Proposal Name: J. Bennett Johnston Waterway Navigation Project; Old River Lock to Shreveport, Louisiana; 12 foot channel authorization
Submission Date: 09/16/2016
Proposal ID Number: 98501cca-8ab9-4602-ab0b-883918e5101a

Purpose of Proposal: The purpose of this project is to increase the depth of the navigation channel of the J. Bennett Johnston Waterway from 9 feet to 12 feet. The Corps is mandated to maintain the channel of the JBJ from the Mississippi River to Shreveport, Louisiana to a 9 foot depth and 200 foot width. The Red River Waterway Commission is requesting a modification to the existing project to authorize the navigation channel to a 12 foot depth and to maintain the existing authorized 200 foot width. This change would allow the Red River to be authorized at the same depth as adjoining waterways. An authorized 12 foot depth, as are the adjacent waterways, would reduce the waterborne rates to the industries, which is a national benefit. The Corps mission for the JBJ project was 78% Navigation, 14% Soil and Water Conservation, and 8% Recreation. This project clearly fulfills the Corps mission to maintain waterways for navigation and will have benefits extending into both soil and water conservation and recreation. The Red River Waterway Commission had contracted the Shaw Group to conduct a reconnaissance study for the proposed project modification. The attached study determined that a 12 foot channel project would provide a 4.6:1 benefit to cost ratio.
1. Administrative Details

Proposal Name: J. Bennett Johnston Waterway Navigation Project; Old River Lock to Shreveport, Louisiana; 12 foot channel authorization
by Agency: Red River Waterway Commission, P.O. Box 776 Hwy 1 By-Pass, Natchitoches, Louisiana 71458, Phone 1-800-874-9431
Locations: LA
Date Submitted: 09/16/2016
Confirmation Number: 98501cca-8ab9-4602-ab0b-883918e5101a

Supporting Documents

<table>
<thead>
<tr>
<th>File Name</th>
<th>Date Uploaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRWC Primary Sponsor.pdf</td>
<td>09/16/2016</td>
</tr>
<tr>
<td>2016 12 Ft Study Submission Documents.pdf</td>
<td>09/16/2016</td>
</tr>
<tr>
<td>JBJ MAP.pdf</td>
<td>09/16/2016</td>
</tr>
<tr>
<td>2016 12 Ft Study Submission Documents.pdf</td>
<td>09/16/2016</td>
</tr>
</tbody>
</table>
2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Letter of Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red River Waterway Commission (Primary)</td>
<td>The Red River Waterway Commission is requesting a project modification to the federal authorized project J. Bennett Johnston Waterway (JBJ) to change the authorized channel depth from 9 feet to 12 feet and maintain the existing width of 200 feet. The authorization would allow the J. Bennett Johnston Waterway to be authorized to the same depth as adjacent waterways in the navigation system; Mississippi River, Arkansas River, Atchafalaya River and Intracoastal Waterway. The J. Bennett Johnston Waterway is a navigation project connecting 236 Miles of the Red River to the Mississippi River with five navigation locks and dams providing the necessary lift of approximately 141 feet. This system has allowed for the development of 4 public ports and several private terminals that have attracted investments over $9.9 Billion in inflation adjusted dollars through 2013, and created over 10,000 jobs in the region. In addition to navigation, the RRWC has created and maintained 20 recreation areas along the Waterway. The majority of inbound cargo shipments are in bulk materials used for power plant fuel, construction, agriculture and oil &amp; gas industries. Outbound cargo is primarily refined petroleum destined for New Orleans, Baton Rouge, and Houston. An initiative to growing the tonnage volume on the Red River is to increase the capacity per shipment that a 12 foot channel would provide. Currently barges are short loaded, three quarters full, to travel at a 9 foot draft. A 12 foot draft would carry one-third more material than the 9 foot draft at a predicted cost increase of only 10%. It is clear that the Ports and related industries would greatly benefit from the availability of a 12 foot channel on the J. Bennett Johnston Waterway. The Red River Waterway Commission is fully prepared to provide a letter of intent to move forward on an evaluation of the requested modification and to fund the local cost share for both the evaluation and construction.</td>
</tr>
</tbody>
</table>

3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.

[x] Modification to an Authorized USACE Project : J Bennett Johnston Waterway
4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.

The purpose of this project is to increase the depth of the navigation channel of the J. Bennett Johnston Waterway from 9 feet to 12 feet. The Corps is mandated to maintain the channel of the JBJ from the Mississippi River to Shreveport, Louisiana to a 9 foot depth and 200 foot width. The Red River Waterway Commission is requesting a modification to the existing project to authorize the navigation channel to a 12 foot depth and to maintain the existing authorized 200 foot width. This change would allow the Red River to be authorized at the same depth as adjoining waterways. An authorized 12 foot depth, as are the adjacent waterways, would reduce the waterborne rates to the industries, which is a national benefit. The Corps mission for the JBJ project was 78% Navigation, 14% Soil and Water Conservation, and 8% Recreation. This project clearly fulfills the Corps mission to maintain waterways for navigation and will have benefits extending into both soil and water conservation and recreation. The Red River Waterway Commission had contracted the Shaw Group to conduct a reconnaissance study for the proposed project modification. The attached study determined that a 12 foot channel project would provide a 4.6:1 benefit to cost ratio.
5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-
Federal share of those costs, of the proposed study and, separately, an estimate of the cost of
construction or modification.

<table>
<thead>
<tr>
<th></th>
<th>Federal</th>
<th>Non-Federal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Construction</td>
<td>$12,000,000</td>
<td>$0</td>
<td>$12,000,000</td>
</tr>
</tbody>
</table>

Explanation (if necessary)

The attached study considered four alternatives, see pages 15 and 16. The most desirable option was for a 12 foot channel, 200 foot wide at the surface, but to allow the sides to slope. This would lose a maximum of 24 feet, resulting in a minimum bottom width of 176 feet. This will reduce the initial construction cost and annual maintenance dredging. After analysis of the Waterway it was determined that over 90 percent of the navigation channel is greater than 12 foot naturally or due to the existing navigation structures (dikes & revetments). The main areas of current dredging is at the lock approaches and below Lock 1, where there is no pool and is impacted by the Mississippi River. The five lock chambers are able to take a 12 foot draft with no modifications. The RRWC reconnaissance study indicates that approximately $12,000,000 would be required for first cost construction dredging. Under the original local sponsor cost share agreement the RRWC was only responsible for all lands, easements, and rights of ways required for construction and subsequent maintenance of the project. Therefore we do not anticipate a local cost share requirement for the modification. However, the RRWC is prepared to contribute to any local sponsor cost share that may arise.
6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.

The J. Bennett Johnston Waterway is a navigation project with a channel depth of 9 foot and width of 200 foot connecting the Mississippi River to the Red River and ending in Shreveport, Louisiana. Vessels are currently moving on the Waterway with barges light loaded to only a draft of 9 feet. By increasing the depth of the channel to 12 feet, a barge would be able to add 1/3 more capacity or 500 tons per barge. The typical tow on the waterway has 6 barges. Loading the barges to 12 feet increases the tonnage from 9,000 tons to 12,000 tons; therefore a 6 barge tow loaded to 12 feet will be transporting cargo equivalent to an 8 barge tow. An important consideration is that the same tow and crew would be used, reducing the rate per ton. Estimated cost savings would be between, $1.50 to $4.50 per ton. The reconnaissance study prepared for the Red River Waterway Commission determined a benefit to cost ratio of 4.6 to 1. The reduction in rates, water compelled rates, will also provide greater competition for long haul rail. Reduced rates will provide an incentive for industries to move from rail to water, or provide greater leverage to negotiate lower rail, transportation rates; which is a national benefit. Another benefit to the project would be increased flood storage in the river that would protect human life and property. We do not believe there would be any impact to the ecosystem by increasing the depth of the channel.
7. Does local support exist? If ‘Yes’, describe the local support for the proposal.

[x] Yes

Local Support Description

The Red River Waterway Commission (RRWC), project local sponsor, is requesting a Project modification to the federal authorized project (J. Bennett Johnston Waterway) for the Corps to change the depth of the navigation channel to 12 feet and width of 200 feet. The authorization would allow the J. Bennett Johnston Waterway to be authorized to the same depth as adjacent waterways in the navigation system.

The J. Bennett Johnston Waterway is a navigation project connecting 236 Miles of the Red River to the Mississippi River with five navigation locks with usable dimensions of 84-feet wide by 705-feet long to provide the necessary lift of approximately 141 feet. The locks can accommodate a standard 6-barge tow and towboat in a single lockage. This system has allowed for the development of 4 public ports and several private ports that has attracted over 9.9 Billion inflation adjusted dollars through 2013, and created over 10,000 jobs in the region. The majority of cargo movements on the Red River are inbound shipments in bulk materials used for power plant fuel, construction, agriculture, and oil & gas. Outbound cargo is primarily refined petroleum destined for New Orleans, Baton Rouge, and Houston. A key to growing the tonnage volume on the Red River is to increase the capacity per shipment on each barge that a 12 foot channel would allow. Currently barges are short loaded, three quarters full, to travel at a 9 foot draft. A 12 foot draft would carry one-third more material than the 9 foot draft at a predicted cost increase of only 10%. This would provide a great cost savings to the industries using the waterway. It is clear that the Ports and related industries would greatly benefit from the availability of a 12 foot channel along the J. Bennett Johnston Waterway. The improved capacity and efficiency, reduced costs, and the potential for more economic development would lead to an increase in trade and economic activity along the entire waterway.

8. Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?

[x] Yes
Primary Sponsor Letter of Support

(As uploaded)
September 15, 2016

TP: U.S Army Corps of Engineers

RE: J. Bennett Johnston Waterway, 12’ Channel Project Modification

The Red River Waterway Commission (RRWC), project local sponsor, is requesting a Project modification to the federal authorized project (J. Bennett Johnston Waterway) for the Corps to change the depth of the navigation channel to 12 feet and width of 200 feet. The authorization would allow the J. Bennett Johnston Waterway to be authorized to the same depth as adjacent waterways in the navigation system.

The J. Bennett Johnston Waterway is a navigation project connecting 236 Miles of the Red River to the Mississippi River with five navigation locks with usable dimensions of 84-feet wide by 705-feet long to provide the necessary lift of approximately 141 feet. The locks can accommodate a standard 6-barge tow and towboat in a single lockage. This system has allowed for the development of 4 public ports and several private ports that has attracted over 9.9 Billion inflation adjusted dollars through 2013, and created over 10,000 jobs in the region. In addition to navigation the RRWC has also created and maintained 20 recreation areas along the Red River. With the navigable access to the river and recreational areas the Red River has become a top choice for businesses, visitors and major sporting events like the 2009 and 2012 Bassmaster Classic and the 2013 FLW Forest L. Wood Cup.

The majority of cargo movements on the Red River are inbound shipments in bulk materials used for power plant fuel, construction, agriculture, and oil & gas. Outbound cargo is primarily refined petroleum destined for New Orleans, Baton Rouge, and Houston. A key to growing the tonnage volume on the Red River is to increase the capacity per shipment on each barge that a 12 foot channel would allow. Currently barges are short loaded, three quarters full, to travel at a 9 foot draft. A 12 foot draft would carry one-third more material than the 9 foot draft at a predicted cost increase of only 10%. This would provide a great cost savings to the
industries using the waterway. It is clear that the Ports and related industries would greatly benefit from the availability of a 12 foot channel along the J. Bennet Johnston Waterway. The improved capacity and efficiency, reduced costs, and the potential for more economic development would lead to an increase in trade and economic activity along the entire waterway. The Red River Waterway Commission is fully prepared to provide a letter of intent to move forward on the project modification and any local sponsor cost associated.

Sincerely;

Ken Guidry
Executive Director
Additional Proposal Information

(This is as uploaded, a blank page will show if nothing was submitted)
2016 12 Ft Study Submission Documents.pdf
September 15, 2016

TP: U.S Army Corps of Engineers

RE: J. Bennett Johnston Waterway, 12’ Channel Project Modification

The Red River Waterway Commission (RRWC), project local sponsor, is requesting a Project modification to the federal authorized project (J. Bennett Johnston Waterway) for the Corps to change the depth of the navigation channel to 12 feet and width of 200 feet. The authorization would allow the J. Bennett Johnston Waterway to be authorized to the same depth as adjacent waterways in the navigation system.

The J. Bennett Johnston Waterway is a navigation project connecting 236 Miles of the Red River to the Mississippi River with five navigation locks with usable dimensions of 84-feet wide by 705-feet long to provide the necessary lift of approximately 141 feet. The locks can accommodate a standard 6-barge tow and towboat in a single lockage. This system has allowed for the development of 4 public ports and several private ports that has attracted over 9.9 Billion inflation adjusted dollars through 2013, and created over 10,000 jobs in the region. In addition to navigation the RRWC has also created and maintained 20 recreation areas along the Red River. With the navigable access to the river and recreational areas the Red River has become a top choice for businesses, visitors and major sporting events like the 2009 and 2012 Bassmaster Classic and the 2013 FLW Forest L. Wood Cup.

The majority of cargo movements on the Red River are inbound shipments in bulk materials used for power plant fuel, construction, agriculture, and oil & gas. Outbound cargo is primarily refined petroleum destined for New Orleans, Baton Rouge, and Houston. A key to growing the tonnage volume on the Red River is to increase the capacity per shipment on each barge that a 12 foot channel would allow. Currently barges are short loaded, three quarters full, to travel at a 9 foot draft. A 12 foot draft would carry one-third more material than the 9 foot draft at a predicted cost increase of only 10%. This would provide a great cost savings to the
industries using the waterway. It is clear that the Ports and related industries would greatly benefit from the availability of a 12 foot channel along the J. Bennet Johnston Waterway. The improved capacity and efficiency, reduced costs, and the potential for more economic development would lead to an increase in trade and economic activity along the entire waterway. The Red River Waterway Commission is fully prepared to provide a letter of intent to move forward on the project modification and any local sponsor cost associated.

Sincerely;

Ken Guidry
Executive Director
Red River Waterway Commission
Initial Investigation Study

Deeping the J. Bennett Johnston Waterway Project
From 9 FT. Navigability to 12 FT.
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
for
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

prepared for the
Red River Waterway Commission
5941 Highway 1 Bypass
Natchitoches, Louisiana 71458

for delivery to the
U. S. Army Corps of Engineers
Vicksburg District
August 2010
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
for
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

TABLE OF CONTENTS

PREFACE ....................................................................................................................... iv

I. STUDY AUTHORITY ........................................................................................ 1

II. STUDY PURPOSE .......................................................................................... 2

III. LOCATION OF PROJECT AND CONGRESSIONAL DISTRICT .............. 2

IV. PRIOR REPORTS AND EXISTING PROJECTS ......................................... 3

V. PLAN FORMULATION ..................................................................................... 7
   A. Identification of Problems and Opportunities .......................................... 7
       1. Existing Conditions on the Red River ......................................... 7
          a. Operations
          b. Existing Environmental Setting
       2. Expected Future Conditions............................................................... 10
       3. Concise Statement of Specific Problems and Opportunities
          with Emphasis on Problems Warranting Federal Participation in the Feasibility Study ........................................... 12
   B. Formulation of Alternative Plans.............................................................. 14
   C. Preliminary Evaluation of Alternatives ................................................... 14
       1. Comparison of Effects of Alternative Plans ....................................... 14
       2. Selected Alternative—The Recommended Alternative for Benefit-Cost Analysis ...................................................... 15
TABLE OF CONTENTS (cont’d)

D. Benefit-Cost Analysis of Selected Alternative ....................................... 17
   1. Benefits of the Channel Deepening Plan .................................... 17
      a. Identify Commodity Types
      b. Identify the Study Area
      c. Determine Current Commodity Flow
      d. Determine Current Cost of Waterway Use
      e. Determine the Current Cost of Alternative Movement
      f. Forecast Potential Waterway Traffic by Commodity
      g. Determine Future Cost of Alternative Mode
      h. Determine Cost of Waterway Use
      i. Determine Waterway Use With and Without the Project
      j. Compute NED Benefits
   2. Construction Cost of the Channel Deepening Plan ...................... 21
   3. Operational and Maintenance Cost of the Channel
      Deepening Plan ............................................................................ 23
   4. Environmental Aspects of the Channel Deepening Plan ............. 24
   5. Summary of the Analysis of the Channel Deepening Plan .......... 24

VI. FEDERAL INTEREST ........................................................................................ 26

VII. PRELIMINARY FINANCIAL ANALYSIS ....................................................... 26
    A. Future Cost Sharing Considerations and the PMP .......... 26
    B. Feasibility Study and the Feasibility Cost Sharing Agreement .......... 28

VIII. SUMMARY OF FEASIBILITY STUDY ASSUMPTIONS ......................... 30

IX. FEASIBILITY PHASE MILESTONES ........................................................ 31

X. FEASIBILITY PHASE COST ESTIMATE .................................................... 31
    A. Preliminary Feasibility Cost Estimate Based on Pre-PMP Estimates .... 31
    B. Preliminary Cost Share Apportionment ........................................ 32

XI. RECOMMENDATIONS ............................................................................. 33

XII. POTENTIAL ISSUES AFFECTING INITIATION OF THE FEASIBILITY PHASE ................................................................. 34

XIII. VIEWS FROM OTHER RESOURCE AGENCIES .................................. 34

XIV. PROJECT AREA MAP ........................................................................... 34
EXHIBITS and ATTACHMENTS

EXHIBITS

Exhibit 1. J. Bennett Johnston Waterway Project Map .................................................. 3
Exhibit 2. Study Area Map ............................................................................................ 4
Exhibit 3. Channel and Dredging Plan and Section Summary Graphic ......................... 13
Exhibit 4. Section View of Alternatives 3 and 4 ......................................................... 16
Exhibit 5. Summary of Benefit-Cost Analysis ............................................................... 25
Exhibit 6. Pre-PMP Feasibility Cost Estimate ............................................................. 32
Exhibit 7. Preliminary Cost Share Apportionment ....................................................... 33

ATTACHMENTS

Attachment A. Cargo Estimates by Cargo Type, Provider, and O&D ......................... A.1
Attachment B. Estimation of Benefits without Project (9 ft. Navigation Channel) ....... A.2
Attachment C. Estimation of Benefits with Project (12 ft. Navigation Channel)......... A.3
Attachment D. RRWC Letter of Intent to Participate in Feasibility Study ............... A.4
PREFACE

This initial investigation of the Reconnaissance Study addressing deepening the J. Bennett Johnston Waterway project is modeled after the U.S. Army Corps of Engineers (USACE) Planning Guidance Handbook (Regulation 1105-2-100, 22 April 2000) and Section 905(b) of the Water Resources and Development Act of 1986. The Section 905(b) outline provided as Exhibit G-2 in the Planning Guidance Handbook was followed. This version of the reconnaissance report, i.e., the initial investigation, was prepared under the auspices of the Red River Waterway Commission and provided to the USACE Vicksburg District for further review and analysis.

The intent of this report is to provide logically based 905(b) required information to the Red River Waterway Commission, the USACE, stakeholders, and Louisiana’s congressional delegation. The objective is to provide data defining the federal interest, denoting economic justification, and identifying potential environmental impacts.

The Commission purpose is threefold: (1) to obtain a congressional appropriation to deepen the J. Bennett Johnston Waterway section of the Red River between Old River and Shreveport, (2) to facilitate congressional authorization and appropriations to fund the deepening of the waterway to 12 ft. navigability, and (3) to ensure federal authorization and appropriations to maintain the 12 ft. channel of the Red River waterway within the jurisdiction of the Red River Waterway Commission.

