US Army
Corps of Engineers

Port of Iberia, Louisiana Navigation Project Final Feasibility Report

Civil Works Review Board Briefing

New Orleans District Presentation

April 27, 2006

Public Law 109-13

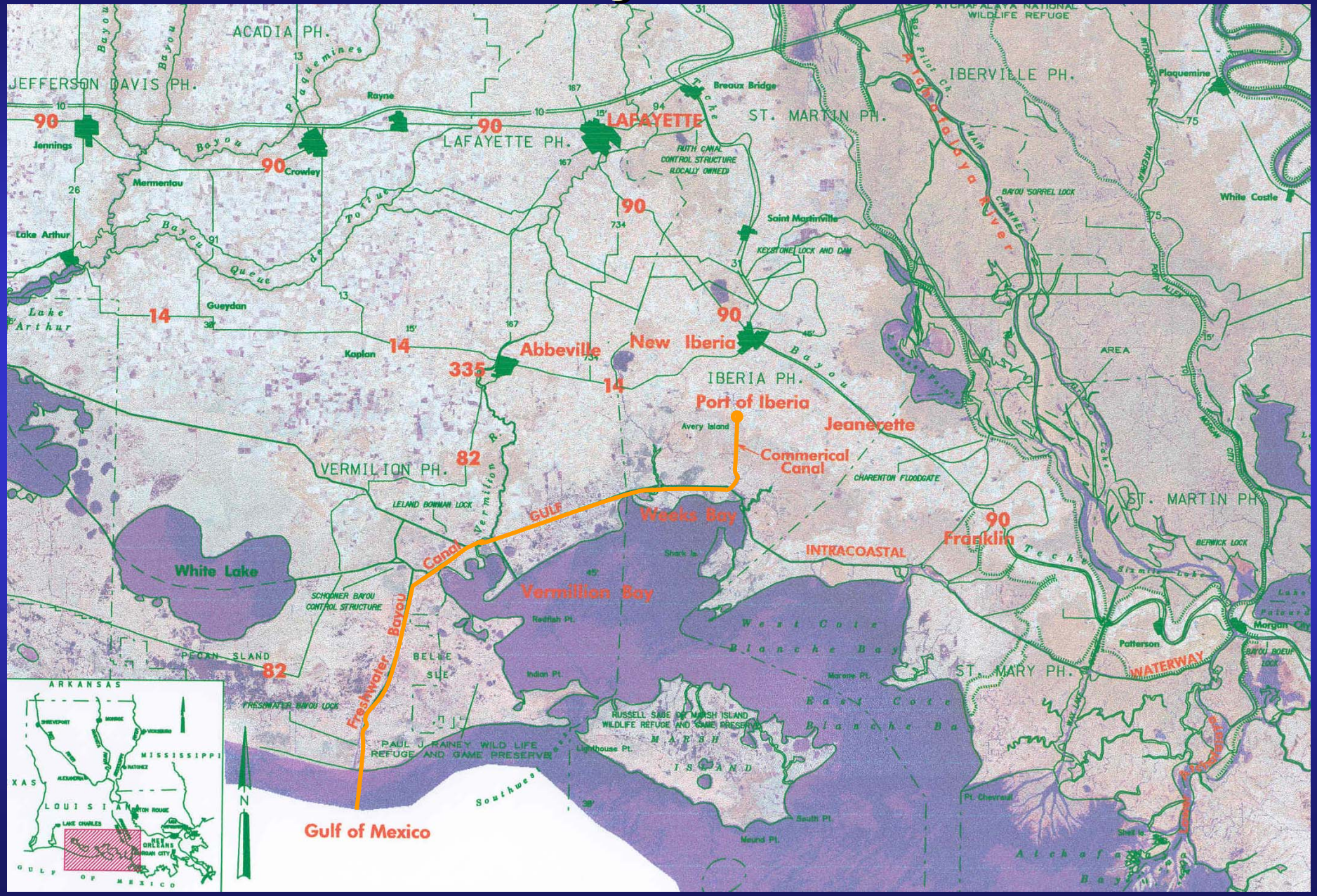
Sec. 6009. OFFSHORE OIL AND GAS FABRICATION PORTS.

