmatic Agreement executed with TX and LA SHPOs for Section 106 compliance



Environmental Compliance

- Coastal Zone Consistency
 - ▶ Concurrence from TX
 - ▶ Conditional Consistency proposed by LA but not accepted by USACE
- Louisiana Department of Natural Resources notified (letter dated April 26, 2010)
 - ▶ Recommended Plan is fully consistent to the maximum extent practicable with the enforceable policies of both state programs
 - ▶ We are proceeding with the project
 - ▶ No response received to date
- Recommended Plan compliant with all other applicable Federal and State regulations and pertinent Executive Orders



Estimated Costs for Recommended Plan

(October 2009 price level; 4.375% interest rate, Costs in \$1,000)

	Total First Cost	Fully Funded Cost
Construction Dredging and PAs	\$704,977	\$764,659
Fish and Wildlife Mitigation	77,491	84,109
Cultural Resources Mitigation	1,248	1,389
Lands	4,361	4,666
Engineering & Design	105,712	113,320
Construction Management	62,921	68,287
Deep-Draft Utility Relocations	1,199	1,306
Pipeline Removals	40,428	44,011
Aids to Navigation – Bridge Fender Modifications	51,794	56,179
Aids to Navigation – Channel Markers	1,492	1,618
Berthing and Dock Modifications	20,254	21,828
Total Project Cost	\$1,071,877	\$1,161,372



Cost Share for Recommended Plan

TOTAL COST (Baseline) = \$1071.9

(October 2009 price level; 4.375% interest rate, Costs in \$1,000,000)

	Federal Share	Non-Federal Share
Deep Draft Nav. from 40 – 45 ft.	\$ 566.2	\$188.3
Deep Draft Nav. from 45 – 48 ft.	\$ 125.2	\$125.2
Lands, Easements, ROW & Relocations	\$ 0	\$ 4.2
Other Fed. Costs (Aids-to-Navigation)	\$ 1.5	\$ 0
Associated Costs	\$ 0	\$ 61.3
TOTAL COSTS	\$ 692.9	\$379.0

GNF Costs - deepening between 40 and 45 feet - 75% Fed/25% non-Fed

GNF Costs - deepening below 45 feet - 50% Fed /50% non-Fed



Public Involvement

- Three scoping meetings in TX and LA 2000 and 2003
- Series of workshops in TX and LA in 2002 to identify BU opportunities
- Public meetings (one TX, one LA) 2010 on draft reports
- All comments and responses incorporated into report
 - ▶ Nearly all resource agency comments were positive
 - ▶ Local Texas governments expressed support
 - ▶ Majority of 31 public comments related to pipeline removals



Agency Technical Review

- ATR led by the DDNPCX (Mobile District) with additional reviewers in New York and Wilmington Districts
- Substantive comments recommended:
 - ▶ More in-depth evaluation of non-structural alternatives
 - ▶ Significant reorganization and updating of ODMDS DEIS
 - ▶ Evaluation of project sensitivity to storm surge impacts
- All review comments were resolved and closed
- Cost estimates reviewed and certified by the Walla Walla Cost Engineering DX on 19 Oct 2009
- Final FR/EIS ATR backcheck certified on 5 May 2010
- Model Approval of WVA ecological model received on 30 June 2009



Independent External Peer Review

- IEPR managed by DDNPCX and conducted by Battelle
- IEPR completed 13 Dec 2007, in accordance with prior EC 1165-2-209
- 18 comments (17 concurred, 1 non-concurred)
- IEPR certified 06 May 2010 with backcheck in accordance with EC 1165-2-209 completed 21 May 2010.