This report will be submitted to the U.S. Army Corps of Engineers Vicksburg District (MVK) upon its completion and acceptance by the Red River Waterway Commission. Because the report was prepared with assistance from the Vicksburg District but not by the Vicksburg District, matters relative to construction activity that may be required beyond dredging only (e.g., construction that may be determined in the later feasibility phase) and associated costs may require additional in-house detail by the Vicksburg District.
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
FOR
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

I. STUDY AUTHORITY
This initial investigation report was prepared in response to a resolution adopted by the Red River Waterway Commission (RRWC or Commission) dated May 20, 2009. This study was funded by the Commission with professional services assistance provided by Shaw Environmental and Infrastructure, Inc., Baton Rouge, Louisiana.

The report is offered by the Commission to the U.S. Army Corps of Engineers (USACE or Corps) to clearly define benefits to the economy of the United States that will be generated by the deepening the Red River from 9 ft. to 12 ft., to identify potential construction and operations and maintenance costs that may be incurred therein, and to assist in defining the Project Management Plan for determining the scope and cost of a feasibility study to address the proposed project in detail.

On June 28, 2006, following resolution was adopted by the Committee on Transportation and Infrastructure, U. S. House of Representatives, Washington, D. C.

RESOLUTION
Docket 2756
J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana

Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Red River Below Denison Dam, Arkansas, Louisiana, Oklahoma, and Texas, published as House Document no. 304, 90th Congress, 2nd Session, and any other pertinent reports to determine whether modifications to the recommendations contained therein are advisable at the present time in the interest of providing a 12-foot navigation channel, ecosystem restoration, bank stabilization, flood damage reduction and related purposes on the J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana.
II. STUDY PURPOSE

The purpose of this investigation as a precursor to a USACE reconnaissance study is intended to determine whether a federal interest exists in participating in a cost shared feasibility study documenting the economic benefits of deepening the J. Bennett Johnston section of the Red River in Louisiana from a navigable depth of 9 ft. to a depth of 12 ft. To accomplish this purpose, this work follows a reconnaissance report format which is aligned with procedures in accordance with the general procedures and guidelines set forth in the U. S. Army Corps of Engineers (USACE) rules and regulations and the Water Resources and Development Act of 1986 (WRDA), specifically section 905(b) of that act.

The Reconnaissance Study was initiated in June 2009 by the Red River Waterway Commission, Natchitoches, Louisiana, and has resulted in the finding that there is a federal interest in continuing the study into the feasibility phase. The analysis presented herein documents the basis for this finding and establishes the general scope of the feasibility phase. This assessment can be used in determining the scope of the Project Management Plan that presents the reconnaissance overview and formulation rationale.

The primary objective of study is to evaluate the anticipated costs and benefits of deepening the Red River between Old River and Shreveport as a means of determining federal interest, in this case economic interest while maintaining the environmental integrity of the river corridor. The findings of this 905(b) assessment support the Red River Water Commission and the USACE in proceeding with a Feasibility Study in accordance with normal Corps procedures or following a WRDA Section 203 approach if approved by the Assistant Secretary of the Army (Civil Works).

III. LOCATION OF PROJECT AND CONGRESSIONAL DISTRICT

The study area is the navigable portion of the Red River in Louisiana which extends from Shreveport and flows in a generally southeastward direction to the Lower Old River in Avoyelles Parish through or along the following Louisiana parishes: Caddo, Bossier, Red River, Winn, Natchitoches, Grant, Rapides, Avoyelles, Catahoula and Concordia. Major rivers within the watershed include the Ouachita and Black Rivers.

This segment of the Red River, also known as the J. Bennett Johnston Waterway Project (JBJWP), is approximately 236 miles in length. Along the waterway are the cities of Shreveport, Bossier City, Coushatta, Natchitoches, Colfax, and Alexandria. At Old River, the Red River becomes the Atchafalaya River which flows into the Wax Lake Outlet and also Atchafalaya Bay south of Morgan City. The study area is within the jurisdiction of the U. S. Army Corps of Engineers Vicksburg District (MVK).

The study area lies within Louisiana Congressional Districts 4 and 5. A graphic depiction of the J. Bennett Johnson Waterway Project and the study area are noted in Exhibits 1 and 2 respectively. As noted, the non-federal sponsor for the feasibility phase of the study is the Red River Waterway Commission.
IV. PRIOR REPORTS AND EXISTING PROJECTS

According to information obtained from the U. S. Army Corps of Engineers Vicksburg District, in its first documented attempt to improve navigation on the Red River, Congress authorized the Red River below Fulton, Arkansas Project in the River and Harbor Act, July 13, 1892. The project provided for improvements from Fulton to the Atchafalaya River by systematic clearing of banks, snagging, dredging shoals, building levees, closing outlets, revetting caving banks, and preventing injurious cutoffs. No channel dimensions were specified.

Congress modified the project in 1946 by authorization of the Overton-Red River Waterway. This project led to the construction of a 9 ft. deep by 100-ft. wide navigation channel from the Mississippi River via Old and Red Rivers for a channel from the Mississippi River and a turning basin on Bayou Pierre near Shreveport. Overall, the authorization called for 9 locks 56 ft. by 650 ft., a pumping plant, drainage structures, and appurtenances.
Exhibit 2. J. Bennett Johnston Waterway Project Location Map

Legend:
- Red River Waterway District Parishes
- Non-RRDC Parishes on Red River
- Parishes outside study area
- National Forests (State)
- Lock and Dam
- Port
- Recreation Area
- Historic Site
- City
- Town
- Village
- Census Delineated Place (CDP)

Red River Waterway
Water
Red River Waterway Construction Ports Association

REFERENCE
Red River Waterway Commission, Ports Association of Louisiana, USACE Vicksburg District GIS
In 1950, Congress modified the Red River below Fulton Project to provide a channel 9 ft. deep by 100 ft. wide from the exit point of the Overton Red River Waterway at Mile 31 to the mouth of the Black River at mile 35.5 in connection with the modification of the 9 ft. by 100 ft. Ouachita-Black River Project from the mouth of the Black River to Camden, Arkansas.

The River and Harbor Act of 1968 modified these and other prior projects in authorizing the present day waterway. Details of the authorized plan, consisting of four distinct reaches, were included in House Document 304, 90th Congress, 2nd Session. Design of the project began in fiscal year (FY) 1969. In FY73, construction funds were first authorized and project construction began. The navigation channel opened in 1994. In the FY97 Energy and Water Development Appropriation Act, Public Law 104-206, the Mississippi River to Shreveport reach of the overall Red River Waterway Project was renamed the J. Bennett Johnston Waterway.

Previous projects and reports by the USACE relative to the Red River and 12-ft. navigability include but are not limited to the following:

Projects:
- J. Bennett Johnston Waterway, Mississippi River to Shreveport, LA (Formerly Red River Waterway, Mississippi River to Shreveport, LA)
- Ouachita-Black Navigation Project, Red River to Camden, AR
- Red River Emergency Bank Protection, AR, LA, OK, and TX
- Red River Below Denison Dam, AR, LA, and TX
- Red River Waterway, Shreveport, LA to Daingerfield, TX

Studies:
- Red River Navigation, Southwest Arkansas, AR and LA

The Red River Waterway District and its respective Commission was created by the Louisiana legislature in 1965 to sponsor and oversee the Red River navigation project. The navigation project, maintained by the U.S. Army Corps of Engineers (USACE or Corps), today consists of a 9 ft. deep by 200 ft. wide navigation channel that extends approximately 236 miles from Shreveport to Lower Old River and the beginning of the Atchafalaya River. Red River Mile Post 0 is located at the junction of the Red and Mississippi Rivers east of the Old River Lock. Atchafalaya River Mile Post 0 is located at approximately Mile Post 6.9 of the Red River at the junction of Lower Old River and Red River.

The Commission is charged with providing for recreational, social, and economic development along the Red River. To that end, the Commission, in cooperation with the USACE, has constructed 19 recreation areas along the river as well as at the five Corps lock and dam sites.
The Commission has also provided substantial assistance to the four Red River ports that harbor industry along the river. To facilitate social and economic development, the Red River Waterway District levies an *ad valorem* tax from seven parishes within its jurisdiction. Revenue distribution from the *ad valorem* tax is legislatively mandated and currently distributed into construction funds (65%) and operations and maintenance funds (35%). Prior to 2009, this distribution was set as 75% for construction and 25% for operations and maintenance.

According to a May 2007 economic impact study contracted by the Commission entitled *J. Bennett Johnston Waterway Project, 1968-2007: The First 40 Years*, RRWC projects, along with the original navigation project, have generated $4.6 billion in new construction investment, $8.4 billion in new business sales, and an estimated $58.2 million in new sales taxes for the local governments. Inclusive of benefits accrued from the initial federal investment, for every $1 in local taxes paid, taxpayers in the Red River Waterway District received $19 in spending attracted to the area (construction), $35 in new sales (purchases), and $11 in household earnings (jobs).

In late 2007, the Commission concluded a report addressing its *Strategic Plan 2008 – 2027*. This report, which led to the Legislature’s revising the proportion of millage assessment dedicated to capital improvements and O&M, outlined the Commission’s vision, goals, and objectives for a 20-year planning period. The focus applied to recreation areas as well as to ports and economic development potential. One of the major economic development objectives was to explore the benefits and resulting opportunities of deepening the federally mandated project depth of the Red River within the Commission’s jurisdiction from 9 ft. of navigable depth to 12 ft. As a result of this objective, the Commission chose to work in cooperation with the Vicksburg District of the USACE in the execution of this initial investigation of a 905(b) reconnaissance study.

In 2004, the Waterway Commission commissioned a *Market Research & Freight Development Study* for the Red River between Old River and Shreveport. The study documented present freight movements as 99% bulk materials in the form of liquid and dry commodities. The report also documented the need for and recommended deepening the navigable channel depth to 12 ft.

As a sign of multi-state support for the deepening project, representatives of the Red River Valley Association, an organization with membership representing four states, has also petitioned for funding of a reconnaissance study by the Corps of Engineers for the 12-ft. navigation project for many years.
V. PLAN FORMULATION

A. Identification of Problems and Opportunities

1. Existing Conditions on the Red River
   a. Operations

As noted, since completion of the J. Bennett Johnston Waterway, four public ports and 19 recreational complexes (in addition to the recreation sites at the locks and dams) have been constructed along the Red River. The four ports—the Port of Alexandria, Natchitoches Parish Port, Red River Parish Port, and the Port of Shreveport-Bossier—are all fully operational full-service facilities which function as reliable, long-term economic engines in their respective locales.

It is these four ports as well as additional waterborne cargo-oriented industrial operations along the waterway that offer additional economic benefits to the overall economy and, therefore, generate national interest. Benefits, as presented in this plan formulation section, are based on transportation savings. In this case, the transportation savings are a function of costs saved in fully loading 12-foot deep barges rather than short loading those barges at the three-quarters level, i.e., with a 9-foot draft, which is the currently required mode of operations. Savings will result in reduced trips and, therefore, a reduction in cost per ton transported.

The vast majority of cargo movements up and down the Red River flow through the Old River Lock. Most cargo on the Red is inbound, and the vast majority of that inbound cargo is bulk materials used in the construction industry or as fuel stock. Outbound cargo is primarily refined petroleum destined for New Orleans, and to a lesser degree, for Baton Rouge and Houston. Because the overwhelming majority of refined petroleum cargo from the Shreveport-Bossier City region is destined for New Orleans, data used in the benefits analysis reflects deliveries to New Orleans only. Cargo data for the refined petroleum products was provided by the shipper.

In similar fashion, data for generating benefits relative to the shipment of petroleum coke from the New Orleans area to the CLECO Rodemacher generating facility at Boyce was provided by CLECO to the RRWC. That data is reflected herein in the benefits calculations as provided by CLECO.

For other users listed, base year data was determined by using cargo carried over the past five years and averaged for use as annual first year cargo. In the Alexandria area, cargo tonnage
provided by the Port of Alexandria and the Red River Waterway Commission was used to estimate base year tonnage. This same approach was used for all other shippers and carriers within the study area not previously noted (i.e., CLECO and the petroleum distributor). Other major users of the waterway include the following: Pinebluff Sand and Gravel Co., Luhr Brothers, Inc., Vulcan Materials Company, and Martin-Marietta Materials. In summary, cargo data presented in the benefit-cost analysis was obtained from each of the four ports, the commission, and these industry users which are located along the Red between Old River and Shreveport.

Only cargos with originations and/or destinations that could utilize greater than 9-foot drafts were included. These shipments are those which utilize the Mississippi River to and from the New Orleans area as well as upriver from the vicinity of Cairo. Southbound cargo from the Ohio River Valley region is predominately aggregate shipments but also includes miscellaneous materials such as shredded rubber and other fuel stock commodities.

Presented in tabular format in Attachment A at the end of text is data reflective of existing operations used in the benefits analysis. Within this data set, first year, or base cargo, tonnage (as noted, determined as a function of the past five years averaged as an annual estimate) is shown as it relates to each of the operators listed. Actual 2010 shipping rates were used for cargo inbound or
outbound to or from New Orleans and the Ohio Valley then to or from the respective origins and destinations on the Red River. This base data is used in the benefits logic and cargo flow analysis detailed throughout this section of the recon study. Cargo from the Arkansas River (authorized for 12 ft. but maintained at 9 ft.) offered no benefit to deepening the navigation channel of the J. Bennett Johnston Waterway, but if it were deepened to 12 ft., additional benefits would accrue.

b. Existing Environmental Setting

With the exception of the four ports, the existing industrial sites along the banks of the river, and the sections of the river that pass through or between busy municipal downtown areas, the river setting is pastoral. Dotted by 19 recreational complexes and an occasional boat landing, the river is peaceful and rural in nature. Minimal variations are noted in flora and fauna, and recreation opportunities are plentiful. Fishing and water sport activities were noted on routine trips conducted for this study and as indicated by the Commission. Slow moving barge traffic generally complements the serene setting, and cargo flow and recreation activities occur with no adverse impact to either activity.

In general, the proposed project is waterway specific, which is limited to the channel and the site of a previous impact area, and no historical or archeological sites in the region were noted as remarkable for purposes of this study. Because the project is limited to the locks and channel and project operations will be consistent with activities of routine dredge cycles, no construction impacts outside of the channel bottom are expected. If the project requires modification by way of topside activity, flora and fauna may be affected. Of particular interest above low pool would be wetlands. However, because the construction area will be small relative to the length of the river and because it would be within a previously impacted area, wetland impacts would not be expected to be significant.

In more specific terms, information obtained from the Louisiana Department of Environmental Quality (DEQ) indicates that the waterway is monitored as two sections: (1) from the Arkansas state line south to U. S. Hwy. 165 at Alexandria and (2) south of U. S. Hwy. 165 to Old River. These subsegments are monitored for primary and secondary contact recreation, fish and wildlife propagation, and drinking water supply. Monitoring for agricultural use is addressed in the northern section only.
The most recently published DEQ water quality data (2008) indicates that the noted uses are fully supported (i.e., water quality is not impaired) within both segments with one exception. In the upper reach, water quality is classified as non-supportive for fish and wildlife propagation. The suspected cause of the impairment is sulfates, and the suspected source of impairment is listed as natural sources and sources outside state jurisdiction or borders.

The Louisiana Department of Wildlife and Fisheries specifically noted that one endangered species requires general consideration during construction. The Interior Least Tern is a small bird that nests in the state along the banks of the Red and Mississippi Rivers between April and August. Any construction activity to occur on the banks of the river would require additional detailed evaluation regarding the tern. In addition, DNR files list two rare small fish species, the Bluehead Shiner and the Blue Sucker, that live in the Red River. Possible impacts to these rare and endangered species will have to be addressed in the feasibility phase of study for the channel deepening project.

Other endangered or threatened species or habitat related concerns listed for the parishes through which the Red River flows include the following animals: Louisiana Black Bear, the Pallid Sturgeon, Red-Cockaded Woodpecker, Fat Pocketbook Pearly Mussel, and Louisiana Pine Snake. One plant, the Earth Fruit, is listed as threatened.

No historical or archeological impacts are expected based upon initial communications with the Louisiana Department of Culture Recreation and Tourism, State Historic Preservation Office. However, formal assessment will be required during the feasibility phase of study. Air quality in the region is good, and no relocation or negative social impact is expected by implementation of the project.

2. Expected Future Conditions

For purposes of this reconnaissance study, the expected future condition assessment is based on current port and industry river users relative to cargo presently handled plus petroleum coke which CLECO will deliver to Boyce from the New Orleans area. Expected future conditions expand this base commodity flow over the 50 year planning horizon. Projections of future cargo loads were determined following review of historical data obtained from the Bureau of Economic Affairs and Louisiana Department of Labor data relative to general industrial and employment growth in Louisiana for the past 12 years. Regional in-state modeling data was not readily available and deemed cost prohibitive for
recon study purposes. By way of historical application, it is assumed that as the state economy grows, so does the demand for construction materials and refined petroleum products and the resulting shipment of same. CLECO data, however, reflects no increase in tonnage. Information supplied by CLECO notes tonnage as remaining constant for the 50 year planning cycle, and that data is reflected herein.

In addition, information obtained from the Louisiana Department of Transportation and Development in its 2007 Marine Transportation System Plan offered more specific insight and reasonableness in determining the rate of growth for inland waterway cargo movements. More detailed information relative to this data is offered in Section V.D.1.f.

In summary, identified cost reduction benefits are estimated for the traditionally established Red River commodity mix and current origins and destinations. An increase in cargo flow is anticipated. While the cargo mix may be expanded to other commodities in the future, hypothetical expansion of commodity mix was not incorporated into the alternatives analysis or benefits assessment. However, based in the consistent growth in cargo movements over the initial 40-year operating period of the waterway project as well as state and federal inland waterway growth projections, growth in cargo tonnage as a basis of overall economic growth in the nation, state, and region was incorporated. As a result of incorporating this data, the cost savings is presented in the number of barge trips saved thus reducing the cost per ton of cargo shipped. This reduction also represents a net economic development gain because resources will be released for productive use elsewhere in the economy.
3. **Concise Statement of Specific Problems and Opportunities with Emphasis on Problems Warranting Federal Participation in the Feasibility Study**

Early estimates by the Red River Waterway Commission, the Red River Valley Association, and industry stakeholders suggest that transportation cost saving of up to 30% could be garnered if barges were fully loaded to a 12 ft. draft rather than a 9 ft. draft. In deepening the channel accordingly, no definite need for physical or structural impact is expected. If no structural revisions to locks, lock approaches, dikes, etc. are required as preliminary investigations indicate, first time costs as well as incremental maintenance cost will be minimal while benefits will be substantial.

While review of USACE as-built drawings of the lock and dam system indicate no significant need for structural revision to the existing Red River locks or channel training features, representatives of the USACE Vicksburg District have indicated that further analysis will be required in the feasibility study. Examples of situations that may require additional subsurface evaluation and engineering assessment are listed in Section V.D.2 and include hydrologic issues, verification of sill depths, construction remnants, authorization language, and operational procedures by tow vessels.

In the past several years, routine maintenance of the 9 ft. channel required dredging along less than 1% of the length of the river, approximately 2.2 miles. With minimal exception (this 1%), the river channel ranges from 20 ft. to 80 ft. in depth. Routinely, maintenance dredging occurs on the downriver side of each lock, near the ports of Natchitoches and Alexandria, and at multiple locations downstream of Lock and Dam No. 1. Summary estimates of recent years indicate that approximately 1,000,000 cubic yards of material is dredged annually, all of which is deposited in the stream channel. An annual cost for this routine dredge cycle approximates $2,000,000. For purposes of this report, dredging costs are estimated at $2.00 per cubic yard ($2,000,000/1,000,000 CY = $2.00/CY).