In determining the In determining the economic justification for navigation projects involving offshore oil and gas fabrication ports, the Secretary of the Army, acting through the Chief of Engineers, is directed to measure and include in the National Economic Development calculation the value of future energy exploration and production fabrication contracts and transportation cost savings that would result from larger navigation channels.

CWRB Briefing Purpose

- Summarize what's happened since last CWRB (31 Oct 05)
- Summarize the ITR Comments and Resolution
- Summarize the Rationale for the Recommended Plan
- Provide Necessary Information to the CWRB for Release of the Report for State and Agency Review

Study Area


ACADIA PH.
JEFFERSON DAVIS PH.
LAFAYETTE PH.
ST. MARTIN PH.
IBERVILLE PH.
IBERIA PH.
VERMILION PH.
ST. MARTIN PH.
ST. MARY PH.
PECAN ISLAND
Jennings
Mermentau
Crowley
Rayne
Lake Arthur
Gueydan
Kaplan
LAFAYETTE
Breaux Bridge
Saint Martinville
Abbeville
New Iberia
Port of Iberia
Avery Island
Jeanerette
Franklin
Patterson
Morgan City
Plaquemine
White Castle
White Lake
Weeks Bay
Vermillion Bay
Commerical Canal
Freshwater Bayou
Gulf of Mexico
INTRACOASTAL
WATERWAY
RUTH CANAL CONTROL STRUCTURE (LOCALLY OWNED)
KEYSTONE LOCK AND DAM
BAYOU SORREL LOCK
CHARENTON FLOODGATE
LELAND BOWMAN LOCK
SCHOONER BAYOU CONTROL STRUCTURE
FRESHWATER BAYOU LOCK
BERWICK LOCK
BAYOU BOEUF LOCK
PAUL J. RAINEY WILD LIFE REFUGE AND GAME PRESERVE
RUSSELL SAGE OR MARSH ISLAND WILDLIFE REFUGE AND GAME PRESERVE
ATCHAFALAYA NATIONAL WILDLIFE REFUGE
ARKANSAS
MISSISSIPPI
LOUISIANA
GULF OF MEXICO
N

What's Happened Since 31 Oct 05

- Final Feasibility Report presented to CWRB 31 Oct 05
- The review process identified six unresolved issues preventing completion of policy, technical and legal certification
- Result was to wait to file final report until we have reasonably resolved remaining issues to produce more credible and defendable final report, in early 2006

What's Happened Since 31 Oct 05

- Vertical team identified 11 tasks to resolve the 6 outstanding issues:
  - Market Share
    - Determine whether other fabricators could compete in the market
    - Interview oil and gas companies to determine viability of port and likelihood of future topside market going to port
    - Complete scenario analysis
  - Weight of Contracts
    - Review and attempt to provide additional detail on Infield data
    - Identify size of rigs and weights through reanalysis of Infield data/additional data sources
    - Identify and net out benefits for topsides that could be moved under both with and without project conditions
  - Immersion and Design Vessel
    - Find more barges with similar characteristics to design vessel so that ballasting, payload, and center of gravity issues can be explored
  - Transportation Benefits
    - Verify type and draft requirements of ocean going vessels by contacting port and users for more information
  - Use of Advanced Maintenance and Overdepth for Developing Benefits
    - Develop more information on existing practices for Port competitors – determine competitors vessel loading practices; identify how competitors use portion of channel reserved for advanced maintenance for over depth dredging
  - Waiver on Development of a Tow Simulation Model
    - Develop and conduct desktop study to establish basis for waiver of tow simulation model
    - Coordination with ERDC during desktop study