Independent External Peer Review

- Significant issues identified by IEPR
 - ▶ Economics – recommended additional analysis of current and future vessel fleet, design vessel recommended
 - ▶ Recommended consideration of Regional Sediment Management issues, relative sea-level rise, and storm surge
 - ▶ Recommended incorporation of risk and uncertainty into economic and environmental analysis
- Non-concurrence on moderate level comment
 - ▶ Adequacy of wave and sediment transport modeling of Gulf shoreline impacts
 - ▶ ERDC determined modeling efforts were fully defensible
- Analysis and reports revised to address all comments



Environmental Operating Principles

- **Strive for Environmental Sustainability** – Design of project features addresses potential changes over time (e.g., sea-level rise, shoreline erosion, etc.).
- **Consider Environmental Consequences** – Direct and indirect effects of the project on the environment quantified using ecological modeling and compensatory mitigation provided for all unavoidable impacts.
- **Seek Balance and Synergy** – Opportunities to beneficially use large quantities of dredged material thoroughly explored. Environmentally acceptable placement areas satisfied the project needs.
- **Accept Responsibility** – Implementation of Recommended Plan complies with all Federal and State laws and applicable Executive Orders.
- **Mitigate Impacts** – All unavoidable environmental impacts are fully compensated by mitigation plan.
- **Understand the Environment** – Knowledgeable and experienced environmental professionals in Texas and Louisiana participated in ICT. Their expertise ensured that the broad spectrum of environmental habitats of the study area were adequately understood, and the impacts accurately identified.
- **Respect Other Views** – Views of the public were solicited throughout the process. Collaboration between the USACE, Sponsor, and ICT members occurred as well.



Risk and Uncertainty

- Considered in the following analyses
 - ▶ Economic benefit calculations – numerous sensitivity analyses indicate Recommended Plan BCR is greater than 1.0 for foreseeable scenarios
 - ▶ HS Modeling – provided conservatively high estimate of project impacts to ensure full range of potential effects was considered
 - ▶ Storm surge effects – minimal risk established by sensitivity analysis of 500-year storm
 - ▶ Shoaling rates – sensitivity analysis indicated that predicted shoaling rates are conservatively high; DMMP should be sufficient for 50 years
 - ▶ Relative sea-level rise – risk to engineering features is minimal; risk to mitigation measures addressed by mitigation monitoring and contingency plan
 - ▶ Ecological modeling – risk that impacts may be greater than predicted compensated by mitigation plan that replaces 4 times the predicted marsh lost
 - ▶ Cost analysis – statistical modeling established contingency of 30-33% (greater than standard 25%)
- Risk and uncertainty communicated in FR/EIS