A graphic abstraction of the Red River study area and routine dredge activity is presented in Exhibit 3. Shown in the depiction in plan and section views are the six pools, the five locks, distance between locks, pool elevations, dredge locations, and cubic yards of maintenance dredge material moved at those locations. Because dredge operations have shown a tendency to stabilize since the completion of the system, this exhibit reflects one year of maintenance (2008) for which data was provided by the USACE.
B. Formulation of Alternative Plans

Four alternative plans were presented, and one of those options was identified as clearly the most feasible alternative. The no action alternative was considered as were two construction based alternatives and one non-construction approach. The no action alternative was considered and rejected as not addressing the problem or offering additional NED benefits.

The non-construction approach involved maintaining minimum pool elevations three feet higher than that presently established. This approach was also rejected early in the recon process as the local sponsor indicated that inundation rights, additional land acquisition issues, and associated costs would substantially negate benefits such that the alternative would not be economically or politically feasible. In addition, it would not meet the acceptability criteria required by Principles and Guidelines.

The third and fourth alternatives are construction based. Alternative 3 considered dredging to deepen the navigation channel to 12 ft. at pool and maintaining the 200 ft. bottom width thereby requiring modification or reconstruction of at least one bank where the minimum 200 ft. bottom width exists at proposed deepening sites. Alternative 4 is also a deepening by dredge option, the difference being that the channel depth may be reduced in select locations in lieu of affecting channel embankments and side slopes where practical.

C. Preliminary Evaluation of Alternatives

1. Comparison Effects of Alternative Plans

Construction activity required to develop Alternative 3, deepening the navigation channel to 12 ft. and maintaining a 200 ft. bottom width, will require reconstruction of at least one side of the channel wherever deepening will occur in a reach with the minimum channel width. Should this be the case in all areas presently dredged on a routine basis, this alternative would be cost prohibitive. While indications are that specific sites requiring side slope reconstruction will be minimal, a full determination is beyond the scope of this reconnaissance study.

The fourth alternative, which is similar to Alternative 3, also deepens the navigation channel from 9 ft. to 12 ft. but, in contrast and by design, is not intended to impact either side slope, dikes, or other construction features. Assuming the 4:1 slope of the channel embankment as noted on as-built drawings, deepening by 3 ft. will result in a narrowing of the 200 ft. bottom width by 24 ft. if and where any channel width dredge section is as narrow as 200 ft. at a dredge deepening site.

Because only approximately one percent of the waterway is dredged routinely and the deepening project is expected to broaden the area dredged only minimally, a 24 ft. reduction of channel width will have
minimal if any significance on current and/or future cargo operations. Identifying specific locations where minimal channel bottom width is of concern is beyond the scope of a recon study and, therefore, should be addressed in the feasibility phase.

If operational considerations are warranted at select locations where the bottom width is reduced, these considerations will be defined and further addressed in the feasibility phase. As a result, this alternative requires minimal to no impact of any features outside of the thalweg or channel bottom and is the least costly of the two construction alternatives.

2. Selected Alternative—The Recommended Alternative for Benefit-Cost Analysis

Because Alternative 4 fulfills the objective of the user needs, is the least costly alternative, provides only minimal impact, requires no additional servitude or land acquisition, and causes minimal to no environmental degradation, it has generated the greatest interest in planning and progress report meetings conducted throughout the recon planning period. It is also the least time consuming construction option. For these reasons, this alternative represents the plan selected for benefits-cost analysis relative to national economic development (NED).

While the alternative may result in a narrowing of the channel bottom width by a maximum of 24 ft. in a few isolated reaches, communications with operators along the waterway indicate that this concern is not significant. If an issue related to the reduction of channel width by a maximum of 24 ft. resulting in a bottom width of 176 ft. becomes a reality with the project, it will occur only when two tow vessels with barges approach. When addressing this issue, operations stakeholders noted that standard operating procedures encourage boat to boat communications. Coordination between approaching vessels will allow proper maneuvering when and if required. These same stakeholders also note that numerous similar shallow draft inland waterways function smoothly with only 125 ft. bottom channel widths. The Gulf Intracoastal Waterway is one example.

A graphic depiction of Alternatives 3 and 4 is presented in Exhibit 4.
Exhibit 4. Section View of Alternatives 3 and 4

ALTERNATE 3: TYPICAL 12' CHANNEL SECTION

ALTERNATE 4: TYPICAL 12' CHANNEL SECTION
D. Benefit-Cost Analysis of Selected Alternative

1. Benefits of the Channel Deepening Plan

Information offered below follows the ten steps used to estimate benefits associated with improvements of the inland navigation system as documented in ER 1105-2-100 (22 Apr 2000), p. 3-6.

a. Identify Commodity Types (1)

Commodity Types are noted in Attachment A as subsections of data provided for each shipper listed and/or otherwise noted herein. The complete data set includes aggregates, liquid petroleum products, petroleum coke, and miscellaneous bulk cargo including rubber chips, iron, and agricultural chemicals. As noted, these commodities reflect those currently transported on the waterway.

b. Identify the Study Area (2)

The study area includes the reach of the J. Bennett Johnston Waterway project from Mile 0 of the Red River at the Mississippi River at Lower Old River to Shreveport, Louisiana, Mile 236. The immediate study area includes five locks and dams and miscellaneous channel works along the waterway, the total length of which is 236 miles. The total reach of the study for purposes of this project, including operations addressed in this recon study, extends along the length of the Mississippi River from the region of New Orleans northward to the Ohio Valley where aggregates and other shipments are loaded from Tennessee, Kentucky, Kansas, etc. Originations and destinations of commodities are also noted in Attachment A.

c. Determine Current Commodity Flow (3)

As referenced previously, current commodity flow was determined by using an average annual cargo flow based on data covering the past five years. Information was provided by the Red River Waterway Commission, the referenced ports, and the listed companies currently moving shipments along the waterway. CLECO is one exception as no five-year history exists for petroleum coke. The company just began moving cargo which is the fuel that will be used by the company’s newest electricity generating unit completed in early 2010. This cargo will be delivered to Boyce (near Alexandria) from petroleum processing facilities located along the Mississippi River in the vicinity of New Orleans.
d. **Determine Current Cost of Waterway Use (4)**

The cost of waterway use was determined by using current (2010) origin-to-destination cargo delivery costs. A competitive rate for each commodity for each origin to destination was incorporated as a function of tonnage to be handled. Rates were provided by the individual haulers interviewed, and these rates remained constant throughout the planning period.

With two exceptions, rates were addressed as a function of two legs of each trip. All shipments move through the Old River Lock, and rates were provided for shipments by barge from the point of origin or destination along the Red River to or from the Old River Lock. A second set of rates by cargo per barge was provided from point of origination or destination to the Old River Lock.

One exception is representative of data provided by one company that distributes refined petroleum product from Shreveport to New Orleans. In this case, a single unit cost was provided as cost per ton from origin to final destination. Additionally, and as noted previously, cost savings estimates by CLECO were provided by the RRWC from data provided to the Commission by CLECO. The savings data was calculated by CLECO from origin to final destination and not as a function of origin to Old River. All rates, cargos, originations, and destinations used in the benefits calculations are included in Attachment A.

e. **Determine the Current Cost of Alternative Movement (5)**

The current cost of alternative movement is based on rates charged for moving cargo to and from the various ports and industrial sites along the JBHW with barges loaded to 9 ft. drafts. The rates used in this recon study are reflective of those actually used on the waterway in early 2010. The rates are as follows:

<table>
<thead>
<tr>
<th>Rates per Ton—Barge Loaded to 9 ft. Draft</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Old River to/from Alexandria</td>
<td>$ 2.95</td>
</tr>
<tr>
<td>Old River to/from Natchitoches</td>
<td>$ 3.75</td>
</tr>
<tr>
<td>Old River to/from Red River Parish Port</td>
<td>$ 4.00</td>
</tr>
<tr>
<td>Old River to/from Shreveport</td>
<td>$ 4.50</td>
</tr>
<tr>
<td>New Orleans to/from Old River</td>
<td>$ 2.50</td>
</tr>
<tr>
<td>New Orleans to Boyce</td>
<td>$ 5.45</td>
</tr>
<tr>
<td>Ohio Valley to Old River</td>
<td>$ 11.50</td>
</tr>
<tr>
<td>Liquified Petroleum Shreveport to New Orleans</td>
<td>$ 15.30</td>
</tr>
</tbody>
</table>
f. Forecast Potential Waterway Traffic by Commodity (6)

In tabular data provided in Attachment A, cargo forecasts by user and by commodity are provided. While this information does list 9 ft. only cargo data sets, the respective tonnage was not used in the benefits calculation in estimating the forecast of potential waterway traffic. Cargo movements within the Red River system and cargo moving outside of the system, i.e., along the Mississippi River to or from the Red River sites, are presented in columnar fashion. Rates assigned to each movement are noted.

Building upon the base tonnage per port and industrial user by commodity type and/or origin/destination as presented in Attachment A, a 1.3 percent annual increase in tonnage was assigned for the 50 year planning horizon. As referenced previously, this increase was based on average gross state product over the past 12 years as determined by review of historical data obtained from the U. S. Department of Commerce Bureau of Economic Analysis (BEA) and Louisiana Department of Labor (DOL) employment data relative to general industrial and employment growth in Louisiana for the past 12 years. Regional intrastate modeling data was not readily available. The result of this assessment yielded between one and two percent annual growth.

More specific to the project, was projection data obtained from the Louisiana Marine Transportation System Plan (DOTD, 2007). In this report, data provided in Exhibit 3-38, U. S. Inland Waterway Traffic Projections by Commodity Groups, indicates a long-term medium average annual growth rate of 1.3 percent in the U. S. inland waterways industry. This rate of increase is relative to the previously referenced BEA and DOL economic indicators yet more industry specific. For this reason, a 1.3 percent annual growth factor was used for all tonnage projections with the exception of CLECO cargo and for the Red River Parish Port cargo.

For the Red River Parish Port, exception was noted because of recent increases in bulk traffic over the past year. Because of this increased tonnage, Ohio Valley quarries shipping aggregate for use in establishing land-based drill sites and production facilities for natural gas exploration in the Haynesville Shale region of northwest Louisiana, a base tonnage other than the five-year average was incorporated. RRWC and Red River Parish Port representatives estimate an average annual cargo flow for the next ten years to approximate 300,000 tons with a decrease to 200,000 per year in year 11 of the deepening project. From that point (year
11), the rate of cargo flow is shown to increase at the aforementioned 1.3 percent per year. CLECO cargo flow, as presented by the company, remains constant throughout the planning period. Using this information, additional waterway traffic by commodity is presented in totals offered in Attachment A.

g. Determine Future Cost of Alternative Mode (7)

While the cost to haul cargo (rate per ton) remains constant during the project period for the purpose of benefits analysis, additional costs are expected in moving a barge loaded fully to 12 ft. (2,000 tons) versus one loaded to 9 ft. (1,500 tons). Industry operators indicate that the incremental cost of moving a barge loaded to 12 ft. rather than 9 ft. is no more than 10% greater than the 9 ft. cost. In the case of moving liquefied petroleum, the specific incremental cost/ton differentiation was provided. (Note: With liquid refined petroleum products, tonnage loaded to 9 ft. = 3,437; loaded to 12 ft. = 4,385).

The cost of alternative movement would be a function of the costs of trips saved (net cost reduction) plus the incremental cost of hauling heavier loads. Industry representatives indicate that increasing current rates by no more than 10% will represent the current cost of alternative movement with the proposed heavier loads. This 10% factor is used in defining the additional incremental cost of hauling various cargos if the project is implemented. These costs are minimal as the only additional cost to haulers is that of vessels burning slightly more fuel in pushing heavier loads. No additional labor or time is involved.

h. Determine Future Cost of Waterway Use (8)

Cost of alternative movement was calculated as two separate functions. First, the number of trips saved was determined. This estimate was determined by dividing the total number of tons over the planning period by 1,500 tons, the average tonnage loaded to 9-ft. draft. This same total tonnage was then divided by 2,000 tons per barge, the average tonnage of a load shipped at 12-ft. draft. The difference in these two calculations provides the number of trips saved. (as noted, for liquefied petroleum shipments, tonnages were 3,437 and 4,385, respectively.)
i. Determine Waterway Use, With and Without the Project (9)
   Based upon the methodology described heretofore, the estimated number of barge trips saved is 36,851. Because savings per ton is a function of origination and destination and since commodities and rates vary accordingly, cost savings per ton were calculated. These savings were then applied by commodity type and by O/D location.

j. Compute NED Benefits (10)
   The benefits estimated by these calculations are presented in Attachments B, Estimation of Benefits Without Project (9 ft. Navigation Channel), and C, Estimation of Benefits With Project (12 ft. Navigation Channel). A base year of 2010 was used, and a discount factor of 4.375 was incorporated over the 50-year period of analysis. Average annual equivalent transportation cost with the current 9 ft. channel is $43,139,232. With the project, i.e., deepening of the channel to a navigable depth of 12 ft., calculations yield an average annual equivalent transportation cost of $35,774,798. The resulting average annual equivalent transportation savings is $7,364,434.

2. Construction Cost of the Channel Deepening Plan
   During the data collection phase of this recon study, construction issues relative to the channel, channel training works, the five locks, and approaches to the locks were considered. The primary construction aspect of this channel deepening project is to deepen the channel by the same mechanical means used in routine dredge cycles, i.e., suction dredge with in-channel disposal. The key difference without and with the project is that the navigation channel will be deepened by three ft., from 9 ft. to 12 ft., only in select locations where channel depth does not already exceed 12 ft. As a result, the bottom width will be reduced by a maximum of 24 ft. thereby yielding a minimum bottom width of 176 ft. at some locations where dredging occurs. As noted in previously in Section V. C of this report, this occasional narrowing of the bottom channel width will not have a significant impact on current or future barging operations.

   In the case of the Red River, deepening of the channel will occur only where the channel is less than 12 ft. deep in its present and future configurations. Based upon recent historical dredge cycles, this dredging occurs along less than one percent of the length of the waterway at approximately ten locations. Half of those locations are near approaches on the downstream side of each lock. This historical data indicates that, with rare exception, the channel depth exceeds 12 ft. in depth along 99 percent of its length between Shreveport and the Old River Structure.
Depth-finder readings taken along the entire length of the waterway during the late summer of 2009 indicated that depths along the channel range from the 20 ft. to deeper than 80 ft. in all but a few locations—typically those locations highlighted in the channel and dredging summary graphic presented in Exhibit 3.

In establishing first time costs, initial dredging was of primary consideration. This conclusion was verified by the fact that less than one percent of the channel length is dredged annually for maintenance purposes. Additionally, no pipeline relocations will be required.

Therefore, existing annual maintenance dredge data was utilized as a basis to determine the length of the required collective dredge footprint used in the volume calculation. This data was based on the 2008 cycle which was defined as a typical annual dredge cycle. A channel width of 176 ft. was used, and 3 ft. was incorporated as the differential depth. An additional 20 percent factor was added to supplement this volume in accounting for additional dredge footprint. These calculations yielded approximately 300,000 cubic yards of initial dredge material, which is roughly one-third the dredge material relocated in a typical recent year.

Dredge cost in 2008 was $2.00 per cubic yard along the Red River according to information collected from MVK. With an additional 20% added in contingencies, the estimated total first time cost for dredging is $720,000. Adding survey, testing, design, administration costs, etc. of $280,000 yields a total first time dredge cost of $1,000,000. This cost
assumes construction methods used in routine dredging cycles, i.e., the same equipment and in-channel disposal. However, to ensure a conservative benefits-cost analysis, this cost is doubled to $2,000,000.

During preliminary scoping meetings with USACE MVK personnel, several items were discussed that may be of concern regarding using 12 ft. of navigable waterway depth. While none of the items brought forth are significant enough to halt the project in the reconnaissance stage, they will require further scrutiny in the feasibility phase of study. These items of discussion included the following:

- hydrologic issues relative to the reduced water volume in the locks and the passage of vessels
- verification of sill depths at low pool
- a remnant coffer dam structure upstream of Lock No. 2
- the impact of hinging at Lock No. 3
- modification to at least one approach apron where rock is routinely encountered during current maintenance dredging operations
- modification of channel training works that may be required if and where deepening affects existing embankments
- reducing channel width to 176 ft. and the "304" document
- any operational procedures that may be required of tow boat operators either in or near locks or as a result of reduced bottom channel width

Only one of these issues, the apparently shallow rocks on one side of one lock, has a relatively high probability of actual first time construction expenditure. Because of the indefinite nature of these concerns, an additional first time cost of $10,000,000 is included in the initial cost scenario. Further analysis of the items listed above must be completed by the Corps for a more detailed cost estimate to be prepared. This cost plus the initial dredging cost of $2,000,000 brings the total first time cost of the project to $12,000,000.

3. Operational and Maintenance Cost of the Channel Deepening Plan

Assuming the volume of material removed as a function of the initial dredge cycle (as detailed in the previous section) is re-deposited annually, approximately 300,000 cubic yards of additional dredging will be required each year as a function of routine maintenance cycles. Using the previously referenced $2.00 per cubic yard costs, annual differential maintenance cost will be $600,000. Because the volume of annually dredged material is insignificant when compared to the volume of the waterway, no additional dredge disposal sites will be required. For purposes of this recon report, an annual O&M factor of $1,000,000 is used to account for contingencies.
4. **Environmental Aspects of the Channel Deepening Plan**

The national or federal objective of water and related land resource project planning is to contribute to National Economic Development (NED) in a manner consistent with protecting the nation’s environment pursuant to national environmental statutes, applicable executive orders, and other federal requirements. Environmental aspects of the channel deepening plan that will require follow-up in the feasibility phase include but are not limited to those listed previously in Section V. A. 1. b, specifically the endangered Interior Least Tern and possible nesting sites along the river as well as the two small fish species that dwell in the Red River that are considered rare, the Bluehead Shiner and the Blue Sucker. Biologists with the Louisiana Department of Wildlife and Fisheries did not indicate that either of these species would be affected by the proposed project. Nonetheless, this hypothesis must be confirmed during the feasibility phase. In addition, other rare, threatened, and endangered species are listed as inhabiting the parishes along the Red River. Any potential project impact on these habitats will require detailed assessment in the feasibility phase.

5. **Summary of the Analysis of the Channel Deepening Plan**

The economic justification of the 9 to 12 ft. channel deepening plan was developed in accordance with the data presented herein and in accordance with procedures established by the USACE. The total annualized costs, which include annualized construction first costs and operations and maintenance costs, are compared to average annual transportation benefits (savings) in the computation of average annual net benefits and the resulting benefit-cost ratio. The benefit-cost ratio for this project is 4.6:1, and, based upon the impact of existing dredging activities along the Red River in the study area, no significant negative impact to the environment is envisioned by way of construction or operations activity. Therefore, the channel deepening project is economically justified.

A summary of the plan benefit-cost analysis is presented in Exhibit 5, Summary of Benefit-Cost Analysis. The total annualized costs, which includes annualized construction first cost as well as operations and maintenance costs, are compared to the average annual transportation benefits to compute the benefit-cost ratio. Net average annual equivalent transportation benefits associated with implementation of the project are also listed.