What's Happened Since 31 Oct 05

- Nov 05 thru Mar 06:
  - Vertical Team engaged for ~11 conference calls
  - 2 IPR meetings
    - 13 Feb 06
    - 10 Mar 06
  - 27 Feb 06 - Revised report went to ITR (Mobile District)
  - 7 Mar 06 - ITR comments complete in Dr. Checks
  - 30 Mar 06 - received ITR certification and legal certification
  - 5 Apr 06 - Final Feasibility Report package mailed to DIV and HQ

ITR Comments

Mar 06 ITR generated 27 comments, categorized below:

- Market Share Issue: 3 Comments
- Weight of Contracts Issue: 8 Comments
- Immersion and Design Vessel Issue: 4 Comments
- Not Directly Related to Key Issues: 12 Comments

ITR Comment Resolution

- **Market Share**

  The oil and gas companies were re-interviewed and additional gulf coast topside fabricators. A list of criteria used in the awarding of fabrication contracts was identified. This list of criteria was incorporated in a scenario analysis to determine a range of POI market share possibilities and associated benefits for alternative with-project channel depths.

- **Weight of Contracts**

  Additional data was acquired on four types of topsides and their associated average fabricated weights. Fabricated weight is the tons of the topsides from the perspective of the fabricator. It includes the steel components of the main structures (decks) and piping. Total shipping weight includes the weight of installed equipment such as pumps, living quarters, helipads, etc. Depending on the type of topside the shipping weight could range from 15,000 tons to 6,000 tons corresponding to a range of channel depths from 20 ft to 16 ft.

- **Immersion and Design Vessel**

  Additional information on the type and availability of barges that would be used in the with-project condition was obtained from industry sources.

ITR Comment Resolution

- **Transportation Benefits**

  Of the many firms that are residents of the POI, several companies indicated that a deeper channel would reduce the cost of transporting their commodities or reduce the transportation cost of their service vessels, however, this information could not be substantiated and therefore this benefit category has been excluded from this analysis.

- **Use of Advanced Maintenance and Overdepth for Developing Benefits**

  This issue was eliminated during a conference call on 15 November 2005 since MVN's analysis did not include these benefits.

- **Waiver on Development of a Tow Simulation Model**

  ERDC performed a site visit, conducted a desktop study, submitted a final report, and concurred with the request for a waiver. HQ granted the waiver request on 9 February 2006.

Rationale for Recommended Plan

Average Annual Net Benefits
(5.125 interest rate, thousands of dollars)

Scenario	Infield GOM Market		MMS High GOM Market		MMS Low GOM Market	
Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition
16 Foot Channel	3,274	1,599	11,678	9,026	2,974	1,334
18 Foot Channel	2,982	1,530	12,200	9,902	2,653	1,232
20 Foot Channel	4,702	1,965	16,167	11,835	4,292	1,613
20 Percent EPC						
16 Foot Channel	371	-969	7,081	4,959	131	-1,181
18 Foot Channel	302	-1,373	7,957	5,304	29	-1,612
20 Foot Channel	793	-1,441	9,978	6,442	465	-1,722
50 Percent Integration						
16 Foot Channel	-634	-1,751	5,489	3,721	-853	-1,946
18 Foot Channel	-1,485	-2,825	5,127	3,006	-1,721	-3,033
20 Foot Channel	-2,334	-3,898	5,027	2,552	-2,597	-4,128
Staging						
16 Foot Channel	-2,198	-3,147	3,014	1,511	-2,384	-3,313
18 Foot Channel	-3,048	-4,221	2,652	795	-3,252	-4,400
20 Foot Channel	-3,898	-5,293	2,552	342	-4,128	-5,495

Note: The market share effects are sequential and cumulative rather than independent of each other.