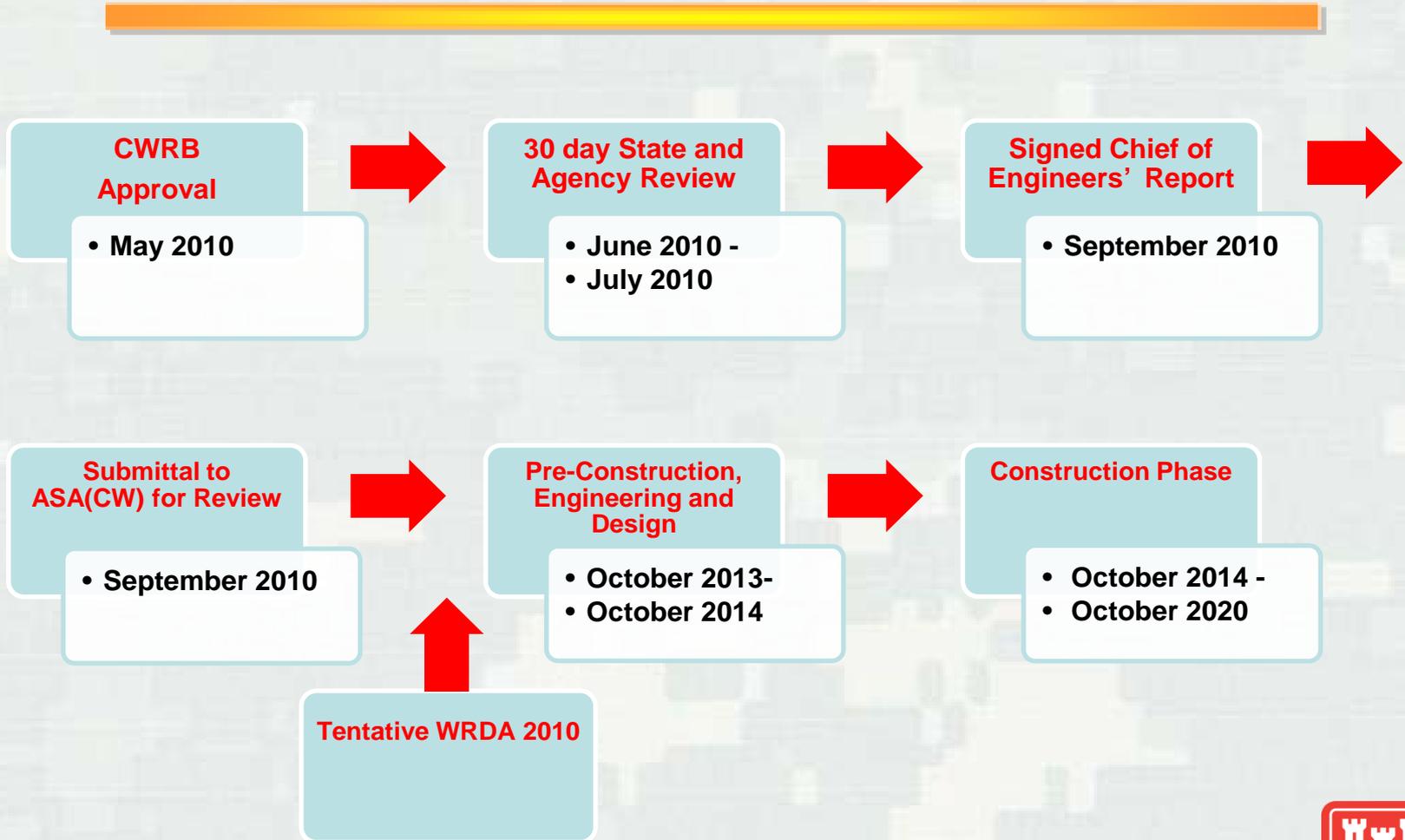
Strategic Campaign Plan

- **Goal 2: Engineering Sustainable Water Resources**
 - ▶ SNWW study analyzed potential effects over a 2,000-square-mile area, incorporating the entire Sabine-Neches watershed.
 - ▶ Dredged material placement plans were developed to beneficially use the material to the benefit of the entire system (inshore and offshore) to the greatest extent possible.
 - ▶ Close collaboration with local sponsor and ICT throughout study.

- **Goal 3: Delivering Effective, Resilient, Sustainable Solutions**
 - ▶ Developed plans to be sustainable over long-term
 - ▶ Utilized latest development in engineering, economic, and environmental modeling
 - ▶ Review and inspection of work will be conducted during design and construction
 - ▶ Project design based upon risk analyses conducted throughout study
 - ▶ Independent review of the project documents and analyses was performed internally by USACE and externally by professionals from academia and expert consultants.
 - ▶ State and Federal resource agency professionals familiar with the highly complex coastal ecosystems of Texas and Louisiana integrally involved in the evaluation and development of the Recommended Plan.



Future Timeline



Recommendation

That the Civil Works Review Board approve the release of the Sabine-Neches Waterway Channel Improvement Feasibility Report and Environmental Impact Statement for State and Agency Review.



QUESTIONS?



Non-Federal Sponsor Presentation



Sabine-Neches Waterway

Feasibility Study Review



History of Deepening SNWW

Year Completed and Depth

- 1912 – 25'
- 1922 – 30'
- 1935 – 34'
- 1946 – 36'
- 1962 – 40'
(current depth)
- **2010 – 48'**



Sabine-Neches Waterway Statistics

- **#1 U.S. Crude Tanker arrival port (MARAD)**
- Supplier of 11% of Nation's refined petroleum products (DOE)
- **Nation's 4th Largest Waterway (total trade tonnage 2007) (AAPA)**
- Holds 45% of nation's LNG import regasification capacity by 2010 (FERC)
 - Could reach 70% by 2012 if Sempra builds LNG facility
- **Supplies 2 of the nation's 5 Strategic Oil Reserves - Big Hill / Hackberry (54.6% of U.S. reserves) (DOE)**
- Supplies 20% of U.S. gasoline East of the Rockies (Martin Associates Study)
- **#1 commercial military outload port in U.S. [#2 in the world] (SDDC)**
- SNWW Industry delivers 470,000 barrels per day of refined products via pipeline to 20 states (Martin Associates Study)