Based upon this data, these benefits offer a first supportable cost of approximately $123,000,000.
EXHIBIT 5. SUMMARY OF BENEFIT-COST ANALYSIS, 2010 DOLLARS

<table>
<thead>
<tr>
<th>CONSTRUCTION FIRST COSTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipeline Relocation</td>
<td>$</td>
</tr>
<tr>
<td>Pre-construction Survey and Design</td>
<td>$ 500,000</td>
</tr>
<tr>
<td>Construction (dredging)</td>
<td>$ 11,500,000</td>
</tr>
<tr>
<td><strong>Subtotal—Project First Cost</strong></td>
<td>$12,000,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANNUALIZED COSTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project First Costs</td>
<td>$ 594,926</td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>$ 1,000,000</td>
</tr>
<tr>
<td><strong>Total Ave. Annualized Project Costs</strong></td>
<td>$1,594,926</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRANSPORTATION SAVINGS BENEFITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Equivalent Transportation Costs (without project)</td>
<td>$43,139,232</td>
</tr>
<tr>
<td>Average Annual Equivalent Transportation Costs (with project)</td>
<td>$35,774,798</td>
</tr>
<tr>
<td>Difference in Without and With Project Cost</td>
<td>$7,364,434</td>
</tr>
<tr>
<td>Total Discounted Benefits</td>
<td>$131,724,910</td>
</tr>
<tr>
<td>Annualized Project Benefits</td>
<td>$6,530,548</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENEFIT COST RATIO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First Cost</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Average Annual Equivalent First Cost</td>
<td>$594,926</td>
</tr>
<tr>
<td>Annual Operation and Maintenance</td>
<td>$1,000,000</td>
</tr>
<tr>
<td><strong>Total Average Annual Equivalent Cost</strong></td>
<td>$1,594,926</td>
</tr>
<tr>
<td>Average Annual Equivalent Benefit</td>
<td>$7,364,434</td>
</tr>
<tr>
<td>Benefit-Cost Ratio</td>
<td>4.6 : 1</td>
</tr>
</tbody>
</table>
VI. FEDERAL INTEREST

Contributions to national economic development (NED outputs) are increases in the net value of the national output of goods and services expressed in monetary units and are the direct net benefits that accrue in the planning area and the rest of the nation. Contributions include increases in the net value of goods and services, those marketed and also those that may be not be marketed. Protection of the nation’s environment is achieved when damage to the environment is eliminated or avoided and important cultural and natural aspects of our nation’s heritage are preserved.

Data collected for the reconnaissance phase of study to address deepening the Red River in Louisiana from a navigable depth of 9 ft. to a depth of 12 ft. indicates a highly substantial benefit to cost ratio of 4.6 to 1. Based on the number of trips saved and the collective savings accrued over the 50-year planning period, the project is clearly justified within the NED parameters established by USACE guidance. In addition, environmental impacts are expected to be nil as implementation of the project is not expected to negatively affect any flora or fauna in the channel or outside of the channel unless circumstances unforeseen in the reconnaissance phase of analysis are encountered. Therefore, based on preliminary appraisal of costs, benefits, and environmental impacts of identified potential project alternatives, the channel deepening plan presented herein contributes to the NED objective and is consistent with federal interest.

VII. PRELIMINARY FINANCIAL ANALYSIS

A. Future Cost Sharing Considerations and the Project Management Plan (PMP)

In lieu of the preparation of a PMP, which requires full attention of the USACE Vicksburg District, the level of detail presented in this section is presented for the edification of the RRWC and other stakeholders not necessarily familiar with USACE PMP and feasibility study procedures.

According to the Corps Planning Guidance Handbook (ER 1105-2-100, 22 April 2000), the federal cost sharing agreement is intended to promote a partnership for the conduct of the feasibility study. Both parties will conduct planning within the framework established by Principles and Guidelines (P&G) and additional guidance as may be required. As the local sponsor, the Red River Waterway Commission has expressed a willingness to discuss the possibility of conducting the required feasibility study under Section 203 of the Water Resources Development Act of 1986.

If the Commission pursues the Section 203 route, in following program requirements, the Commission will be required to provide 100 percent of the cost of preparing the Feasibility Study. However, should the project proceed to construction, the Commission will receive a credit or reimbursement for share of the cost of general navigation features such as land, rights-of-way, etc. As the local sponsor, the Red River Waterway Commission...
Commission is aware of the cost sharing requirements for project implementation, and the Commission understands that the federal share of the cost of the feasibility study will be credited to the Commission as part of its share of implementation costs.

While developing the Project Management Plan (PMP), which will be incorporated in the Feasibility Cost Sharing Agreement (FCSA), the District Commander must discuss with the prospective non-federal sponsor the objectives of the feasibility study to reduce uncertainties in areas such as design and cost. During negotiations, the prospective non-federal sponsor must be informed that the level of accuracy of alternative plan evaluation and cost estimates to be developed in the feasibility study will depend on the extent of uncertainties and the depth of investigations made during the feasibility study.

The PMP negotiated between the Corps and the non-federal sponsor will ensure that the work required for the feasibility phase has been carefully developed and considered. The PMP forms the basis for estimating the total study cost and local share. It also is the basis for assigning tasks between the Corps and the sponsor and for establishing the value of in-kind services. The responsibility for the preparation of the PMP rests with Corps study manager in coordination with the Corps project manager. During the feasibility phase, significant changes to the PMP may require modification of the FCSA.

In the case of this project, the PMP will be completed by the USACE Vicksburg District and negotiated with the non-federal sponsor following the review and completion of the reconnaissance phase and will be revised and updated, as appropriate, based on discussions, resolution of issues, and agreements on actions at the Feasibility Scoping Meeting.

The PMP should include the costs for the tasks for non-federal sponsors that have been historically accomplished without charge such as the following: supervision and administration, study management; attendance at meetings, both public and technical; and overhead and indirect costs which are directly related to the feasibility study. It is expected that detailed scopes of work may be needed for individual items in the PMP. Work items will also include those tasks typically necessary to support the review process from the signing of the report through the ASA (CW)'s request to the Office of Management and Budget for the views of the Administration.

Hence, the PMP will guide the allocation of study funds among tasks to assure that all interests are given adequate attention. As a minimum, the PMP will address work tasks, their milestones and negotiated costs, and responsibility for the accomplishment; Corps and
other professional criteria used to assess adequacy of the completed work effort; procedures for reviewing and accepting the work of both parties; the schedule of performance; the coordination of a mechanism between the Corps and the non-federal sponsor; and references to regulations and other guidance that will be followed in conducting the tasks.

The PMP will address the appropriate level of engineering detail required for the feasibility phase. Engineering studies and analysis should be scoped to the minimum level needed to establish project features and elements that will form an adequate basis for the project construction schedules and cost estimate. Uncertainties should be reflected in contingencies which will be resolved during feasibility and/or planning, engineering, and design.

To ensure that the sponsor is afforded the opportunity to participate in any significant effort as a result of Washington level policy review, review support will be included as a work item in the PMP for District and non-federal sponsor costs only. These costs, including any necessary travel, will be limited to those reasonable costs associated with the review and processing of the feasibility report.

In summary, the total cost of the feasibility phase will be established through negotiations of the PMP. Costs will be defined by task and type (i.e., labor, materials, equipment, indirect costs, etc.) and will be fully supported and documented. Procedures will be established for tracking expenses and cost accounting including the allocation of costs between the federal government and the non-federal sponsor. All parties to the Feasibility Cost Sharing Agreement must agree to the funding schedule established in the PMP.

B. Feasibility Study and the Cost Sharing Agreement

The Feasibility Cost Sharing Agreement (FCSA) is intended to promote a partnership for the conduct of the feasibility study. The Department of the Army remains responsible for representing the federal interest by following federal policies and budgetary priorities. Both parties will conduct planning within the framework established by Planning and Guidelines and additional guidance as may be provided in by USACE regulations. In addition, the District Commander shall be satisfied that the non-federal sponsor has authority to enter into agreement and that the FCSA is legally sufficient.

According to ER 1105-2-100, the purpose of the feasibility study is to identify, evaluate, and recommend to decision makers an appropriate, coordinated, implementable solution to the identified water resources problems and opportunities. The resulting report should be a complete decision document. The report will (1) provide a complete presentation of study results and findings including those developed in the reconnaissance phase so that readers can reach
independent conclusions regarding the reasonableness of recommendations, (2) indicate compliance with applicable statutes, executive orders, and policies, and (3) provide a sound and documented basis for decision makers at all levels to judge the recommended solution(s).

Under normal circumstances, the cost of the feasibility phase will be shared equally between the federal government and the non-federal sponsor(s) during the study. Of the non-federal sponsor’s share (50 percent of the total feasibility phase cost), 50 percent (25 percent of the total feasibility phase cost) must be in cash and the remainder may be in-kind products and services. Section 105(a) of WRDA of 1986 requires the sponsor to contribute 50 percent of the study during the period of such study. No credit may be given to the non-federal sponsor for work prior to the start of the feasibility phase or after its completion.

Exception to this 50/50 rule relative to inland waterway projects is addressed in Appendix G, Amendment #1 of ER 1105-2-100, in section G-9. This section indicates that cost sharing is not applicable to single purpose inland navigation studies on the nation’s inland waterways system. If this is the case, then no feasibility cost or construction cost will be applied to the local sponsor for this project other than that which may be required for lands, rights-of-way, real estate, relocations, etc. which, in all likelihood, will be minimal if any.

Section 203 of WRDA 1986 states that a non-federal interest may on its own undertake a feasibility study of a proposed harbor or inland harbor project and submit it to the Secretary. If the project is authorized, the Secretary of the Army shall credit toward the non-federal share of the cost of construction of such project an amount equal to the portion of the cost of developing such study that would be the responsibility of the United States if such study were developed by the Secretary.

Should the inland rule be deemed not applicable, the USACE has established cost sharing between federal and non-federal partners for the implementation of a proposed commercial navigation project. For a project that increases the navigation channel depth from 9 ft. to 12 ft., the federal government will pay 90 percent and the non-federal sponsor (the Red River Waterway Commission) will pay 10 percent for all general navigation feature costs (channel, jetties, breakwaters, and other features required for navigation) of the proposed plan during the period of construction. The non-federal sponsor must provide all lands, easements, rights-of-ways, relocations, and disposal areas required for project implementation and operation and maintenance. All operations and maintenance costs for the project will be apportioned fully (100%) to the federal government.

As the non-federal sponsor, the Red River Waterway Commission shall also pay an additional 10 percent of the project costs for general navigation features in payments over a period not to exceed 30 years, at an interest rate
determined pursuant to Section 106. The 10 percent repayment is reduced by the non-federal sponsor's cost of lands, easements, rights-of-ways, relocations, and dredged material disposal areas if applicable. The local sponsor is also aware of the cost sharing requirements for potential project implementation.

A letter of intent from the local sponsor stating a willingness to pursue the feasibility study and to share in its cost, and an understanding of the cost sharing that is required for project construction is included as Attachment D.

VIII. SUMMARY OF FEASIBILITY STUDY ASSUMPTIONS
The following assumptions are applicable to the project.

1. Size and means of transporting inland barges will remain constant throughout the planning period. Typical barge width is 35 ft.

2. Maintenance dredging operations (in CY of material) has stabilized and will remain relatively constant. The same will hold true with a 12 ft. channel. In all likelihood, deepening can take place during normal dredge cycles. Areas dredged will fill annually thereby increasing annual maintenance cost accordingly (approx. 300,000 CY per year).

3. Commercial users and permitting authorities will approve/accept 24 ft. bottom channel width reduction from 200 ft. to 176 ft.

4. Only deepening from 9 ft. to 12 ft. was studied. No additional benefits will result from a deeper channel.

5. From an engineering perspective, it is assumed that no physical constraints will impede implementation of the project. However, more detailed analyses will be required during the feasibility phase.

6. No underground pipelines, etc. will be impacted.

7. Existing soils and other natural subsurface conditions will be sufficient to accommodate deeper dredging.

8. Existing dredge disposal sites are adequate to accept additional material.

9. The proposed action, including a dredged material disposal plan, is not expected to have adverse impacts on the natural environment inclusive of threatened and endangered species and their habitat. To confirm this assumption, more detailed investigations in compliance with NEPA and permitting laws will be conducted during the Feasibility Study stage.

10. Operations and maintenance of the Red River between Old River and Shreveport (i.e., waterway, locks, and dams, etc. by the COE; non-federal functions by the RRWC) will maintain the status quo for the project planning period.
11. Current in-channel disposal will be utilized. If required, current defined disposal locations will be utilized. No additional real estate is required for implementation of the proposed project.

12. Data collected during the Recon Study suggests that the construction period will be one year or less, assuming that no engineering-based construction activity is required on existing structures.

13. Economic development along the Red River J. Bennett Johnson Waterway Project will continue at rates comparable to the Louisiana economy at-large. In that regard, a growth rate of 1.3 percent compounded assumes continued growth in the study area in central and northwest Louisiana. Benefits and costs are expressed in equivalent economic terms using a base year of 2010, a 50-year project life, and a federal discount rate of 4 3/8 percent. Only existing cargo operations were included in benefits calculations.

14. Construction impacts will not negatively impact the Interior Least Tern, and construction activities will not negatively affect water quality or the Bluehead Shiner and the Blue Sucker.

15. The Feasibility Report will be based on a package of engineering information provided by the USACE and incorporated via the PMP.

IX. FEASIBILITY PHASE MILESTONES

Completion of Feasibility phase milestones will be conducted in accordance with ER 1105-2-100, Appendix H, Amendment No. 1, dated November 20, 2000, and the final Project Management Plan.

X. FEASIBILITY PHASE COST ESTIMATE

A. Preliminary Feasibility Cost Estimate Based on Pre-PMP Estimates

Based on previous dredging-based feasibility studies similar to that required for the Red River 9 ft. to 12 ft. deepening project, the cost estimated to complete the Feasibility Study recommended above will likely be in the magnitude of $2,500,000 to $4,000,000, inclusive of both the federal and non-federal expenses. Once a PMP is negotiated between the Corps and the Commission, more detailed estimates can be provided. A pre-PMP feasibility cost estimate is provided in Exhibit 6.
### EXHIBIT 6. Pre-PMP Feasibility Cost Estimate

<table>
<thead>
<tr>
<th>Task</th>
<th>Low Range</th>
<th>High Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project and Study Management</td>
<td>$200,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>$200,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Cultural Resources Studies</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Hazardous, Toxic, Radiological, and Waste Studies</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Economic Studies</td>
<td>$700,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Engineering Studies</td>
<td>$750,000</td>
<td>$1,250,000</td>
</tr>
<tr>
<td>Independent Technical Review</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Value Engineering</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Report Review</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Subtotal Cost Estimate</strong></td>
<td><strong>$2,200,000</strong></td>
<td><strong>$3,550,000</strong></td>
</tr>
<tr>
<td>Contingencies</td>
<td>$300,000</td>
<td>$450,000</td>
</tr>
<tr>
<td><strong>Total Study Cost</strong></td>
<td><strong>$2,500,000</strong></td>
<td><strong>$4,000,000</strong></td>
</tr>
</tbody>
</table>

### B. Preliminary Cost Share Apportionment

By way of example, an estimate of the cost apportioned by way of anticipated USACE requirements for the channel deepening project is presented below in Exhibit 7. This estimate assumes a Section 203 approach, i.e., local sponsor funds the feasibility study and is credited for this expenditure as a function of construction cost sharing. The cost of the feasibility study is a relative of magnitude cost based on the preliminary finding of the recon study and not on a fully defined Project Management Plan (PMP) as the PMP will be prepared by the USACE, Vicksburg District. The PMP will be required, revised, and updated, as appropriate, based on discussions, resolution of issues, and agreements on actions at the official Feasibility Scoping Meeting.
EXHIBIT 7. PRELIMINARY COST SHARE APPORTIONMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Federal</th>
<th>Non-federal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconstruction Engineering and Design</td>
<td>100%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Engineering, Design, and Planning</td>
<td>$500,000</td>
<td>$</td>
<td>$500,000</td>
</tr>
<tr>
<td>Construction Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General navigation Features</td>
<td>100%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Dredging from 9 ft. to 12 ft.</td>
<td>$11,500,000</td>
<td>$</td>
<td>$11,500,000</td>
</tr>
<tr>
<td>Total Design and Construction Costs</td>
<td>$12,000,000</td>
<td>$</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Feasibility Study</td>
<td>$4,000,000</td>
<td>$</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Credit/Reimbursement for Feasibility Study</td>
<td>$(4,000,000)</td>
<td>$(4,000,000)</td>
<td></td>
</tr>
<tr>
<td>Lands, Easements, Right-of-Way, Relocations, Disposal, etc.</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Total Cost Allocation</td>
<td>$16,000,000</td>
<td>$</td>
<td>$16,000,000</td>
</tr>
</tbody>
</table>

XI. RECOMMENDATIONS

Based upon data collected for this initial investigation of a WRDA Section 905(b) Reconnaissance Study addressing deepening the J. Bennett Johnston Waterway from a navigable depth of 9 ft. to 12 ft., the justification for moving the project to feasibility study phase is extremely positive, i.e., having a benefit to cost ratio of 4.6 to 1. Because this investigation was prepared with peripheral assistance from the Corps of Engineers Vicksburg District but not by the District itself, two options become operative.

Option 1 is to obtain congressional appropriation for the Corps to participate in finalizing the Recon Study thereby allowing full Corps participation in the development of a Project Management Plan (PMP). Once this PMP is prepared, authority and subsequent appropriation to fund the preparation of a Feasibility Study will be required.

Option 2 offers the opportunity for the Corps to provide assistance to the RRWC in meeting to prepare a PMP as part of this 905(b) reconnaissance effort. Once the PMP is prepared within the parameters of the USACE guidelines, the RRWC will continue moving forward with the Feasibility Phase in accordance with WRDA Section 203 parameters.

Coordination, collaboration, and cooperation among the Corps at the District level, the Corps at the Division level, Corps Headquarters in Washington, D.C., the RRWC, and the congressional delegation are highly recommended in this decision-making process.
XII. POTENTIAL ISSUES AFFECTING INITIATION OF FEASIBILITY PHASE

No issues affecting the initiation of the feasibility phase have been identified at the time of completion of the reconnaissance phase of study. Continuation of this study into the cost-shared feasibility phase is contingent upon an executed FCSA. Failure to achieve an executed FCSA within 18 months of the approval date of the Section 905(b) Analysis will result in termination of the study. Other than funding, there are no apparent issues at this time that impact on the implementation of the feasibility phase. As iterated previously, should the USACE choose not to continue to the feasibility phase, the Red River Waterway Commission has expressed interest in investigating the possibility of proceeding with the feasibility phase under the authority of Section 203 of the Water Resources Development Act of 1986 as soon as practical.

XIII. VIEWS FROM OTHER RESOURCE AGENCIES

Because this initial investigation requires only limited coordination with other resource agencies and no major impacts are expected, views from other agencies were limited to the Louisiana Department of Environmental Quality (DEQ) and the Louisiana Department of Wildlife and Fisheries (LDWF). Representatives of LDWF commented on the need for further review to minimize or alleviate potential impact to the endangered and/or threatened including but not limited to the Interior Least Tern, which has been known to nest along riverbanks in Louisiana, and the Bluehead Shiner and the Blue Sucker, two rare small fish species known to inhabit the shallows of the Red River. More detailed data from LDWF and DEQ can be expected during the PMP process.