Rationale for Recommended Plan

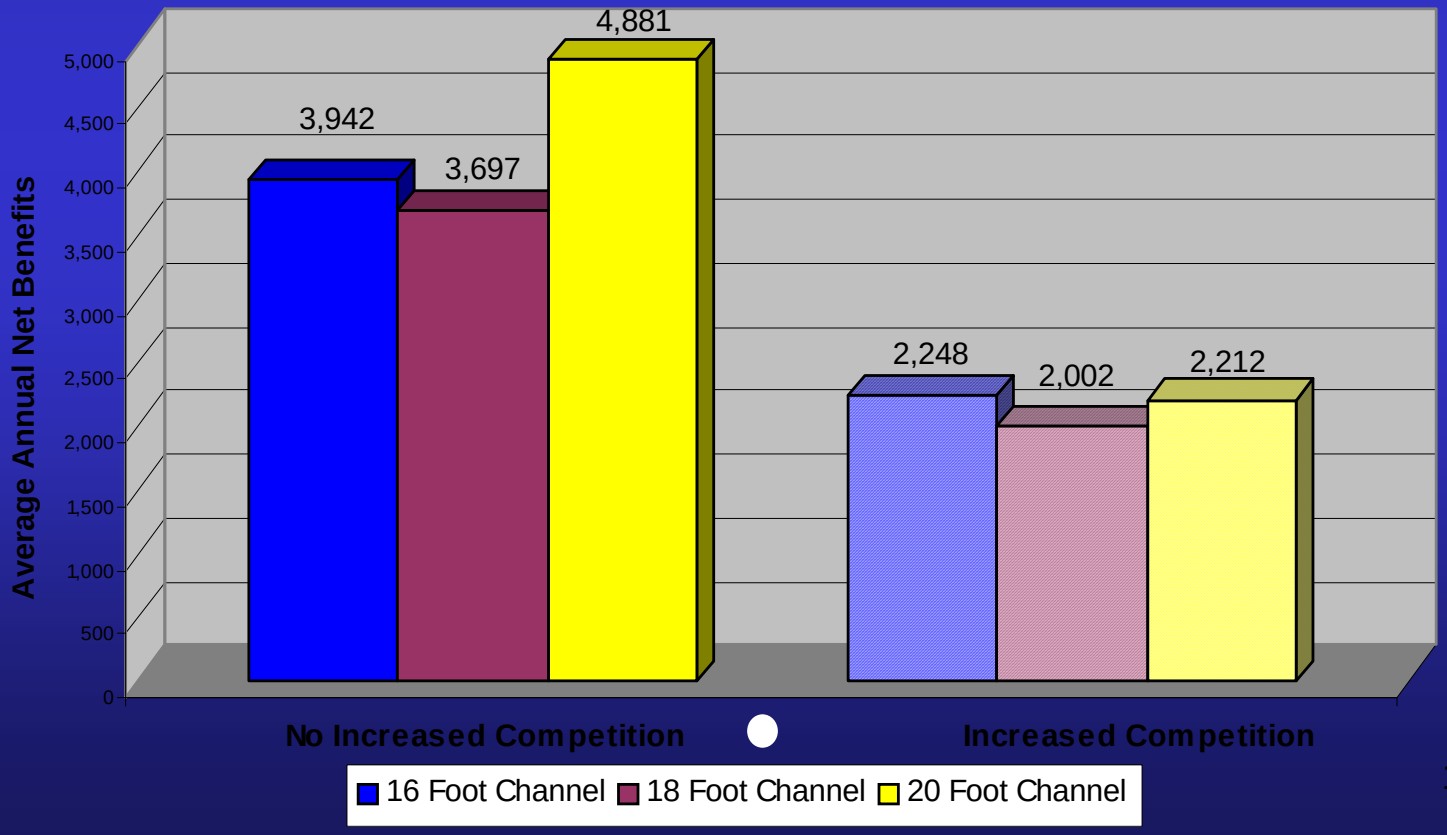
Average Annual Net Benefits
AVERAGE OF INFIELD & MMS HIGH GOM MARKET
(5.125 interest rate, thousands of dollars)

Scenario Competition	No Increased Competition	Increased Competition
16 Foot Channel	7,476	5,313
18 Foot Channel	7,591	5,716
20 Foot Channel	10,435	6,900
20 Percent EPC		
16 Foot Channel	3,726	1,995
18 Foot Channel	4,130	1,966
20 Foot Channel	5,386	2,500
50 Percent Integration		
16 Foot Channel	2,428	985
18 Foot Channel	1,821	91
20 Foot Channel	1,347	-673
Staging		
16 Foot Channel	408	-818
18 Foot Channel	-198	-1,713
20 Foot Channel	-673	-2,476

Note: The market share effects are sequential and cumulative rather than independent of each other.