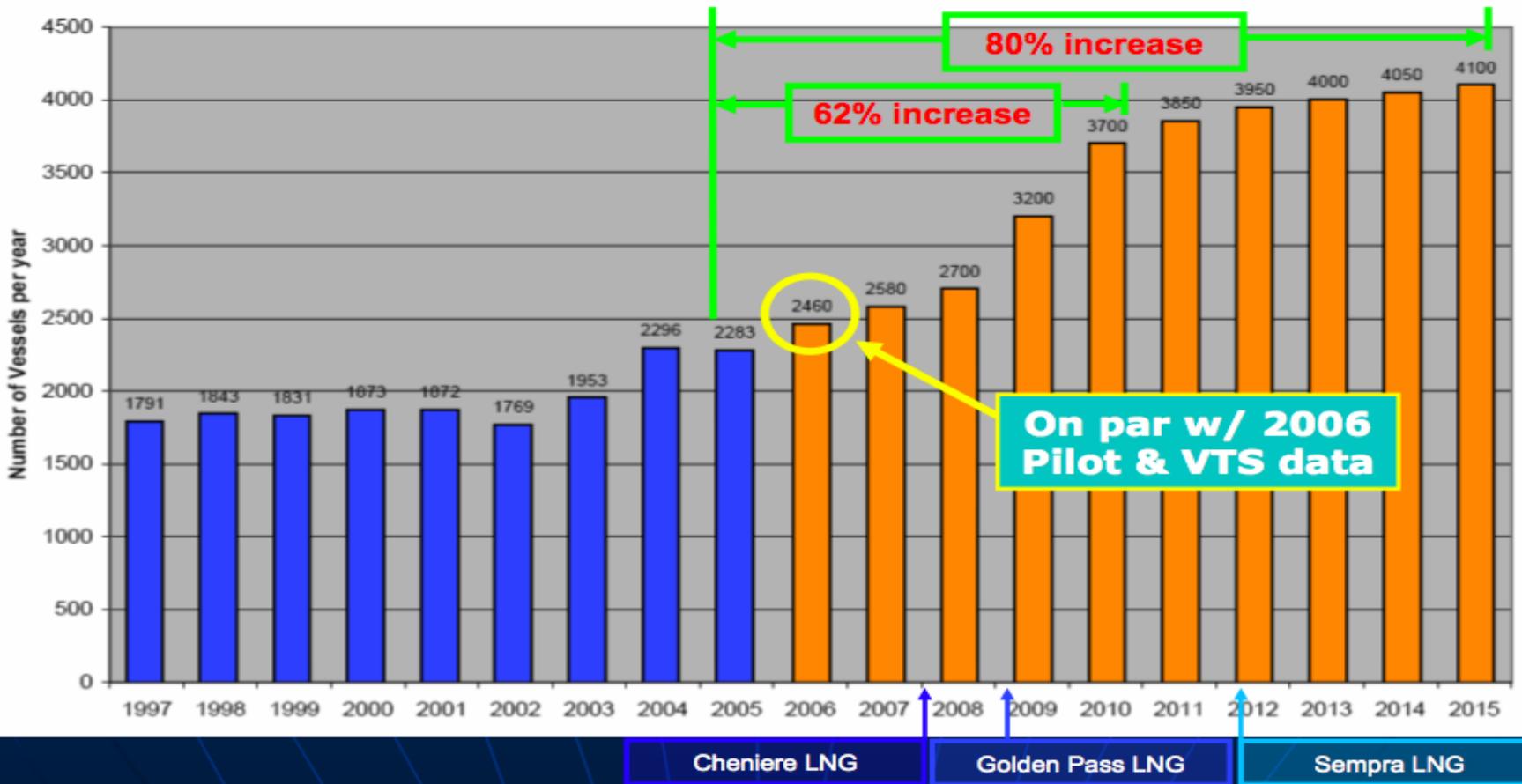
Vessel Size Increasing

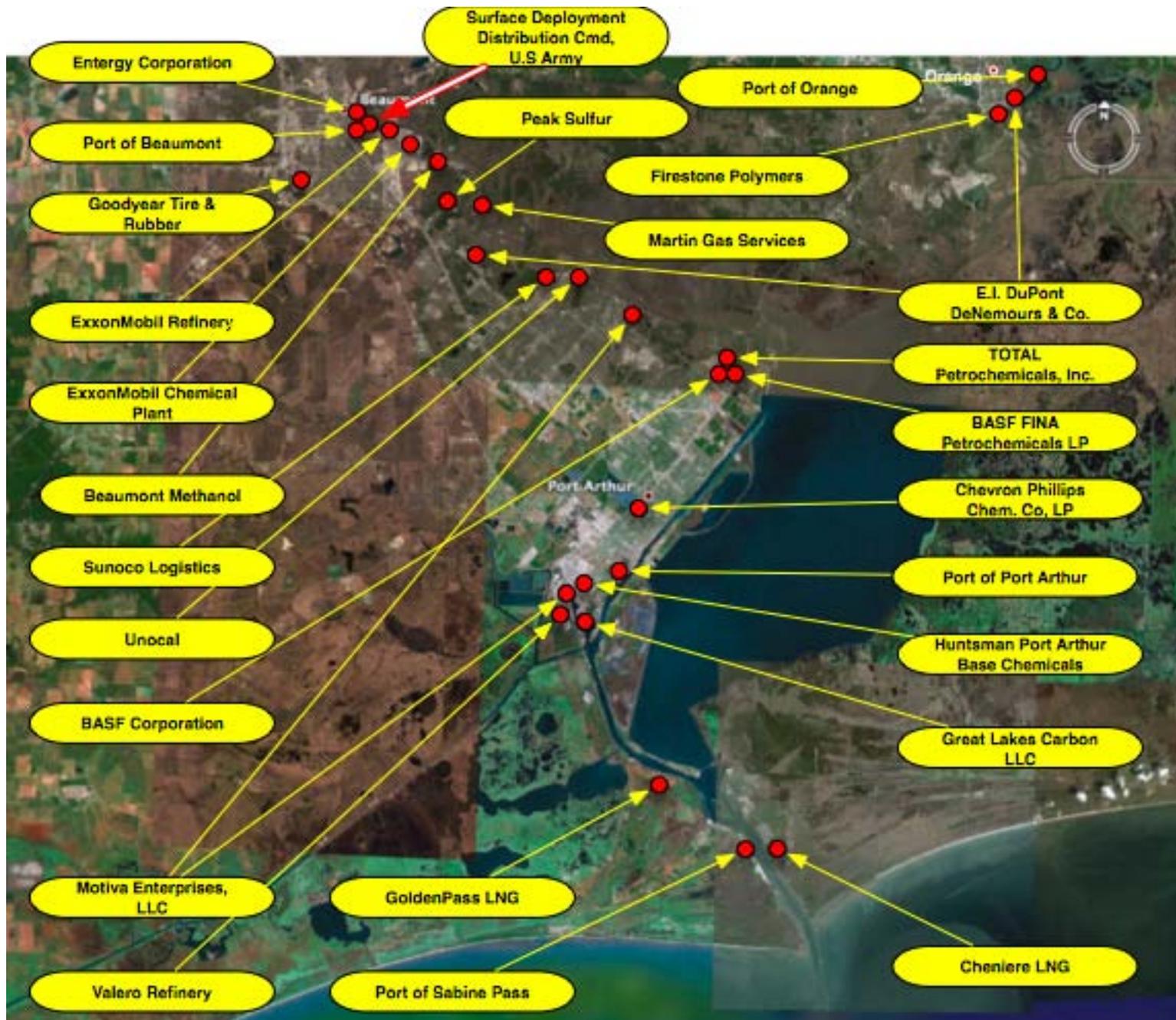
- World fleet getting bigger, draft increasing
- Double-hull required by 2015 making tankers wider
- Ships capable of >40' draft already calling on SNWW terminals
- Offshore lightering necessity increasing



Number of Inbound Vessels

Number of Inbound Vessels
Historical (1997-2005) and Projected (2006-2015)
(Not including reduction for pipeline crude oil projects)





Original Tenets of the Proposed Project

- Deepening the SNWW from the Gulf of Mexico to the Port of Beaumont *to improve transportation efficiency and navigation safety*
- Widening the Neches River Channel and the Sabine-Neches Canal to improve operational efficiency.