XIV. PROJECT AREA MAP

A map of the study area is provided in Exhibits 1 and 2.
<table>
<thead>
<tr>
<th>自治体名</th>
<th>船名</th>
<th>船籍</th>
<th>吨</th>
<th>8月寄港</th>
<th>9月寄港</th>
<th>10月寄港</th>
<th>11月寄港</th>
<th>12月寄港</th>
</tr>
</thead>
<tbody>
<tr>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
<td>内港</td>
</tr>
<tr>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
<td>外港</td>
</tr>
</tbody>
</table>

注：
1. 外港寄港は主に外港寄港で、内港寄港は主に内港寄港です。
2. 内港寄港は主に内港寄港で、外港寄港は主に外港寄港です。
3. 8月寄港は主に8月寄港で、9月寄港は主に9月寄港です。
4. 10月寄港は主に10月寄港で、11月寄港は主に11月寄港です。
5. 12月寄港は主に12月寄港で、1月寄港は主に1月寄港です。

(数据表内容以实际数据为准)
<table>
<thead>
<tr>
<th>Cargo Provider</th>
<th>Red River Terminals</th>
<th>CIL/CIO Tonnage</th>
<th>Port of Mackinac/Portage</th>
<th>Red River Parich Port Tonnage</th>
<th>Port of Steep River/Busselton</th>
<th>Tonnage average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>17,432.1</td>
<td>1,032,541</td>
<td>8,723,612</td>
<td>4,999,260</td>
<td>17,054,851</td>
</tr>
<tr>
<td></td>
<td>12 Percentages</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
ATTACHMENT B. Estimation of Benefits Without Project (9 ft. channel)

Deepening of Red River Waterway
With 9-Foot Channel

<table>
<thead>
<tr>
<th>Base Year</th>
<th>Total Present Value</th>
<th>Interest Rate</th>
<th>Annual Equivalent Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ 870,143,197</td>
<td>4.375%</td>
<td>$ 43,139,232</td>
</tr>
</tbody>
</table>

Interest Rate: 4.375% Annual Equivalent Value: $43,139,232

Period of Analysis: 50

Capital Recovery Factor: 0.049577164

<table>
<thead>
<tr>
<th>Number Year Factor</th>
<th>Total Present Value</th>
<th>Present Value of W/O Trans Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.95808383 $37,767,900</td>
<td>$36,184,814</td>
</tr>
<tr>
<td>2</td>
<td>0.91792463 $38,068,823</td>
<td>$34,944,310</td>
</tr>
<tr>
<td>3</td>
<td>0.87944875 $38,373,657</td>
<td>$33,747,665</td>
</tr>
<tr>
<td>4</td>
<td>0.84258563 $38,682,455</td>
<td>$32,593,281</td>
</tr>
<tr>
<td>5</td>
<td>0.80726767 $38,995,267</td>
<td>$31,479,618</td>
</tr>
<tr>
<td>6</td>
<td>0.77343010 $39,312,145</td>
<td>$30,405,196</td>
</tr>
<tr>
<td>7</td>
<td>0.74101087 $39,633,143</td>
<td>$29,368,590</td>
</tr>
<tr>
<td>8</td>
<td>0.70995054 $39,958,314</td>
<td>$28,368,427</td>
</tr>
<tr>
<td>9</td>
<td>0.68019213 $40,287,712</td>
<td>$27,403,385</td>
</tr>
<tr>
<td>10</td>
<td>0.65168108 $40,621,392</td>
<td>$26,472,193</td>
</tr>
<tr>
<td>11</td>
<td>0.62436511 $40,959,144</td>
<td>$25,689,756</td>
</tr>
<tr>
<td>12</td>
<td>0.59819412 $41,297,994</td>
<td>$24,947,570</td>
</tr>
<tr>
<td>13</td>
<td>0.57312011 $41,642,063</td>
<td>$24,244,408</td>
</tr>
<tr>
<td>14</td>
<td>0.54909711 $41,996,214</td>
<td>$23,580,350</td>
</tr>
<tr>
<td>15</td>
<td>0.52608107 $42,356,477</td>
<td>$22,954,056</td>
</tr>
<tr>
<td>16</td>
<td>0.50402977 $42,722,857</td>
<td>$22,355,396</td>
</tr>
<tr>
<td>17</td>
<td>0.48290277 $43,105,247</td>
<td>$21,784,076</td>
</tr>
<tr>
<td>18</td>
<td>0.46266134 $43,503,650</td>
<td>$21,238,118</td>
</tr>
<tr>
<td>19</td>
<td>0.44326835 $43,917,063</td>
<td>$20,717,078</td>
</tr>
<tr>
<td>20</td>
<td>0.42468524 $44,345,500</td>
<td>$20,220,027</td>
</tr>
<tr>
<td>21</td>
<td>0.40688993 $44,790,063</td>
<td>$19,746,678</td>
</tr>
<tr>
<td>22</td>
<td>0.38983179 $45,250,726</td>
<td>$19,296,023</td>
</tr>
<tr>
<td>23</td>
<td>0.37349154 $45,736,487</td>
<td>$18,868,016</td>
</tr>
<tr>
<td>24</td>
<td>0.35783620 $46,248,360</td>
<td>$18,462,023</td>
</tr>
<tr>
<td>25</td>
<td>0.34283708 $46,786,320</td>
<td>$18,080,092</td>
</tr>
<tr>
<td>26</td>
<td>0.32846666 $47,349,359</td>
<td>$17,720,046</td>
</tr>
<tr>
<td>27</td>
<td>0.31469860 $47,946,508</td>
<td>$17,380,062</td>
</tr>
<tr>
<td>28</td>
<td>0.30150764 $48,578,766</td>
<td>$17,060,056</td>
</tr>
<tr>
<td>29</td>
<td>0.28886980 $49,247,215</td>
<td>$16,760,069</td>
</tr>
<tr>
<td>30</td>
<td>0.27678129 $49,953,829</td>
<td>$16,480,086</td>
</tr>
<tr>
<td>31</td>
<td>0.26516052 $50,692,618</td>
<td>$16,220,108</td>
</tr>
<tr>
<td>32</td>
<td>0.25402277 $51,468,505</td>
<td>$15,980,137</td>
</tr>
<tr>
<td>33</td>
<td>0.24339737 $52,281,592</td>
<td>$15,760,176</td>
</tr>
<tr>
<td>34</td>
<td>0.23319508 $53,132,880</td>
<td>$15,560,225</td>
</tr>
<tr>
<td>35</td>
<td>0.22342044 $54,021,378</td>
<td>$15,380,287</td>
</tr>
<tr>
<td>36</td>
<td>0.21405551 $54,946,976</td>
<td>$15,220,360</td>
</tr>
<tr>
<td>37</td>
<td>0.20508312 $55,910,774</td>
<td>$15,080,437</td>
</tr>
<tr>
<td>38</td>
<td>0.19648883 $56,903,772</td>
<td>$14,960,525</td>
</tr>
<tr>
<td>39</td>
<td>0.18825085 $57,935,874</td>
<td>$14,860,627</td>
</tr>
<tr>
<td>40</td>
<td>0.18036010 $58,997,076</td>
<td>$14,780,739</td>
</tr>
<tr>
<td>41</td>
<td>0.17280009 $59,108,378</td>
<td>$14,720,861</td>
</tr>
<tr>
<td>42</td>
<td>0.16559688 $59,260,876</td>
<td>$14,680,994</td>
</tr>
<tr>
<td>43</td>
<td>0.15861746 $59,454,574</td>
<td>$14,661,138</td>
</tr>
<tr>
<td>44</td>
<td>0.15196883 $59,688,372</td>
<td>$14,661,288</td>
</tr>
<tr>
<td>45</td>
<td>0.14559687 $59,963,270</td>
<td>$14,671,447</td>
</tr>
<tr>
<td>46</td>
<td>0.13949593 $60,278,270</td>
<td>$14,691,617</td>
</tr>
<tr>
<td>47</td>
<td>0.13364879 $60,633,270</td>
<td>$14,721,800</td>
</tr>
<tr>
<td>48</td>
<td>0.12804879 $61,028,270</td>
<td>$14,772,000</td>
</tr>
<tr>
<td>49</td>
<td>0.12267952 $61,463,270</td>
<td>$14,842,210</td>
</tr>
<tr>
<td>50</td>
<td>0.11753726 $61,948,270</td>
<td>$14,932,430</td>
</tr>
</tbody>
</table>

TOTAL $2,327,198,296 $870,143,197
**ATTACHMENT C. Estimation of Benefits With Project (12 ft. channel)**

<table>
<thead>
<tr>
<th>Number</th>
<th>Year</th>
<th>Factor</th>
<th>With Project Trans Cost</th>
<th>Of With Proj Trans Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.95808383</td>
<td>$31,308,050</td>
<td>$29,995,736.53</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.91792463</td>
<td>$31,558,150</td>
<td>$28,968,003.02</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.87944875</td>
<td>$31,811,501</td>
<td>$27,976,584.70</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.84258563</td>
<td>$32,068,146</td>
<td>$27,020,158.63</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.80726767</td>
<td>$32,328,127</td>
<td>$26,097,451.46</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.77343010</td>
<td>$32,591,488</td>
<td>$25,207,237.52</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.74101087</td>
<td>$32,858,272</td>
<td>$24,348,336.97</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.70995054</td>
<td>$33,128,525</td>
<td>$23,519,614.07</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.68019213</td>
<td>$33,402,291</td>
<td>$22,719,975.48</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.65168108</td>
<td>$33,679,616</td>
<td>$21,948,368.62</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.62436511</td>
<td>$32,937,346</td>
<td>$20,564,929.76</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.59819412</td>
<td>$32,248,532</td>
<td>$19,889,076.05</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.57312011</td>
<td>$31,563,763</td>
<td>$19,236,067.38</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.54909711</td>
<td>$30,983,091</td>
<td>$18,605,107.74</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.52608107</td>
<td>$30,402,291</td>
<td>$17,995,429.73</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.50402977</td>
<td>$29,821,488</td>
<td>$17,406,293.49</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.48290277</td>
<td>$29,237,101</td>
<td>$16,836,985.70</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>0.46266134</td>
<td>$28,654,572</td>
<td>$16,286,818.58</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.44326330</td>
<td>$28,072,003</td>
<td>$15,755,128.95</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.42468824</td>
<td>$27,489,376</td>
<td>$15,241,277.34</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.40688693</td>
<td>$26,906,155</td>
<td>$14,744,647.12</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>0.38983179</td>
<td>$26,322,291</td>
<td>$14,264,843.60</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>0.37349154</td>
<td>$25,736,948</td>
<td>$13,800,693.31</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>0.35783209</td>
<td>$25,151,341</td>
<td>$13,352,243.18</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.34283708</td>
<td>$24,564,128</td>
<td>$12,918,759.76</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0.32846696</td>
<td>$24,040,548</td>
<td>$12,499,728.58</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>0.31469860</td>
<td>$23,500,632</td>
<td>$12,094,565.20</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>0.29866900</td>
<td>$22,943,270</td>
<td>$11,698,847.12</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>0.28393176</td>
<td>$22,376,948</td>
<td>$11,314,843.60</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.26915154</td>
<td>$21,804,485</td>
<td>$10,950,593.31</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>0.25402779</td>
<td>$21,226,291</td>
<td>$10,604,588.97</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>0.23949737</td>
<td>$20,645,548</td>
<td>$10,262,442.97</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>0.22541930</td>
<td>$20,054,291</td>
<td>$9,931,622.85</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>0.21180958</td>
<td>$19,453,128</td>
<td>$9,611,742.71</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.19861043</td>
<td>$18,842,003</td>
<td>$9,302,430.23</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>0.18592551</td>
<td>$18,222,707</td>
<td>$8,993,326.10</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>0.17360312</td>
<td>$17,604,496</td>
<td>$8,694,803.69</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>0.16164683</td>
<td>$17,001,372</td>
<td>$8,396,368.43</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>0.15002450</td>
<td>$16,400,003</td>
<td>$8,099,326.10</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.13955989</td>
<td>$15,800,003</td>
<td>$7,802,386.43</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>0.12924593</td>
<td>$15,200,003</td>
<td>$7,505,526.99</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>0.11907487</td>
<td>$14,600,003</td>
<td>$7,209,859.69</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>0.10903415</td>
<td>$14,000,003</td>
<td>$6,914,419.66</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>0.09912307</td>
<td>$13,400,003</td>
<td>$6,619,199.66</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.08933038</td>
<td>$12,800,003</td>
<td>$6,324,199.66</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>0.07964510</td>
<td>$12,200,003</td>
<td>$6,030,399.66</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>0.06996610</td>
<td>$11,600,003</td>
<td>$5,736,799.66</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.06028810</td>
<td>$11,000,003</td>
<td>$5,443,499.66</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>0.05060210</td>
<td>$10,400,003</td>
<td>$5,150,499.66</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.04091610</td>
<td>$9,800,003</td>
<td>$4,857,799.66</td>
<td></td>
</tr>
</tbody>
</table>

**Total Present Value** $721,598,317

**Period of Analysis**

**Capital Recovery Factor** 0.049577164

**Base Year**

**Total Present Value** $721,598,317

**Interest Rate** 4.375%

**Annual Equivalent Value** $35,774,798
Congressional Record Documents
Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Red River Below Denison Dam, Arkansas, Louisiana, Oklahoma, and Texas, published as House Document No. 304, 90th Congress, 2nd Session, and any other pertinent reports to determine whether modifications to the recommendations contained therein are advisable at the present time in the interest of providing a 12-foot navigation channel, ecosystem restoration, bank stabilization, flood damage reduction and related purposes on the J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana.

Adopted: June 28, 2006

ATTEST: 

DON YOUNG
CHAIRMAN
ENERGY AND WATER APPROPRIATIONS BILL, 2006

JUNE 16, 2005.—Ordered to be printed

Mr. DOMENICI, from the Committee on Appropriations, submitted the following

REPORT

[To accompany H.R. 2419]

The Committee on Appropriations, to which was referred the bill (H.R. 2419) making appropriations for energy and water development for the fiscal year ending September 30, 2006, and for other purposes, reports the same to the Senate with an amendment and recommends that the bill as amended do pass.

Amount in new budget (obligational) authority, fiscal year 2006

Total of bill as reported to the Senate $31,245,000,000
Amount of 2005 appropriations 29,832,280,000
Amount of 2006 budget estimate 29,746,728,000
Amount of House allowance 29,746,000,000
Bill as recommended to Senate compared to—
  2005 appropriations +1,412,720,000
  2006 budget estimate +1,498,272,000
  House allowance +1,499,000,000
<table>
<thead>
<tr>
<th>Location</th>
<th>Funding</th>
<th>Planning</th>
<th>Stewardship</th>
<th>Restoration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atchafalaya River and Bayous Chene, Boeuf, and Black, LA</td>
<td>585</td>
<td>1,500</td>
<td>1,500</td>
<td>150</td>
</tr>
<tr>
<td>Bayou Sorrel, LA</td>
<td>612</td>
<td>700</td>
<td>700</td>
<td>100</td>
</tr>
<tr>
<td>Cross Lake Water Supply Enhancement, LA</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Bayou, Plaquemines Parish, LA</td>
<td>100</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Bennett Johnston Waterway Study, LA</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Louisiana Coastal Area Ecosystem Restoration, LA</td>
<td>5,000</td>
<td>5,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plaquemines Parish Urban Flood Control, LA</td>
<td>15,000</td>
<td>15,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port of Iberia</td>
<td>750</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Bernard Parish Urban Flood Control, LA</td>
<td>636</td>
<td>636</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Charles Parish Urban Flood Control, LA</td>
<td>450</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Baton Rouge Parish, LA</td>
<td>100</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Pearl Navigation, LA and MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Shore Lake Ponchartrain, LA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Searsmont Harbor, ME</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacostia River and Tributaries, MD and DC</td>
<td>180</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anacostia River and Tributaries, PG County Levee, MD &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baltimore Metro WMR Res.-Patapsco and Back Rivers, MD</td>
<td>500</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chesapeake Bay Comprehensive Plan, MD</td>
<td>525</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chesapeake Bay Shoreline, Maryland Coastal Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chesapeake Bay—SEDI Buoy, Model</td>
<td>900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Shore, MD, Chesapeake Bay Island, MD</td>
<td>500</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Potomac River Greater Seneca/Muddy Branch, MD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackstone River Watershed Restoration, MA and RI</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Massachusetts Ecosystem Restoration, MA</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston Harbor (45-foot Channel), MA</td>
<td>650</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detroit River Masterplan, MI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Letters of Support
August 31, 2016

Colonel Michael C. Derosier, Commander
U.S. Army Corps of Engineers
Vicksburg District
155 Clay Street
Vicksburg, Mississippi 39183-3435

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

Dear Colonel Derosier:

The Red River Waterway Commission (RRWC) is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The Red River Valley Association Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and the Gulf Intracoastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons. The estimated cost savings range from $1.50 to $4.00 per ton.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.
As the Chair of the Red River Waterway Commission and Secretary of the Department of Transportation and Development, I support the 12 foot draft request.

If you have questions, please contact Phil Jones at (225) 379-3030.

Sincerely,

Shawn D. Wilson, Ph.D.
Secretary

SDW:SJB:sjb
August 31, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet and Cleco is supporting the efforts of the Red River Waterway Commission in accomplishing such modification.

In 2009 Cleco put into commercial operation its latest edition to our generation fleet; Madison Unit 3 located in Lena, La. Madison 3 is a Circulating Fluidized Bed (CFB) unit that can burn a multitude of fuels in its boilers for the purpose of generating power. The addition of Madison 3 was to diversify our generation portfolio and become less reliant on a particular fuel. On site with Madison 3 is our Rodemacher Unit 2; a Powder River Basin coal fired unit that receives and burns over 2 million tons of coal each year. At the time of Rodemacher 2’s construction the option of water transportation was not available.

Madison 3’s entire fuel supply is delivered by barge from Mississippi River origins and then up the Red River to Cleco’s unloading facility. The current 9-foot draft limitation on the Red River limits the advantage of utilizing the U.S. Waterways to deliver commodities that originate on a 12-foot draft waterway.

Cleco currently moves up to 2.5 million tons of commodities such as petroleum coke, Illinois Coal, and Limestone (Chemstone) per year. Cleco, through our logistics provider, operates 3 to 6 boats pushing 42 to 66 barges annually delivering products to our dock.

Cleco believes by increasing the channel depth to 12-feet they could reduce the total number of tows by 20%, as well as reduce the boat requirements by as much as 25%. Fewer barges would be required to move the same amount of tonnage as well as reducing boat fuel. Cleco estimates the increase in draft depth could reduce overall logistics costs by as much as $2 to $3 per ton or up to $8.1 million annually.

A 12-foot draft on the Red River would increase the economic development opportunities along the river by reducing the overall costs and creating a more competitive environment with alternative means of transportation such as the railroads.

It is Cleco’s understanding that about 90% of the entire 210 miles of the Red River is at 12-foot draft. Increasing the draft depth of the Red River will be benefited from supply sources to end users by eliminating the un-used cargo capacity or dead freight of barges being loaded on the Mississippi River.
with a Red River destination; therefore reducing overall transportation costs. Cleco’s goal is to produce the lowest cost power for its customers; utilization of the U.S. navigable waterways has helped us do that. The increase in draft depth will ensure that Cleco will continue to fuel the Madison 3 unit with the most reliable and lowest transportation cost possible.

Cleco fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel, as well as, strongly encouraging the Corp pursue the 12-foot channel modifications necessary that would increase the productivity, efficiency, and reliability of the Red River.

Respectfully,

Calvin Johnson
Manager Fuel Supply & Strategy
TO: U.S. Army Corps of Engineers 08/22/2016

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Priefert Steel has been moving 1,500 tons of steel coils per barge to the Port of Caddo Bossier since the beginning of 2015; we import steel coils to up the Red river to Shreveport.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

The Red River Waterway Commission and the Port of Caddo Bossier have been successful in assisting our company to increase tonnage. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. Justifications include:

1. A 12-foot channel is essential to keep the waterway open (has been closed to navigation over 21 weeks in past 18 months primarily to silt buildup and only a 9ft channel).
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company and does not allow us to barge Steel from the Northern United States that is more cost effective for Priefert.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system and each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.

The estimated cost savings to our company would range from $1.00 to $2.00 per ton. We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet. Priefert Manufacturing strongly supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel.

Sincerely,

Chris Shipp
General Manager Priefert Steel
August 19, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Terral RiverService is in support of the request from the Red River Waterway Commission.

Terral RiverService is an inland boat and barge company that operates on the Red River. Terral has been moving barges and selling barge freight on the Red River since 1992. Currently Terral moves around 2,000,000 tons of cargo on the Red River System. Terral employs around 50 people whose jobs are dependent on the viability of barge navigation on the Red River.