Rationale for Recommended Plan

Average Annual Net Benefits
AVERAGE OF HIGHEST & LOWEST POI MARKET SHARE SCENARIO
(COMPETITION-STAGING)
With Average Infield & MMS High GOM Market
(5.125 Interest Rate, Thousands of Dollars



Rationale for Recommended Plan

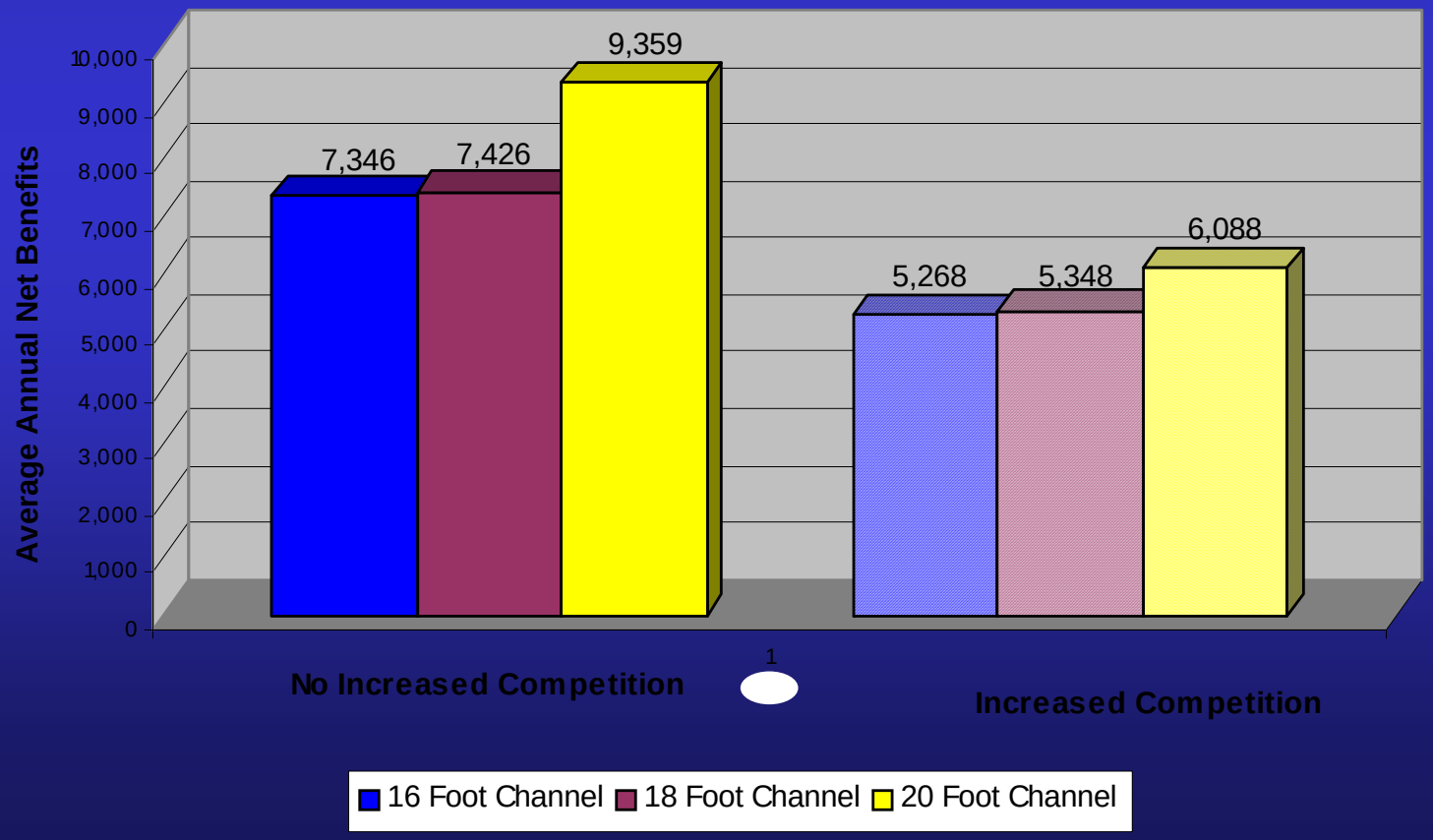
Average Annual Net Benefits
AVERAGE OF NO INCREASED & INCREASED COMPETITION SCENARIO