Purpose of Feasibility Phase

- ***Describe and evaluate alternative plans***
- ***Fully propose a recommended project.***



Feasibility Study Challenges

- Vast Complexity and Size of Project
- Escalating Cost of Project
- Multiple Technical Reviews
- Multi-State Environmental Coordination

Open Process = Solid Results

- Identify stakeholders & urge participation
- Intensive state & federal resource agency involvement
- Establish working groups and coordination teams

MSC Presentation



Sabine-Neches Waterway

- Division Position
- Quality Assurance
- Support/Recommendations
- Lessons Learned

Colonel
Anthony C. Funkhouser
Southwestern Division



Southwestern Division Position

- **Concur with Colonel Weston's brief**
- **Fully support the recommended project**
- **Successful conclusion for a complex hence lengthy study**
- **Reviews throughout the process have improved and strengthened the project**



Quality Assurance

Centers of Expertise Involvement:

- **Deep Draft PCX (PM for ATR throughout, model certification, and IEPR)**
- **Ecosystem PCX (Mitigation model review)**
- **ERDC (Hydrosalinity Modeling)**
- **Cost Estimating DX**



Quality Assurance

Division, HQ Policy Reviews, and IEPR:

FSM	May 2001
AFB	May 2007
IEPR complete	Dec 2007
Draft Report 1	May 2008
NED VTM	Mar 2009
Mitigation VTM	Jun 2009
Draft Report 2	Dec 2009
Final Report	May 2010



Rationale for SWD Support

- **District Counsel legal certification 6 May 2010**
- **Policy compliant except for question on cost sharing pipeline removals or relocations**
- **District revising backup documents to OWPR can verify or recommend change on pipeline cost sharing before final report is released**
- **Project elements and cost are same – only who pays what share will change**



Rationale for SWD Support

- **Recommended project is economically justified and environmentally compliant**
- **Project is consistent with Environmental Operating Principles**
- **Project supports Strategic Campaign Plan Goals 2 and 3**
- **Report informs project partners and public of Risk and Uncertainty**



SWD Recommendation

- **Approve report for release subject to resolution of the correct cost sharing for pipeline removals or relocations**
- **Complete Chief of Engineers Report**
- **Expected response to Draft Chief's Report – favorable from the state and agencies**



Office of Water Project Review Presentation



HQUSACE POLICY REVIEW CONCERNS Civil Works Review Board

Sabine-Neches Waterway Channel Improvement Project

Thomas Hughes
Office of Water Project Review
Planning and Policy Division
Washington, DC – 25 May 2010



US Army Corps of Engineers
BUILDING STRONG[®]

HQUSACE Team Reviews:

- FSM was held in May 2001
- AFB was held in May 2007
- Pre-release review of Draft report in June 2007
- Second Pre-release review of Draft report in June 2008
- Draft report review July 2008
- IPRs to discuss reformulation November 2008, February and June 2009
- Review of Draft report concurrent with public review December 2009
- Final Feasibility Report /EIS: current review being completed by HQUSACE team



Policy Questions from AFB and Draft Report Reviews

- ❑ Under Keel Clearance
- ❑ Dredged Material Disposal
- ❑ Incremental Analysis of Alternatives.
- ❑ Consideration of Non-structural measures
- ❑ Locally Preferred Plan
- ❑ Mitigation
- ❑ Associated costs
- ❑ Model Certification
- ❑ Over depth and advanced maintenance.
- ❑ Relocations and Removals
- ❑ Project cost allocation
- ❑ Sea Level Rise
- ❑ Forecasting FWOP environmental conditions
- ❑ FWOP Average Annual Habitat Units
- ❑ Environmental Coordination and Compliance.