The main benefit to deepen the Red River is to reduce freight rates to customers relying on barge traffic on river. Almost every barge Terral tows on the red river is coming from or is going to a river that is already authorized to a 12 foot draft. Increasing the draft of the Red River would make Terral’s customers more competitive and in many cases would result in a cost savings being passed on to the end user, the public. 90% of the Red River already exceeds a 12 foot draft and the authorization would only result is extra dredging for 10% of the river. The locks are currently capable of passing a 12 foot draft tow, but would only need additional dredging at the approaches.

A 9 foot draft tow of 6 barges holds around 9000 tons. A 12 foot draft tow of 6 barges would hold over 12000 tons of material. Barges loaded out of St Louis heading to the Port of Alexandria currently cost around $15 per ton. The only reason they would be loaded to 9 foot is due to the last 90 miles of the 920 mile trip. If we could load to around 12 foot drafts the effective rate would be about $11.25 per ton. This is a $3.75 per ton savings that would save a customer moving 100,000 tons $375,000. This cost savings would change the economics of moving barges on the Red River and would likely open up the area to greater economic prosperity.

Terral is certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable Terral to provide our customers with as much as $4,000,000 in savings per year (this is a blended rate of towing and barge freight sold per year). To develop and realize full potential, the Waterway must be authorized at 12 feet.
Terral RiverService fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. Terral strongly encourages the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully,

Gabe Gattle
VP of Transportation

Terral RiverService, Inc.
DATE: August 8, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
    Support for a 12-Foot Channel

Ladies and Gentlemen:

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Since commencing operations in the mid-1990's, the Caddo Bossier Parishes Port Commission's ("Port's") mission has been to serve, not only as a multi-modal commerce hub, but also as a key economic development agency working to attract investments and create and retain jobs at The Port complex, as well as throughout Caddo and Bossier parishes. Fortunately, The Port has a successful track record of creating as well as retaining jobs. As a result, 1,700 people work at the companies at The Port complex alone.

Shortly after Benteler Steel chose The Port complex as the site for their $975 million steel tube manufacturing facility, The Port began a thoughtful process for land acquisition for one reason: only 700-acres of greenfield sites remained available and that acreage was made up of much smaller tracts of land. The Port no longer owned a site that could accommodate another Benteler Steel or Pratt Industries in our area.

As part of an in-depth Five Year Master Plan, this comprehensive expansion plan was completed in the fall of last year and revealed 18 viable sites in both Caddo and Bossier Parishes. These sites were determined "viable" because each site met a list of pre-determined criteria. Within these 18 sites are hundreds of separate tracts of land. The Port's goal is to purchase 3,000 acres and develop at least two 500-acre "mega" sites for large footprint companies. The remainder of the property would be for smaller developments in the 10-100 acre range. The top site on our radar includes some 3000 +/- acres and over four miles of river frontage!

We believe additional land will facilitate the fulfillment of The Port's mission, which is to enhance commerce, attract dollar investment and create employment for the parishes of Caddo and Bossier. In addition, it could lead to the creation of 15,000 direct and indirect jobs for the region.

"This institution is an equal opportunity provider and employer."

MEMBERS: Sam N. Gregorio, President; Rick C. Prescott, Vice President; Roy Griggs, Secretary-Treasurer
Lynn Austin; Erica R. Bryant; James D. Hall; Capt. Thomas F. Murphy; James L. Pannell; Steve Watkins
Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway is currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The Caddo Bossier Parishes Port Commission fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Eric England, PPM
Executive Port Director
TO: U.S. Army Corps of Engineers  
RE: J. Bennett Johnston Waterway  
Support for a 12-Foot Channel

I'm writing to ask your support of the Red River Waterway Commission’s request to deepen the J. Bennett Johnston Waterway from 9 feet to 12 feet. Deepening the channel would ensure efficient transport of commercial tows, support employment in the Caddo-Bossier area and would provide increased safety benefits.

Genesis Energy, L.P. is a midstream energy services provider that offers infrastructure and logistics to move our customers’ products to market in a safe, efficient and cost effective manner. Our operations are primarily in the Gulf Coast region of the United States, including Texas, Louisiana, Arkansas, Mississippi, Alabama, Florida, Wyoming and in the Gulf of Mexico. Genesis utilizes the Red River to move and store product for our customers.

- Genesis operates the Red River Terminal, located at the Port of Shreveport-Bossier. Genesis and its refinery customers depend on the Terminal to store refined products and the Red River is the primary means for southbound transportation.
- Genesis Marine facilitates this transportation need, but only if its barges can access the Terminal.
- The Refinery Services division utilizes the Terminal and uses the Red River to move and store caustic soda for its and its customers’ operations.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. However, there are challenges in using the waterway. Typically the waterway has high water or low water and there is no intermediary level. This leads to occurrences of unexpected shoaling. By dredging the waterway, it will make the channel more reliable to use.

In addition, the current depth makes the waterway inefficient and costly to use. Our businesses have been required to light load barges and use multiple barges to complete a haul that would normally only take one barge. Genesis and its customers incur substantial unnecessary costs as a result. In addition, we have encountered lost business opportunities due to the inefficiency and unreliability of the river. By deepening the channel, it would allow the barges to be loaded to their full capabilities thus allowing more efficient, cost effective and reliable transport.

Changing the depth of the waterway to 12 feet would allow for safe, reliable and efficient transportation of cargo. More importantly, the change would allow the Red River to be competitive with commercial inland waterways, most of which already operate at a depth of 12 feet. The waterway is already set up to support a channel that is 12 feet as each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
Genesis Energy fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Thank you for your consideration.

Sincerely,

[Signature]

Grant Sims
CEO
Genesis Energy, L.P.
Date: 8/18/2-16

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
    Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Florida Marine Transporters (FMT) transports a variety of products on the Red River (rolled coil steel, Frac Sand, Scrap Metal, Aggregate, Coal, Pet Coke, etc.) by barge to serval companies. FMT also owns and operates a terminal located at mile 97 on the Red River where we move, store and sell products.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable as possible.

Unfortunately, a 9-foot draft has proven to be less than reliable during low water events and when silting from high water events occur. In order to provide a business friendly, reliable, efficient, economically sound river transportation and spur economic growth along the Red River a 12-foot channel is needed.

The reasons and justifications why such action must be taken include:

1. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons or more depending on barge size.
2. By increasing barge capacity along the Red River, Economic Development professionals will have a fighting chance to bring new industrial businesses along the red river that supports communities with taxable revenues and high wage job creation.
3. Increasing barge capacity and marine transportation will reduce CO2 emissions by rail and truck (see attached chart). A reduction in CO2 emissions benefits everyone.
4. Competition for long haul rail and trucking to reduce freight rates which attracts new businesses to the region.
5. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company and customers.
6. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
7. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
The estimated annual cost savings to our company with a 12-foot channel would range from $1.50 to $4.00 per ton or $1,500,000 to $4,000,000. Savings of this nature is often shared with the companies we move cargo for. Most important to note is that when barge transportation rates and capacities on the Red River are comparable to other rivers transportation rates, new businesses will open. This is the type of economic impact is needed in Central Louisiana.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our company to continue grow and encourage new business to locate along the Red River creating high paying jobs in Central Louisiana. To develop and realize the full potential, the Waterway must be authorized at 12 feet.

Florida Marine Transporters is a Louisiana based company that fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Kirk C. Landry
Vice President Government Relations
985-502-4805
Kirk.landry@flmarine.com
2360 5th Street
Mandeville Louisiana 70448
Date: August 2, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Central Louisiana Regional Port, a public port located in Rapides Parish, has a variety of companies that depend upon the stability of the Red River.

Currently the J. Bennett Johnston Waterway is authorized and has maintained a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. Our customers tell us the reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
3. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
4. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The estimated cost savings to port tenants would range from $1.50 to $4.00 per ton. Recent shipments of bulk fertilizer could show a minimum savings of approximately $150,000 and can be achieved with a 12-foot channel. Many of the Central Louisiana Regional Port’s customers depend on these savings as the margin of such commodities is minimal. Savings can certainly impact the surrounding economy by way of increased capital investment, jobs, benefits, bonuses, etc.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and utilize at its full potential, the Waterway must be authorized at 12 feet.

The Central LA Regional Port fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Blake K. Cooper
Executive Director
August 17, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
    Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Bierden Construction Company uses the Red River Waterway by receiving rock, lime and frac sand into the Hanna Port. We depend on this waterway to supply our customers with material needed at a fair and competitive price.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include competition for long haul rail to reduce freight rates, which is a national benefit. Also loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The estimated cost savings to our company would range from $1.50 to $2.00 per ton. Recent shipments of Ag Lime show that a potential savings of $18,000 per tow could be realized with a 12-foot channel.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our company to continue to supply our customers with competitive rates and to develop and realize the full potential of using the Red River as a source to receive material.

Bierden Construction Company fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Ryan Dupree
Vice President
August 19, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Savage Inland Marine is in support of the request from the Red River Waterway Commission.

Savage Inland Marine is an Inland Marine Logistics and Freight handling company that provides logistics and dock operations on the Red River. Savage has been moving barges and selling barge freight on the Red River since 1992. Annually Savage unloads and provides logistics for around 2,200,000 tons of cargo on the Red River. Savage employs around 20 people whose jobs are dependent on the viability of barge navigation on the Red River.

The main benefit to deepen the Red River is to reduce freight rates to customers relying on barge traffic on river. Almost every barge Savage handles on the red river is coming from or is going to a river that is already authorized to handle a 12’ draft. Increasing the draft of the Red River would make Savage’s customers more competitive and in many cases would result in a cost savings being passed on to the end user, the public. Currently 90% of the Red River exceeds a 12’ draft and the authorization would only result in dredging for 10% of the river. The locks are currently capable of passing a 12’ draft tow, but would only need additional dredging at the approaches.

A 9’ draft tow of 6 barges holds around 9000 tons. A 12’ draft tow of 6 barges would hold over 12000 tons of material. Barges loaded out of St Louis heading to the Port of Alexandria currently cost around $15 per ton. The only reason they would be loaded to 9 foot is due to the last 90 miles of the 920 mile trip. If we could load to around 12’ drafts the effective rate would be about $11.25 per ton. This is a $3.75 per ton savings that would save our customer $8,250,000 annually. This doesn’t include the saving and efficiency that would be realized by decreasing the number of shifts at the loading and unloading facilities. A savings of this magnitude would drastically increase the viability of the Red River to similar end users.

Savage is certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To recognize the savings per ton, and entice future construction along the Red River the Waterway must be authorized at 12 feet.

Savage Inland Marine fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. Savage strongly encourages the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully,

Joshua Knichel
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Pine Bluff Sand and Gravel ships material from the deeper Mississippi River to our material yard on the Red River at Alexandria, Louisiana and we intermittently tow crushed stone to various locations up the Red River. A 12' channel on the Red River would allow us to put at least 40% more in each barge.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

To lower costs to state and federal agencies, customers, consumers and all involved, the 12' channel would make a very significant difference. In addition to the additional 40% tonnage in each barge, there would be a considerable reduction in greenhouse gases and diesel fuel consumption. We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.

Pine Bluff Sand and Gravel Company fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

PINE BLUFF SAND AND GRAVEL COMPANY

W. Scott McGeorge, Senior Vice President
TO: U.S. Army Corps of Engineers  

RE: J. Bennett Johnston Waterway  
Support for a 12-Foot Channel  

August 23, 2016  

The Ports Association of Louisiana (PAL) is writing to support the Red River Waterway Commission’s request of modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.  

PAL has several member ports located along the Red River and deepening of the J. Bennett Johnston Waterway would greatly improve shipping efficiency and productivity in shipping agricultural products, fertilizers, wood products, steel and pipe.  

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this waterway safe and reliable. Now it is time to make it more efficient.  

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include  

1. Competition for long haul rail to reduce freight rates, which is a national benefit.  
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.  
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.  
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.  
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.  

Without this proposed project modification, our member ports will be unable to take advantage of a deepened channel and the benefits and cost-savings it will afford.  

We are certain that the benefits far outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.  

PAL fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel, and we strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.  

Sincerely,  

Joseph Accardo, Jr.  
Executive Director  
Ports Association of Louisiana
August 8, 2016

To: U.S. Army Corps of Engineers

Re: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

Annex Marine, Inc. supports the modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. The proposed modification would reduce the volatility we have seen on the river, over the last two years in particular, and would also allow better utilization of our equipment which can operate variously at maximum drafts of 9'-6" up to 11'-0".

Not only would risk of damage to equipment be reduced due to operating in a deeper channel but ton-mile costs would drop significantly with the ability to bring more tonnage per trip. We often are limited to an 8'-6" draft, occasionally less, for barge movements to Shreveport due to river conditions. A comparison of tonnage at 8'-6" vs. the maximum tonnage we could accommodate with the deeper channel per trip for our two typical barge configurations is as follows:

<table>
<thead>
<tr>
<th>Config</th>
<th>Draft</th>
<th>Tonnage</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Config 1</td>
<td>8'-6&quot;</td>
<td>3,600 SST (short tons)</td>
<td>an increase of 600 SST per trip</td>
</tr>
<tr>
<td></td>
<td>9'-6&quot;</td>
<td>4,200 SST</td>
<td></td>
</tr>
<tr>
<td>Config 2</td>
<td>8'-6&quot;</td>
<td>2,850 SST</td>
<td>an increase of 1,550 SST per trip</td>
</tr>
<tr>
<td></td>
<td>11'-0&quot;</td>
<td>4,400 SST</td>
<td></td>
</tr>
</tbody>
</table>

The increase in tonnage per trip could mean a reduction in ton-mile costs of 10% or more keeping Annex's current volume to Shreveport constant.

Our understanding is that all locks on the Waterway are capable of passing 12 foot tows and that more than 90% of the Waterway is already at or exceeding a 12 foot channel so only roughly 20 miles would need to be altered in order to allow industry to take advantage of authorized 12 foot channel depths in the Lower Mississippi River, Arkansas River, Atchafalaya River and Intracoastal Waterway.

For all these reasons, Annex Marine, Inc. fully supports the proposed deepening of the J. Bennett Johnston Waterway.

Respectfully yours,

Donique Browsh
Vice President, Annex Marine, Inc.
TO: U.S. Army Corps of Engineers  
RE: Authorization for 12' Channel, J. Bennett Johnston Waterway

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, NWS, RRWC, public ports, and industry, have made great efforts to make this Waterway safe and reliable. Now it is time to make it efficient. The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet and this Association is in full support of this initiative.

There is one major action that will provide the Waterway with the most competitive edge against rail, a 12-foot channel. Following are the reasons and justifications why such action must be taken.

- **Competition:** As long as rail rates drop to meet waterborne rates, industry cannot be expected to change the way they conduct business if they are experiencing the benefits. We must continue to do what is necessary to reduce waterborne rates.
- **Authorization of Adjacent Systems:** ALL major Waterways south of Cairo, Illinois, are currently authorized for a 12 foot channel, **except our Waterway,** to include: Mississippi River, Arkansas River, Atchafalaya River and Gulf Intra Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 foot, creating a great inefficiency for industry and shippers.
- **Current Channel Depths:** It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
- **Lock Capability:** Each of the five locks on the Waterway is capable of passing 12-foot draft vessels.
- **Additional Cargo Capacity:** As a 'rule of thumb' one barge carries 1,500 tons of cargo, loaded at 9'. Loading a barge to 12 feet provides an additional 3', 1/3 more capacity, or 500 tons per barge. A typical tow for this Waterway pushes 6 barges. Loading to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons; therefore, a 6 barge tow would be carrying the same volume as 8 barges. An important factor is that the same tow and crew would be used keeping the cost the same, providing a lower cost per ton.
- **Ecosystem Benefits:** Positive impacts due to 'notched' dikes, fish habitat and Least Tern habit restoration could be included in this project.

**Economic Analysis:** The most important reason to justify a 12-foot channel would be the economics. Estimates comparing the potential cost per ton and savings to industry were considered for various commodities. Rates also vary depending on the port destination, using the Port of Shreveport-Bossier as the example port, which would experience the most savings. The main commodities considered were liquid petroleum, construction stone, fertilizer and coal. Costs per ton will vary depending on type product and product value.
The estimated cost savings would range from $1.50 to $4.00 per ton. Recent shipments of liquid petroleum show that a potential savings of $10,000 per barge would be realized if there was a 12-foot channel.

Another example of an economic benefit is for a user such as the CLECO and their Rodemacher power plant near Boyce, LA. With the potential to move 3 million tons of coal and limestone per year the transportation savings would be a major factor in reduced power rates to customers.

Currently sand & gravel to Shreveport and Bossier City move by unit train, which are lower than waterborne rates. A 12-foot channel would make barge transport more competitive and potentially transfer that commodity from rail to barge.

**Conclusion:** We are certain that the benefits outweigh the costs for our Waterway to be maintained at 12 feet. Minimum maintenance dredging and navigation structures would be required. The RRWC had The Shaw Group conduct a study for a 12-foot channel which is included in the official submission. The savings per ton will enable the public ports to market the Waterway and be competitive to recruit industries, such as the paper industries, to use waterborne transportation. To compete and realize the full potential, the Waterway must be authorized at 12 feet.

The Red River Valley Association supports the Red River Waterway Commission in their efforts to modify the J. Bennett Johnston Waterway from a 9 foot to 12 foot navigation channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully Presented:

[Signature]

Richard Brontoli
Executive Director
August 15, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 to 12 feet. Luhr Bros., Inc. has an aggregate yard at mile 82 which services several private contractors as well as many municipalities, government agencies and highway supply contractors with a variety of materials used in their operations. We bring in over 500,000 tons of material each year for this purpose.

The RRVA navigation committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports and industry, has worked tirelessly to make the waterway reliable and safe for transportation of goods. We feel it is time to make it more efficient.

These waterway proponents have been successful in assisting Luhr Bros., Inc. to increase tonnage on the river and to bring in new users. The one major factor that would provide the waterway with the most competitive advantage would be a maintained 12 foot channel. Our material has to transit rivers that are already authorized at 12 feet, which is the Mississippi, Atchafalaya, and the ICWW. We must load our barges to 9 feet because of the waterway and this causes a great inefficiency for our company. It is estimated that the waterway is at or more than 12 feet 90% of the year. Our volume of material would increase from approx., 9,000 tons to 12,200 tons per 6 barge tow.

The cost savings to our company with the 12 foot channel could range from $1.75 to $3.50 per ton depending on the type of material. Recent shipments of aggregates could potentially save us on average $8,400.00 per tow which could be passed on to our customers. This would also reduce the number of tows needed per year which would be a great economic benefit to us. We are certain that the benefits outweigh the costs of the minimum construction and O&M that would be required to have a 12 foot channel.

Luhr Bros., Inc. fully supports the efforts of the Red River Waterway Commission to get the waterway authorized at 12 feet. We strongly encourage the USACE to authorize the 12-foot channel modification.