With Average of Infield & MMS High GOM Market
(5.125 interest rate, thousands of dollars)

Scenario **Competition-Staging**	Mid-Point of No Increased & Increased Competition
16 Foot Channel	3,095
18 Foot Channel	2,850
20 Foot Channel	3,547

Rationale for Recommended Plan

Average Annual Net Benefits
AVERAGE OF HIGHEST & LOWEST POI MARKET SHARE SCENARIO
(COMPETITION-STAGING)
With MMS High GOM Market
(5.125 Interest Rate, Thousands of Dollars)



Rationale for Recommended Plan

Average Annual Net Benefits

AVERAGE OF NO INCREASED & INCREASED COMPETITION SCENARIO

WITH MMS HIGH GOM MARKET

(5.125 interest rate, thousands of dollars)

Scenario **Competition-Staging**	Mid-Point of No Increased & Increased Competition
16 Foot Channel	6,307
18 Foot Channel	6,387
20 Foot Channel	7,724

Recommended Plan

Based on the directive language in Section 6009 of P.L. 109-13 and the feasibility study completed, my recommendation is to increase the project dimensions of several channels from the Port of Iberia, LA to the Gulf of Mexico, to 20-feet deep by 150-feet wide.

Recommended Plan

- The Recommended Plan has a benefit-to-cost ratio of 1.5 to 1 and includes modifying about 60 miles of Commercial Canal, GIWW and Freshwater Bayou to a depth of 20-feet and width of 150-feet.

- Most dredge disposal would be confined to rock dikes built along the inshore channels. Any excess material would be used to replenish broken marsh adjacent to these channels, as practicable.

Recommended Plan

Project Construction:

- Federal Share $133.5 million
- Non-Fed Share $48.0 million
- Pipeline Owners $21.5 million
  - Relocation of pipelines (Removals)

- Estimated Total $203 million

Recommended Plan

Average Annual Benefits and Costs
20-foot Channel
($1,000)

Costs	
Total Annual Cost	16,021
Benefits	
Total Annual Benefits - Deepwater Fabrication	23,746
Net Benefits	7,724
BCR	1.5

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Questions

Presentation
to the

CIVIL WORKS REVIEW BOARD

Port of Iberia, Louisiana

Feasibility Study

By

Michael B. Rogers

Mississippi Valley Division

April 27, 2006

US Army Corps of Engineers®

Rationale for MVD Support

- Concur with MVN Commander's findings and recommendations
- Report complies with all applicable policies and laws in place at this time
- Anticipate a favorable response to the draft Chief's Report
- Plan supported by sponsor, the State of Louisiana and the congressional delegation

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Certification of Legal and Policy Compliance

- Legal certification by MVN Counsel on 30 March2006
- Technical and policy compliance:
  - CESAM performed the ITR
  - All ITR comments resolved
  - SAM ITR Team certified on 30 March 2006

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MVD Quality Assurance Activities

- MVD reviewed ITR comments/responses to ensure appropriate resolution
- Active participation by vertical team
- Worked with MVN and non-Federal Sponsor to resolve HQ review comments
- MVN certified that project is technically, legally, and policy compliant
- MVD concurs that project is technically, legally, and policy compliant

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MVD Recommendation

- Approve Final Feasibility Report
- Release report for State and Agency Review
- Complete Chief's Report to meet contingent authorization requirements