Areas of Policy Concern:

- Locally Preferred Plan
- Incremental Analysis of Alternatives
- Future Without Project (FWOP) Conditions
- Impact Assessment and Mitigation Needs
- Deep Draft Utility Relocations and Removals



Locally Preferred Plan

- **CONCERN:** The selected plan is not the NED and should be identified as a Locally Preferred Plan (LPP).
- **REASON:** The NED plan is the plan the reasonably maximizes net benefits.
- **RESOLUTION:** The selected plan will be identified as the LPP and utilize the categorical exemption to the NED. The RIT has coordinated with the Assistant Secretary of the Army Civil Works (ASACW)
- **RESOLUTION IMPACT:** Concern Resolved.



Incremental Analysis of Alternatives

CONCERN: Since widening has relatively small incremental benefits it needs to be evaluated as a last added increment of the plan considering the full cost of the increment including the associated mitigation costs.

REASON: In order to identify the plan that maximizes national economic development (NED) benefits alternatives need to be evaluated based upon their incremental benefits and costs.

RESOLUTION: The widening component of the array of alternatives was evaluated as a last added increment resulting in a modified NED plan.

RESOLUTION IMPACT: Concern Resolved.



Future Without Project (FWOP) Conditions

CONCERN: Draft report did not fully document the most likely FWOP condition.

REASON: Per policy it is necessary to forecast conditions of all planning area resources relevant to the identified problems and opportunities.

RESOLUTION: Forecasts were revised to include future relative sea level rise, freshwater inflows, precipitation, and water supply such that the FWOP Condition is based upon most likely conditions. A drought scenario for the FWOP Condition was also developed for sensitivity analysis.

RESOLUTION IMPACT: Concern Resolved.



Impact Assessment & Mitigation Needs

CONCERN: The AFB document and draft report did not properly consider benefits from the dredged material management plan.

REASON: If the base plan results in ecological benefits, as in this case, these benefits need to be considered when analyzing project impacts regardless of state boundaries. Coastal Zone Management Act does not apply to Federal lands.

RESOLUTION: Report shows development of the base plan for dredged material disposal and considers benefits associated with beneficial use of dredged material in determining mitigation needs.

RESOLUTION IMPACT: Concern Resolved.



Deep Draft Utility Relocations and Removals

CONCERN: The final report identified 46 removals that may be classified as deep draft utility relocations.

REASON: The final report needs to clearly define the proper allocation of cost and responsibility.

RESOLUTION: District will provide supporting documentation justifying the determination of removals or classify the actions as deep draft utility relocations.

RESOLUTION IMPACT: Concern resolved upon Headquarters review and agreement with determination of relocations versus removal has been justified and properly supported and all necessary revisions to the report has been made.



HQUSACE POLICY COMPLIANCE REVIEW TEAM RECOMMENDATION

Approve release the DRAFT CHIEF'S REPORT – Feasibility Report and EIS for S&A Review contingent upon HQUSACE approval of the proper identification of deep draft relocations and removals.



Discussion



Lessons Learned



Galveston - Lessons Learned

- Resource Agency Coordination
 - ▶ The ICT process is effective in reaching consensus on technical issues
 - ▶ Participation of resource agencies reduces negative comments and improves the decision documents
- ERDC support
 - ▶ Provided expert technical advice and modeling tools
 - ▶ Better schedule management needed
- Managing change during the study process
 - ▶ Implement draft guidance as soon as received; don't assume you will be grandfathered or wait for implementation guidance
 - ▶ Engage the RIT for assistance in determining required implementation actions
- Allow reviews of the draft report to occur concurrently i.e. IEPR/ATR, Public and HQ Policy review
- Vertical team involvement
 - ▶ Improve vertical coordination on all aspects of policy and technical review process, especially regarding new requirements
 - ▶ Ensure that In-Progress Reviews occur throughout plan formulation
- Civil Works Review Board
 - ▶ Standardize guidance in one location
 - ▶ Update HQ website regularly



MSC - Lessons Learned

- Vertical teaming with HQ works well and we appreciate it
- Raising issues like pipeline cost sharing is better done earlier than later, but RIT should be informed/involved when any issue arises
- Reviews within USACE but outside “home” district, and external IEPR improved the outcome



Summary