Sincerely,

Lonnie Dunn
Project Manager
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The City of Bossier City strongly supports the Red River Waterway Commission and the projects they need. Our City and region has received outstanding economic development as a direct result of the J. Bennett Johnston Waterway. The Port of Shreveport/Bossier City would not have happened without this waterway system. Increasing the channel depth to 12 feet will have a major impact on the region’s continued economic development. The jobs created as a result of the waterway have been enormous and will grow significantly with the increased channel depth and resulting barge traffic. It is all the more important due to the rapid congestion of the Interstate and State Highways and resulting demand for more barge capacity as a viable, cost effective transportation mode. The improved quality of life for State residents is reflected in the dramatic increase of fishing, boating, parks and walking trails along the river through creation of this waterway. We urge you to approve increasing the channel depth to 12 feet.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
TO: U.S. Army Corps of Engineers  
RE: J. Bennett Johnston Waterway  
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Red River has been a vital part of the City of Shreveport since the original settlement in 1836. Currently, the citizens of the City of Shreveport enjoy the Red River waterway in many different ways. One of the main attractions is recreational boating and fishing. The City of Shreveport also feels the impacts of the River as a shipping route. The Port of Caddo-Bossier has been and continues to have a large economic impact on the City of Shreveport. A key to our ability to recruit and retain businesses is based upon our multi-modal system, which offers a real competitive advantage to other sites that utilize truck and rail. Presently, the Port has seventeen (17) companies with over 1,700 employees.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRWA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
3. Each of the five locks on the Waterway is currently capable of passing 12-foot draft tows.
4. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
5. In increasing barge traffic, the long term effects are not only fiscal savings, but they also benefit local safety and the environment. Barge transportation is the safest and greenest method of transportation.
6. Not only do barge transportation safety incidents number exponentially less than trucking and rail; they also have the added benefit of reducing the number of trucks on the road, which reduces traffic congestion.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries.

To develop and realize full potential, the Waterway must be authorized at 12 feet.

The City of Shreveport fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Ollie S. Tyler  
Mayor
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

On behalf of the Bossier Chamber of Commerce Board of Directors and 900 Members we support the Red River Waterway Commissions efforts to deepen the channel from 9 feet to 12 feet. The contribution our Ports and Waterway have made to the economic development of our region is astronomical. Bentler Steel alone will have generated over 675 new and high quality jobs for our region.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include the competition for long haul rail to reduce freight and competition for long haul rail to reduce freight rates, which is a national benefit and each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The Bossier Chamber of Commerce fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Michelle Cavanaugh
Director of Government Relations
To: U.S. Army Corps of Engineers  

Re: J. Bennett Johnston Waterway - Project Modification for 12-Foot Channel  

I am writing in support of a project modification request submitted by The Red River Waterway Commission (RRWC) to deepen the authorized channel on the J. Bennett Johnston (JBJ) Waterway from 9 feet to 12 feet.

Deepening the authorized channel to 12 feet makes sense for both navigation and commerce. Each of the five locks on the JBJ Waterway are capable of passing 12-foot draft tows and it is estimated that the controlling depth of the JBJ Waterway is at or exceeds 12 feet for over 90 percent of the 210-mile system. Currently, barges destined for the JBJ Waterway from 12-foot authorized channels have to be special loaded to accommodate a 9-foot draft. Deepening the channel to 12 feet will ameliorate this problem and allow 6-barge tows to increase tonnage from 9,000 to 12,000 tons. This will also increase competition with long haul rail and help reduce freight rates.

The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make the JBJ Waterway safe and reliable. Deepening the authorized channel to 12 feet would have the added benefit of making it more efficient and help attract new industry and jobs to a rural and underserved region.

As U.S. Representative of Louisiana’s Fifth Congressional District, I know how important this project is to the state of Louisiana and the surrounding region. I strongly support the RRWC’s request to deepen the authorized channel to 12 feet and respectfully urge the Corps to give full consideration to this project modification.

Sincerely,

Ralph Abraham, M.D.  
Member of Congress
August 5, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Bossier Parish Police Jury has provided financial support for various projects to enhance The Port. The Benteler Steel/Tube Project at The Port assisted with the creation of a training facility at the Bossier Parish Community College. Over the years, The Port has provided a substantial economic impact for this region, with a large majority of the workforce at The Port residing and shopping in the Parish of Bossier, creating a positive economic impact for the Parish of Bossier.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The Bossier Parish Police Jury fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

[Signature]

William R. Altimus
Parish Administrator

WRA/rdh
August 15, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
    Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The City of Natchitoches has fostered a strong relationship with the Red River Waterway Commission and the Natchitoches Port Commission. The Natchitoches Port and the Red River Waterway Commission plays an important role in economic development, creating a positive economic ripple that strengthens Natchitoches Parish.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The City of Natchitoches fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

[Signature]

Mayor, Lee Posey
August 5, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Central Louisiana Regional Chamber of Commerce fully supports the Red River Waterway Commission’s requested modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Currently, the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made the waterway safe and reliable. Deepening the authorized channel would make it more productive and efficient, increasing barge traffic and tonnage.

The Central LA Regional Port, located in Alexandria, recently reorganized into a parish-wide entity to position it for future growth. The 256 acres of current port property, is occupied by a host of industrial enterprises that have created jobs, generated tax revenues, and enhanced the local economy.

Of the planned $15 million in infrastructure investments at the port, $10 million has already been spent to add an operations center, roadways, and to prepare the site for Cool Planet’s operation at the port. Funds are coming from the state of Louisiana, the Red River Waterway Commission and the company itself.

Other port-based operations continue to make a significant impact on the local economy, including DISTRAN Packaged Substations—a subsidiary of Crest Industries, Calvary Industries, CHS, and Terral River Service. The port was also employed in 2015 to barge in new electric generators for the city of Alexandria, and by Pineville-based Hayes Manufacturing to ship manifolds for the oil industry. The U.S. Army and National Guard have also used the port to move large shipments of equipment and vehicles.

Plans are in place to foster future growth at the Central LA Regional Port. For example, the port could conceivably develop a dock facility on the north side of the river at the former International Paper mill site. That spot is where Revolution Aluminum, LLC has announced plans to build a $2.4 billion aluminum mill complex that would create 1,400 jobs with an average salary of $70,000.

While waterway industries have located in our region, recruiting new users is critically important. There is one major action that will provide the RRW with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:
1. Competition for long haul rail to reduce freight rates, which is a national benefit.

2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our waterway must be special loaded to 9 feet, creating a great inefficiency for companies.

3. It is estimated that the controlling depth of the waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.

4. Each of the five locks on the waterway are currently capable of passing 12-foot draft tows.

5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.

Estimates comparing the potential cost per ton and savings to industry of a 12-foot channel were considered for various commodities. Rates also vary depending on the port destination. The example shown below uses the Caddo-Bossier Port which would experience the most savings. The main commodities considered were liquid petroleum, construction stone, fertilizer and coal. Costs per ton will vary depending on type product and product value.

The estimated cost savings would range from $1.50 to $4.00 per ton. Recent shipments of liquid petroleum show that a potential savings of $10,000 per tow would have been realized had there been a 12-foot channel.

Another example of great economic benefit is for a user such as CLECO and its Rodemacher power plant near Boyce, L.A. With the potential to move 3 million tons of coal per year, the transportation savings would be a major factor in reduced power rates to customers.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries.

For these reasons, the Central Louisiana Regional Chamber of Commerce strongly supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great natural resource.

Sincerely,

Deborah Randolph
President
Central LA Regional Chamber of Commerce
U. S. Army Corps of Engineers

To Whom It May Concern:

Re: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

One of the most exciting economic engines for Caddo Parish is activity at the Port of Caddo-Bossier (the “Port”) which has been a significant contributor of economic growth in Caddo Parish. An economic impact report prepared by Dr. Loren Scott found that for every job created at the Port, four more indirect jobs are created in the Caddo and Bossier communities. The Red River Waterway Commission (RWC) is an active partner in helping the Port achieve its mission to promote job growth in Caddo and Bossier. The Red River connects the Caddo Parish region to the world and the Port and the RWC work hand in hand to promote recreational and commercial opportunities on the Red River. The Port has collected over $88 million in property tax revenue since 1993 and the return on property tax is 17:1. Total public and private investment at the Port has exceeded $1.5 billion.

Currently, the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

- Competition for long-haul rail to reduce freight rates, which is a national benefit.
- Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
- It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.
The Parish of Caddo fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Very truly yours,

[Signature]

Dr. Woodrow Wilson, Jr.
Administrator & CEO

WWJr/kkb
August 30, 2016

TO: U.S. Army, Corps of Engineers

RE: J. BENNETT JOHNSTON WATERWAY
SUPPORT FOR A 12-FOOT CHANNEL

As the local sponsor, the Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway that would authorize deepening the channel from nine feet to twelve feet. This is to inform you that the Natchitoches Parish Port Commission supports this modification.

As a member of the Red River Valley Association’s Navigation Committee, I can say that all of the companies and government agencies that are involved with the waterway have worked very hard to make the river safe and reliable. We support the proposed modification as a means of making the river more efficient and competitive.

The Natchitoches Parish Port is one of the four public ports located on the river. Having been operational since 1996 we have seen a large amount of cargo pass through the Port. As of the end of 2015 almost 1.7 million tons of material has moved in or out of the Port via barge. Over the same time frame almost 2.4 million tons of cargo has been moved by rail. This disparity in the tonnage figures is increasing each year due to the disparity in freight rates between the two modes of transportation. Deepening the river from nine feet to twelve feet would increase the efficiency of barge transportation thereby making it more competitive with the rail transportation. This increased efficiency would make barge transportation more appealing for the Port’s existing tenants as well as companies the Port is trying to attract.

Currently frac sand is arriving at the Port by both rail and barge. Deepening the river would result in greater competition for the unit train rates that are presently in effect. This would mean that more of this material would move by barge. An identical situation exists concerning the aggregate that arrives at the Port.

We feel sure that the benefits of the proposed deepening of the channel would outweigh the costs of the required construction. It is estimated that the depth of the navigation channel is twelve feet or greater for over 90% of the river system. As an extra bonus, each of the five locks on the river is already capable of passing 12-foot draft tows.

Again, the Natchitoches Parish Port Commission fully supports the proposed modification and the Red River Waterway Commission’s efforts to achieve this modification. We urge the Corps to authorize the 12-foot channel modification.
Should you have any questions, please feel free to contact me at this office.

Sincerely,

R. E. L. Breedlove, Jr.
Executive Director
Map Document

(This is as uploaded, a blank page will show if nothing was submitted)
Additional Proposal Information

(This is as uploaded, a blank page will show if nothing was submitted)
September 15, 2016

TP: U.S Army Corps of Engineers

RE: J. Bennett Johnston Waterway, 12’ Channel Project Modification

The Red River Waterway Commission (RRWC), project local sponsor, is requesting a Project modification to the federal authorized project (J. Bennett Johnston Waterway) for the Corps to change the depth of the navigation channel to 12 feet and width of 200 feet. The authorization would allow the J. Bennett Johnston Waterway to be authorized to the same depth as adjacent waterways in the navigation system.

The J. Bennett Johnston Waterway is a navigation project connecting 236 Miles of the Red River to the Mississippi River with five navigation locks with usable dimensions of 84-feet wide by 705-feet long to provide the necessary lift of approximately 141 feet. The locks can accommodate a standard 6-barge tow and towboat in a single lockage. This system has allowed for the development of 4 public ports and several private ports that has attracted over 9.9 Billion inflation adjusted dollars through 2013, and created over 10,000 jobs in the region. In addition to navigation the RRWC has also created and maintained 20 recreation areas along the Red River. With the navigable access to the river and recreational areas the Red River has become a top choice for businesses, visitors and major sporting events like the 2009 and 2012 Bassmaster Classic and the 2013 FLW Forest L. Wood Cup.

The majority of cargo movements on the Red River are inbound shipments in bulk materials used for power plant fuel, construction, agriculture, and oil & gas. Outbound cargo is primarily refined petroleum destined for New Orleans, Baton Rouge, and Houston. A key to growing the tonnage volume on the Red River is to increase the capacity per shipment on each barge that a 12 foot channel would allow. Currently barges are short loaded, three quarters full, to travel at a 9 foot draft. A 12 foot draft would carry one-third more material than the 9 foot draft at a predicted cost increase of only 10%. This would provide a great cost savings to the
industries using the waterway. It is clear that the Ports and related industries would greatly benefit from the availability of a 12 foot channel along the J. Bennet Johnston Waterway. The improved capacity and efficiency, reduced costs, and the potential for more economic development would lead to an increase in trade and economic activity along the entire waterway. The Red River Waterway Commission is fully prepared to provide a letter of intent to move forward on the project modification and any local sponsor cost associated.

Sincerely;

Ken Guidry
Executive Director
Red River Waterway Commission
Initial Investigation Study

Deeping the J. Bennett Johnston Waterway Project
From 9 FT. Navigability to 12 FT.
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
for
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

prepared for the
Red River Waterway Commission
5941 Highway 1 Bypass
Natchitoches, Louisiana 71458

for delivery to the
U. S. Army Corps of Engineers
Vicksburg District
August 2010
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
for
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

TABLE OF CONTENTS

PREFACE ........................................................................................................................................ iv

I. STUDY AUTHORITY .................................................................................................................. 1

II. STUDY PURPOSE .................................................................................................................. 2

III. LOCATION OF PROJECT AND CONGRESSIONAL DISTRICT ........................................ 2

IV. PRIOR REPORTS AND EXISTING PROJECTS .................................................................. 3

V. PLAN FORMULATION ............................................................................................................. 7
   A. Identification of Problems and Opportunities .................................................................. 7
      1. Existing Conditions on the Red River ........................................................................... 7
         a. Operations
         b. Existing Environmental Setting
      2. Expected Future Conditions .......................................................................................... 10
      3. Concise Statement of Specific Problems and Opportunities with Emphasis on Problems Warranting Federal Participation in the Feasibility Study ......................................................... 12
   B. Formulation of Alternative Plans ....................................................................................... 14
   C. Preliminary Evaluation of Alternatives ............................................................................. 14
      1. Comparison of Effects of Alternative Plans ................................................................. 14
      2. Selected Alternative—The Recommended Alternative for Benefit-Cost Analysis ....... 15
TABLE OF CONTENTS (cont’d)

D. Benefit-Cost Analysis of Selected Alternative ............................................... 17
   1. Benefits of the Channel Deepening Plan ............................................... 17
      a. Identify Commodity Types
      b. Identify the Study Area
      c. Determine Current Commodity Flow
      d. Determine Current Cost of Waterway Use
      e. Determine the Current Cost of Alternative Movement
      f. Forecast Potential Waterway Traffic by Commodity
      g. Determine Future Cost of Alternative Mode
      h. Determine Cost of Waterway Use
      i. Determine Waterway Use With and Without the Project
      j. Compute NED Benefits
   2. Construction Cost of the Channel Deepening Plan .................................. 21
   3. Operational and Maintenance Cost of the Channel Deepening Plan ........... 23
   4. Environmental Aspects of the Channel Deepening Plan .......................... 24
   5. Summary of the Analysis of the Channel Deepening Plan .......................... 24

VI. FEDERAL INTEREST .................................................................................. 26

VII. PRELIMINARY FINANCIAL ANALYSIS ..................................................... 26
   A. Future Cost Sharing Considerations and the PMP .................................. 26
   B. Feasibility Study and the Feasibility Cost Sharing Agreement .................. 28

VIII. SUMMARY OF FEASIBILITY STUDY ASSUMPTIONS ............................ 30

IX. FEASIBILITY PHASE MILESTONES .......................................................... 31

X. FEASIBILITY PHASE COST ESTIMATE ....................................................... 31
   A. Preliminary Feasibility Cost Estimate Based on Pre-PMP Estimates .......... 31
   B. Preliminary Cost Share Apportionment .................................................. 32

XI. RECOMMENDATIONS .............................................................................. 33

XII. POTENTIAL ISSUES AFFECTING INITIATION OF THE FEASIBILITY PHASE .................................................. 34

XIII. VIEWS FROM OTHER RESOURCE AGENCIES .................................... 34

XIV. PROJECT AREA MAP ............................................................................ 34
EXHIBITS and ATTACHMENTS

EXHIBITS

Exhibit 1. J. Bennett Johnston Waterway Project Map .................................................. 3
Exhibit 2. Study Area Map ................................................................................................. 4
Exhibit 3. Channel and Dredging Plan and Section Summary Graphic ......................... 13
Exhibit 4. Section View of Alternatives 3 and 4 ............................................................... 16
Exhibit 5. Summary of Benefit-Cost Analysis .................................................................... 25
Exhibit 6. Pre-PMP Feasibility Cost Estimate ................................................................. 32
Exhibit 7. Preliminary Cost Share Apportionment ......................................................... 33

ATTACHMENTS

Attachment A. Cargo Estimates by Cargo Type, Provider, and O&D ......................... A.1
Attachment B. Estimation of Benefits without Project (9 ft. Navigation Channel) ....... A.2
Attachment C. Estimation of Benefits with Project (12 ft. Navigation Channel) ......... A.3
Attachment D. RRWC Letter of Intent to Participate in Feasibility Study ................. A.4
PREFACE

This initial investigation of the Reconnaissance Study addressing deepening the J. Bennett Johnston Waterway project is modeled after the U.S. Army Corps of Engineers (USACE) Planning Guidance Handbook (Regulation 1105-2-100, 22 April 2000) and Section 905(b) of the Water Resources and Development Act of 1986. The Section 905(b) outline provided as Exhibit G-2 in the Planning Guidance Handbook was followed. This version of the reconnaissance report, i.e., the initial investigation, was prepared under the auspices of the Red River Waterway Commission and provided to the USACE Vicksburg District for further review and analysis.

The intent of this report is to provide logically based 905(b) required information to the Red River Waterway Commission, the USACE, stakeholders, and Louisiana’s congressional delegation. The objective is to provide data defining the federal interest, denoting economic justification, and identifying potential environmental impacts.

The Commission purpose is threefold: (1) to obtain a congressional appropriation to deepen the J. Bennett Johnston Waterway section of the Red River between Old River and Shreveport, (2) to facilitate congressional authorization and appropriations to fund the deepening of the waterway to 12 ft. navigability, and (3) to ensure federal authorization and appropriations to maintain the 12 ft. channel of the Red River waterway within the jurisdiction of the Red River Waterway Commission.

This report will be submitted to the U. S. Army Corps of Engineers Vicksburg District (MVK) upon its completion and acceptance by the Red River Waterway Commission. Because the report was prepared with assistance from the Vicksburg District but not by the Vicksburg District, matters relative to construction activity that may be required beyond dredging only (e.g., construction that may be determined in the later feasibility phase) and associated costs may require additional in-house detail by the Vicksburg District.
INITIAL INVESTIGATION
SECTION 905(b) of the WATER RESOURCES DEVELOPMENT ACT
RECONNAISSANCE STUDY
FOR
DEEPENING THE J. BENNETT JOHNSTON WATERWAY PROJECT
FROM 9 FT. NAVIGABILITY TO 12 FT.

I. STUDY AUTHORITY
This initial investigation report was prepared in response to a resolution adopted by the Red River Waterway Commission (RRWC or Commission) dated May 20, 2009. This study was funded by the Commission with professional services assistance provided by Shaw Environmental and Infrastructure, Inc., Baton Rouge, Louisiana.

The report is offered by the Commission to the U.S. Army Corps of Engineers (USACE or Corps) to clearly define benefits to the economy of the United States that will be generated by the deepening the Red River from 9 ft. to 12 ft., to identify potential construction and operations and maintenance costs that may be incurred therein, and to assist in defining the Project Management Plan for determining the scope and cost of a feasibility study to address the proposed project in detail.

On June 28, 2006, following resolution was adopted by the Committee on Transportation and Infrastructure, U. S. House of Representatives, Washington, D. C.

RESOLUTION
Docket 2756
J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana

Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Red River Below Denison Dam, Arkansas, Louisiana, Oklahoma, and Texas, published as House Document no. 304, 90th Congress, 2nd Session, and any other pertinent reports to determine whether modifications to the recommendations contained therein are advisable at the present time in the interest of providing a 12-foot navigation channel, ecosystem restoration, bank stabilization, flood damage reduction and related purposes on the J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana.
II. STUDY PURPOSE

The purpose of this investigation as a precursor to a USACE reconnaissance study is intended to determine whether a federal interest exists in participating in a cost shared feasibility study documenting the economic benefits of deepening the J. Bennett Johnston section of the Red River in Louisiana from a navigable depth of 9 ft. to a depth of 12 ft. To accomplish this purpose, this work follows a reconnaissance report format which is aligned with procedures in accordance with the general procedures and guidelines set forth in the U. S. Army Corps of Engineers (USACE) rules and regulations and the Water Resources and Development Act of 1986 (WRDA), specifically section 905(b) of that act.