Civil Works Review Board

Significant Policy Review Concerns

Port of Iberia, Louisiana Final Feasibility Report & EIS April 2006

Steve Cone
Office of Water Project Review
Planning and Policy Division

Washington, DC – April 27, 2006

Port of Iberia, Louisiana Feasibility Rpt & EIS

- Background of OWPR Involvement
- Current Concerns
- OWPR Recommendation

Background of OWPR Involvement December 2005 - April 2006

- Teleconferences and IPRs to keep team engaged as new information became available and interim tasks were completed.
- Additional data for Scenario Analysis
  - Necessary to corroborate market share, topside value and weight assumptions
- Additional research of Design Vessel
  - Necessary to corroborate vessel capacity and availability assumptions

Issues Resolution Plan Status April 2006

- Market Share Verification/ Scenario Analysis <u>OPEN</u>
- Weight of Topsides/ Value of Contracts <u>RESOLVED</u>
- Immersion and Design Vessel <u>RESOLVED</u>
- Transportation Benefits <u>RESOLVED</u>
  - Removed from the analysis as unverifiable
- Use of Advanced Maintenance and Over Depth for Developing Benefits <u>RESOLVED</u>
- Waiver on Development of a Tow Simulation Model <u>RESOLVED</u>

Policy Review Concerns from Feb06 Draft

- Scenario Analysis and Plan Selection
- No NED Benefits per P&G
- Responses to Letters on Public Review Draft

Scenario Analysis and Plan Selection

Concern: The report does not make a clear and convincing case that the 20-ft channel plan should be recommended as the plan with the greatest net benefits.

Reason: The report presents 24 scenarios. However, there is only a 40% chance that 20' channel has max net benefits and a 60% chance that any plan is justified on the basis of Congressionally-mandated benefits.

Resolution: Not Resolved.

Impact: Affects selection of an NED plan and cost-sharing recommendation.

Market Share Scenarios

- Both POI firms compete
- Topside forecasts developed by Infield (Most Probable) and MMS (High and Low)
- Increased Competition from Other Fabricators (US and Foreign) or Existing Suppliers Only
- Four Performance Options
  - Fully Competitive
  - Contracts
  - Integration
  - Staging

POI Average Annual Net Benefits ($000)

	Infield		MMS High		MMS Low	
Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition
16 Foot Channel	$3,274	$1,599	$11,678	$9,026	$2,974	$1,334
18 Foot Channel	$2,982	$1,530	$12,200	$9,902	$2,653	$1,232
20 Foot Channel	$4,702	$1,965	$16,167	$11,835	$4,292	$1,613
20 Percent EPC						
16 Foot Channel	$371	($969)	$7,081	$4,959	$131	($1,181)
18 Foot Channel	$302	($1,373)	$7,957	$5,304	$29	($1,612)
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50 Percent Integration						
16 Foot Channel	($634)	($1,751)	$5,489	$3,721	($853)	($1,946)
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20 Foot Channel	($2,334)	($3,898)	$5,027	$2,552	($2,597)	($4,128)
Staging						
16 Foot Channel	($2,198)	($3,147)	$3,014	$1,511	($2,384)	($3,313)
18 Foot Channel	($3,048)	($4,221)	$2,652	$795	($3,252)	($4,400)
20 Foot Channel	($3,898)	($5,293)	$2,552	$342	($4,128)	($5,495)

POI Benefit-Cost Ratios

	Infield		MMS High		MMS Low	
Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition	No Increased Competition	Increased Competition
16 Foot Channel	1.27	1.13	1.96	1.74	1.24	1.11
18 Foot Channel	1.21	1.11	1.88	1.71	1.19	1.09
20 Foot Channel	1.29	1.12	2.01	1.74	1.27	1.10
20 Percent EPC						
16 Foot Channel	1.03	0.92	1.58	1.41	1.01	0.90
18 Foot Channel	1.02	0.90	1.57	1.38	1.00	0.88
20 Foot Channel	1.05	0.91	1.62	1.40	1.03	0.89
50 Percent Integration						
16 Foot Channel	0.95	0.86	1.45	1.31	0.93	0.84
18 Foot Channel	0.89	0.80	1.37	1.22	0.88	0.78
20 Foot Channel	0.85	0.76	1.31	1.16	0.84	0.74
Staging						
16 Foot Channel	0.82	0.74	1.25	1.12	0.80	0.73
18 Foot Channel	0.78	0.70	1.19	1.06	0.77	0.68
20 Foot Channel	0.76	0.67	1.16	1.02	0.74	0.66

No NED Plan in Accordance with P&G

Concern: The Main Report states only summarily that the proposed project would accrue no NED benefits as prescribed by the P&G.

Reason: This information needs to be made more prominent in the report and stated clearly in the Executive Summary so that the information is fully revealed to potentially interested parties, stakeholders and decision makers.

Resolution: Resolved.

Responses to Letters on Public Review Draft

Concern: Some of the District responses to public comments were lacking in detail.

Reason: Final report approval is contingent on resolution of outstanding public comments. Inadequate responses will not fully address the concerns or close the issue.

Resolution: Generally resolved. Still needs some adjustments.

New Issues on Apr06 Report

- Benefits Attributed to 20-ft Channel Plan
- Cost-Sharing
- Recommendation for Authorization
- Work-In-Kind Credit

Benefits Attributed to 20-ft Channel Plan

Concern: Benefits attributed to the 20-ft channel plan are overstated

Reason: The 20-ft channel plan is predicated on one forecast occurrence over the 50-year period of analysis of a single barge moving a 15,000-ton topside unit. The same topside could be shipped unassembled on two barges on a 16-ft channel.

Resolution: Given that the movement could occur, albeit at a higher transportation cost, on the 16-ft channel, the presentation of benefits by alternative should be revised. Contract value benefits for the 15,000-ton topside could accrue with a 16-ft channel. Accordingly, the 20-ft channel plan benefits would represent the transportation cost savings from using one barge only.

Impact: Affects cost-sharing. The 20′ channel plan would be considered a LPP with 100% non-Federal responsibility for all costs above the 16′ channel plan.

POI Apportionment of Project Costs ($000)

	16' Channel Plan				20' Channel Plan			
	Federal	Non-Federal	Other 1/	Total	Federal	Non-Federal	Other 1/	Total
Total GNF During Construction	$105,726	$11,747	$0	$117,473	$148,304	$16,478	$0	$164,782
LERR (for GNF)								
Total LERR	$0	$1,613	$0	$1,613	$0	$1,613	$0	$1,613
10% of GNF 2/	($10,134)	$10,134	$0		($14,865)	$14,865	$0	
Total Cost-Shared	$95,591	$23,495	$0	$119,086	$133,439	$32,956	$0	$166,395
LSF	$0	$14,912		$14,912	$0	$14,912		$14,912
Removals	$0	$0	$21,537	$21,537	$0	$0	$21,537	$21,537
Total Project Costs	$95,591	$38,407	$21,537	$155,535	$133,439	$47,868	$21,537	$202,844

1/ Pipelines and underground utility lines owners

2/ Less Credit for LERR

POI LPP Estimated Cost Apportionment ($000)

	Federal	Non-Federal	Other	Project Cos
NED Plan	$95,591	$23,495		
Local Service Facilities		$14,912		
Removals			$21,537	
Cost-Sharing Totals	$95,591	$38,407	$21,537	$155,535
LPP				$202,844
NED Plan Cost				$155,535
LPP - NED is 100% Non-Federal				$47,309
LPP				
Federal Share	$95,591			
Non-Federal Share		$85,716		
Removals			$21,537	
Cost-Sharing Totals	$95,591	$85,716	$21,537	$202,844

OWPR Recommendation

Do <u>not</u> initiate S&A Review

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MVD
Lessons Learned

- Early and continued involvement of the vertical team in the planning effort
- Critical ITR and policy review comments were unresolved during review of draft
- Local sponsors and users are an important resource in resolving technical or policy issues and should be involved early in the comment resolution process.