The Reconnaissance Study was initiated in June 2009 by the Red River Waterway Commission, Natchitoches, Louisiana, and has resulted in the finding that there is a federal interest in continuing the study into the feasibility phase. The analysis presented herein documents the basis for this finding and establishes the general scope of the feasibility phase. This assessment can be used in determining the scope of the Project Management Plan that presents the reconnaissance overview and formulation rationale.

The primary objective of study is to evaluate the anticipated costs and benefits of deepening the Red River between Old River and Shreveport as a means of determining federal interest, in this case economic interest while maintaining the environmental integrity of the river corridor. The findings of this 905(b) assessment support the Red River Water Commission and the USACE in proceeding with a Feasibility Study in accordance with normal Corps procedures or following a WRDA Section 203 approach if approved by the Assistant Secretary of the Army (Civil Works).

III. LOCATION OF PROJECT AND CONGRESSIONAL DISTRICT

The study area is the navigable portion of the Red River in Louisiana which extends from Shreveport and flows in a generally southeastward direction to the Lower Old River in Avoyelles Parish through or along the following Louisiana parishes: Caddo, Bossier, Red River, Winn, Natchitoches, Grant, Rapides, Avoyelles, Catahoula and Concordia. Major rivers within the watershed include the Ouachita and Black Rivers.

This segment of the Red River, also known as the J. Bennett Johnston Waterway Project (JBJWP), is approximately 236 miles in length. Along the waterway are the cities of Shreveport, Bossier City, Coushatta, Natchitoches, Colfax, and Alexandria. At Old River, the Red River becomes the Atchafalaya River which flows into the Wax Lake Outlet and also Atchafalaya Bay south of Morgan City. The study area is within the jurisdiction of the U. S. Army Corps of Engineers Vicksburg District (MVK).

The study area lies within Louisiana Congressional Districts 4 and 5. A graphic depiction of the J. Bennett Johnson Waterway Project and the study area are noted in Exhibits 1 and 2 respectively. As noted, the non-federal sponsor for the feasibility phase of the study is the Red River Waterway Commission.
IV. PRIOR REPORTS AND EXISTING PROJECTS

According to information obtained from the U. S. Army Corps of Engineers Vicksburg District, in its first documented attempt to improve navigation on the Red River, Congress authorized the Red River below Fulton, Arkansas Project in the River and Harbor Act, July 13, 1892. The project provided for improvements from Fulton to the Atchafalaya River by systematic clearing of banks, snagging, dredging shoals, building levees, closing outlets, revetting caving banks, and preventing injurious cutoffs. No channel dimensions were specified.

Congress modified the project in 1946 by authorization of the Overton-Red River Waterway. This project led to the construction of a 9 ft. deep by 100-ft. wide navigation channel from the Mississippi River via Old and Red Rivers for a channel from the Mississippi River and a turning basin on Bayou Pierre near Shreveport. Overall, the authorization called for 9 locks 56 ft. by 650 ft., a pumping plant, drainage structures, and appurtenances.
Exhibit 2. J. Bennett Johnston Waterway Project Location Map

Legend
- Red River Waterway District Parishes
- Non-RRDC Parishes on Red River
- Parishes outside study area
- National Forests (State)
- Lock and Dam
- Port
- Recreation Area
- Historic Site
- City
- Town
- Village
- Census Delineated Place (CDP)

Red River Waterway
Water

REFERENCE
Red River Waterway Commission, Ports Association of Louisiana, USACE Vicksburg District GIS

Shaw
In 1950, Congress modified the Red River below Fulton Project to provide a channel 9 ft. deep by 100 ft. wide from the exit point of the Overton Red River Waterway at Mile 31 to the mouth of the Black River at mile 35.5 in connection with the modification of the 9 ft. by 100 ft. Ouachita-Black River Project from the mouth of the Black River to Camden, Arkansas.

The River and Harbor Act of 1968 modified these and other prior projects in authorizing the present day waterway. Details of the authorized plan, consisting of four distinct reaches, were included in House Document 304, 90th Congress, 2nd Session. Design of the project began in fiscal year (FY) 1969. In FY73, construction funds were first authorized and project construction began. The navigation channel opened in 1994. In the FY97 Energy and Water Development Appropriation Act, Public Law 104-206, the Mississippi River to Shreveport reach of the overall Red River Waterway Project was renamed the J. Bennett Johnston Waterway.

Previous projects and reports by the USACE relative to the Red River and 12-ft. navigability include but are not limited to the following:

Projects:
- J. Bennett Johnston Waterway, Mississippi River to Shreveport, LA
  (Formerly Red River Waterway, Mississippi River to Shreveport, LA)
- Ouachita-Black Navigation Project, Red River to Camden, AR
- Red River Emergency Bank Protection, AR, LA, OK, and TX
- Red River Below Denison Dam, AR, LA, and TX
- Red River Waterway, Shreveport, LA to Daingerfield, TX

Studies:
- Red River Navigation, Southwest Arkansas, AR and LA

The Red River Waterway District and its respective Commission was created by the Louisiana legislature in 1965 to sponsor and oversee the Red River navigation project. The navigation project, maintained by the U.S. Army Corps of Engineers (USACE or Corps), today consists of a 9 ft. deep by 200 ft. wide navigation channel that extends approximately 236 miles from Shreveport to Lower Old River and the beginning of the Atchafalaya River. Red River Mile Post 0 is located at the junction of the Red and Mississippi Rivers east of the Old River Lock. Atchafalaya River Mile Post 0 is located at approximately Mile Post 6.9 of the Red River at the junction of Lower Old River and Red River.

The Commission is charged with providing for recreational, social, and economic development along the Red River. To that end, the Commission, in cooperation with the USACE, has constructed 19 recreation areas along the river as well as at the five Corps lock and dam sites.
The Commission has also provided substantial assistance to the four Red River ports that harbor industry along the river. To facilitate social and economic development, the Red River Waterway District levies an *ad valorem* tax from seven parishes within its jurisdiction. Revenue distribution from the *ad valorem* tax is legislatively mandated and currently distributed into construction funds (65%) and operations and maintenance funds (35%). Prior to 2009, this distribution was set as 75% for construction and 25% for operations and maintenance.

According to a May 2007 economic impact study contracted by the Commission entitled *J. Bennett Johnston Waterway Project, 1968-2007: The First 40 Years*, RRWC projects, along with the original navigation project, have generated $4.6 billion in new construction investment, $8.4 billion in new business sales, and an estimated $58.2 million in new sales taxes for the local governments. Inclusive of benefits accrued from the initial federal investment, for every $1 in local taxes paid, taxpayers in the Red River Waterway District received $19 in spending attracted to the area (construction), $35 in new sales (purchases), and $11 in household earnings (jobs).

In late 2007, the Commission concluded a report addressing its *Strategic Plan 2008 – 2027*. This report, which led to the Legislature’s revising the proportion of millage assessment dedicated to capital improvements and O&M, outlined the Commission’s vision, goals, and objectives for a 20-year planning period. The focus applied to recreation areas as well as to ports and economic development potential. One of the major economic development objectives was to explore the benefits and resulting opportunities of deepening the federally mandated project depth of the Red River within the Commission’s jurisdiction from 9 ft. of navigable depth to 12 ft. As a result of this objective, the Commission chose to work in cooperation with the Vicksburg District of the USACE in the execution of this initial investigation of a 905(b) reconnaissance study.

In 2004, the Waterway Commission commissioned a *Market Research & Freight Development Study* for the Red River between Old River and Shreveport. The study documented present freight movements as 99% bulk materials in the form of liquid and dry commodities. The report also documented the need for and recommended deepening the navigable channel depth to 12 ft.

As a sign of multi-state support for the deepening project, representatives of the Red River Valley Association, an organization with membership representing four states, has also petitioned for funding of a reconnaissance study by the Corps of Engineers for the 12-ft. navigation project for many years.
V. PLAN FORMULATION
A. Identification of Problems and Opportunities
1. Existing Conditions on the Red River
   a. Operations
      As noted, since completion of the J. Bennett Johnston Waterway, four public ports and 19 recreational complexes (in addition to the recreation sites at the locks and dams) have been constructed along the Red River. The four ports—the Port of Alexandria, Natchitoches Parish Port, Red River Parish Port, and the Port of Shreveport-Bossier—are all fully operational full-service facilities which function as reliable, long-term economic engines in their respective locales.

      It is these four ports as well as additional waterborne cargo-oriented industrial operations along the waterway that offer additional economic benefits to the overall economy and, therefore, generate national interest. Benefits, as presented in this plan formulation section, are based on transportation savings. In this case, the transportation savings are a function of costs saved in fully loading 12-foot deep barges rather than short loading those barges at the three-quarters level, i.e., with a 9-foot draft, which is the currently required mode of operations. Savings will result in reduced trips and, therefore, a reduction in cost per ton transported.

      The vast majority of cargo movements up and down the Red River flow through the Old River Lock. Most cargo on the Red is inbound, and the vast majority of that inbound cargo is bulk materials used in the construction industry or as fuel stock. Outbound cargo is primarily refined petroleum destined for New Orleans, and to a lesser degree, for Baton Rouge and Houston. Because the overwhelming majority of refined petroleum cargo from the Shreveport-Bossier City region is destined for New Orleans, data used in the benefits analysis reflects deliveries to New Orleans only. Cargo data for the refined petroleum products was provided by the shipper.

      In similar fashion, data for generating benefits relative to the shipment of petroleum coke from the New Orleans area to the CLECO Rodemacher generating facility at Boyce was provided by CLECO to the RRWC. That data is reflected herein in the benefits calculations as provided by CLECO.

      For other users listed, base year data was determined by using cargo carried over the past five years and averaged for use as annual first year cargo. In the Alexandria area, cargo tonnage
provided by the Port of Alexandria and the Red River Waterway Commission was used to estimate base year tonnage. This same approach was used for all other shippers and carriers within the study area not previously noted (i.e., CLECO and the petroleum distributor). Other major users of the waterway include the following: Pinebluff Sand and Gravel Co., Luhr Brothers, Inc., Vulcan Materials Company, and Martin-Marietta Materials. In summary, cargo data presented in the benefit-cost analysis was obtained from each of the four ports, the commission, and these industry users which are located along the Red between Old River and Shreveport.

Typical Lock and Dam on the Red River

Only cargos with originations and/or destinations that could utilize greater than 9-foot drafts were included. These shipments are those which utilize the Mississippi River to and from the New Orleans area as well as upriver from the vicinity of Cairo. Southbound cargo from the Ohio River Valley region is predominately aggregate shipments but also includes miscellaneous materials such as shredded rubber and other fuel stock commodities.

Presented in tabular format in Attachment A at the end of text is data reflective of existing operations used in the benefits analysis. Within this data set, first year, or base cargo, tonnage (as noted, determined as a function of the past five years averaged as an annual estimate) is shown as it relates to each of the operators listed. Actual 2010 shipping rates were used for cargo inbound or
outbound to or from New Orleans and the Ohio Valley then to or from the respective origins and destinations on the Red River. This base data is used in the benefits logic and cargo flow analysis detailed throughout this section of the recon study. Cargo from the Arkansas River (authorized for 12 ft. but maintained at 9 ft.) offered no benefit to deepening the navigation channel of the J. Bennett Johnston Waterway, but if it were deepened to 12 ft., additional benefits would accrue.

b. Existing Environmental Setting

With the exception of the four ports, the existing industrial sites along the banks of the river, and the sections of the river that pass through or between busy municipal downtown areas, the river setting is pastoral. Dotted by 19 recreational complexes and an occasional boat landing, the river is peaceful and rural in nature. Minimal variations are noted in flora and fauna, and recreation opportunities are plentiful. Fishing and water sport activities were noted on routine trips conducted for this study and as indicated by the Commission. Slow moving barge traffic generally complements the serene setting, and cargo flow and recreation activities occur with no adverse impact to either activity.

In general, the proposed project is waterway specific, which is limited to the channel and the site of a previous impact area, and no historical or archeological sites in the region were noted as remarkable for purposes of this study. Because the project is limited to the locks and channel and project operations will be consistent with activities of routine dredge cycles, no construction impacts outside of the channel bottom are expected. If the project requires modification by way of topside activity, flora and fauna may be affected. Of particular interest above low pool would be wetlands. However, because the construction area will be small relative to the length of the river and because it would be within a previously impacted area, wetland impacts would not be expected to be significant.

In more specific terms, information obtained from the Louisiana Department of Environmental Quality (DEQ) indicates that the waterway is monitored as two sections: (1) from the Arkansas state line south to U. S. Hwy. 165 at Alexandria and (2) south of U. S. Hwy. 165 to Old River. These subsegments are monitored for primary and secondary contact recreation, fish and wildlife propagation, and drinking water supply. Monitoring for agricultural use is addressed in the northern section only.
The most recently published DEQ water quality data (2008) indicates that the noted uses are fully supported (i.e., water quality is not impaired) within both segments with one exception. In the upper reach, water quality is classified as non-supportive for fish and wildlife propagation. The suspected cause of the impairment is sulfates, and the suspected source of impairment is listed as natural sources and sources outside state jurisdiction or borders.

The Louisiana Department of Wildlife and Fisheries specifically noted that one endangered species requires general consideration during construction. The Interior Least Tern is a small bird that nests in the state along the banks of the Red and Mississippi Rivers between April and August. Any construction activity to occur on the banks of the river would require additional detailed evaluation regarding the tern. In addition, DNR files list two rare small fish species, the Bluehead Shiner and the Blue Sucker, that live in the Red River. Possible impacts to these rare and endangered species will have to be addressed in the feasibility phase of study for the channel deepening project.

Other endangered or threatened species or habitat related concerns listed for the parishes through which the Red River flows include the following animals: Louisiana Black Bear, the Pallid Sturgeon, Red-Cockaded Woodpecker, Fat Pocketbook Pearly Mussel, and Louisiana Pine Snake. One plant, the Earth Fruit, is listed as threatened.

No historical or archeological impacts are expected based upon initial communications with the Louisiana Department of Culture Recreation and Tourism, State Historic Preservation Office. However, formal assessment will be required during the feasibility phase of study. Air quality in the region is good, and no relocation or negative social impact is expected by implementation of the project.

2. **Expected Future Conditions**

For purposes of this reconnaissance study, the expected future condition assessment is based on current port and industry river users relative to cargo presently handled plus petroleum coke which CLECO will deliver to Boyce from the New Orleans area. Expected future conditions expand this base commodity flow over the 50 year planning horizon. Projections of future cargo loads were determined following review of historical data obtained from the Bureau of Economic Affairs and Louisiana Department of Labor data relative to general industrial and employment growth in Louisiana for the past 12 years. Regional in-state modeling data was not readily available and deemed cost prohibitive for
recon study purposes. By way of historical application, it is assumed that as the state economy grows, so does the demand for construction materials and refined petroleum products and the resulting shipment of same. CLECO data, however, reflects no increase in tonnage. Information supplied by CLECO notes tonnage as remaining constant for the 50 year planning cycle, and that data is reflected herein.

In addition, information obtained from the Louisiana Department of Transportation and Development in its 2007 Marine Transportation System Plan offered more specific insight and reasonableness in determining the rate of growth for inland waterway cargo movements. More detailed information relative to this data is offered in Section V.D.1.f.

In summary, identified cost reduction benefits are estimated for the traditionally established Red River commodity mix and current origins and destinations. An increase in cargo flow is anticipated. While the cargo mix may be expanded to other commodities in the future, hypothetical expansion of commodity mix was not incorporated into the alternatives analysis or benefits assessment. However, based in the consistent growth in cargo movements over the initial 40-year operating period of the waterway project as well as state and federal inland waterway growth projections, growth in cargo tonnage as a basis of overall economic growth in the nation, state, and region was incorporated. As a result of incorporating this data, the cost savings is presented in the number of barge trips saved thus reducing the cost per ton of cargo shipped. This reduction also represents a net economic development gain because resources will be released for productive use elsewhere in the economy.

CLECO Rodemacher facility at Boyce, Louisiana
3. **Concise Statement of Specific Problems and Opportunities with Emphasis on Problems Warranting Federal Participation in the Feasibility Study**

Early estimates by the Red River Waterway Commission, the Red River Valley Association, and industry stakeholders suggest that transportation cost saving of up to 30% could be garnered if barges were fully loaded to a 12 ft. draft rather than a 9 ft. draft. In deepening the channel accordingly, no definite need for physical or structural impact is expected. If no structural revisions to locks, lock approaches, dikes, etc. are required as preliminary investigations indicate, first time costs as well as incremental maintenance cost will be minimal while benefits will be substantial.

While review of USACE as-built drawings of the lock and dam system indicate no significant need for structural revision to the existing Red River locks or channel training features, representatives of the USACE Vicksburg District have indicated that further analysis will be required in the feasibility study. Examples of situations that may require additional subsurface evaluation and engineering assessment are listed in Section V.D.2 and include hydrologic issues, verification of sill depths, construction remnants, authorization language, and operational procedures by tow vessels.

In the past several years, routine maintenance of the 9 ft. channel required dredging along less than 1% of the length of the river, approximately 2.2 miles. With minimal exception (this 1%), the river channel ranges from 20 ft. to 80 ft. in depth. Routinely, maintenance dredging occurs on the downriver side of each lock, near the ports of Natchitoches and Alexandria, and at multiple locations downstream of Lock and Dam No. 1. Summary estimates of recent years indicate that approximately 1,000,000 cubic yards of material is dredged annually, all of which is deposited in the stream channel. An annual cost for this routine dredge cycle approximates $2,000,000. For purposes of this report, dredging costs are estimated at $2.00 per cubic yard ($2,000,000/1,000,000 CY = $2.00/CY).

A graphic abstraction of the Red River study area and routine dredge activity is presented in Exhibit 3. Shown in the depiction in plan and section views are the six pools, the five locks, distance between locks, pool elevations, dredge locations, and cubic yards of maintenance dredge material moved at those locations. Because dredge operations have shown a tendency to stabilize since the completion of the system, this exhibit reflects one year of maintenance (2008) for which data was provided by the USACE.
Exhibit 3. Channel and Dredging Summary Graphic

2008 Linear Feet Excavated

Plan View

Section View

2008 Annual Dredge Material (CY)

2008 Annual Cost

City Locations

2008 Year: 11,896 LF
2.2 miles/244 miles = 0.0094 < 1%

Orchisla and Black Rivers Intercept

2008 Total: 52,033 CY

B. Formulation of Alternative Plans

Four alternative plans were presented, and one of those options was identified as clearly the most feasible alternative. The no action alternative was considered as were two construction based alternatives and one non-construction approach. The no action alternative was considered and rejected as not addressing the problem or offering additional NED benefits.

The non-construction approach involved maintaining minimum pool elevations three feet higher than that presently established. This approach was also rejected early in the recon process as the local sponsor indicated that inundation rights, additional land acquisition issues, and associated costs would substantially negate benefits such that the alternative would not be economically or politically feasible. In addition, it would not meet the acceptability criteria required by Principles and Guidelines.

The third and fourth alternatives are construction based. Alternative 3 considered dredging to deepen the navigation channel to 12 ft. at pool and maintaining the 200 ft. bottom width thereby requiring modification or reconstruction of at least one bank where the minimum 200 ft. bottom width exists at proposed deepening sites. Alternative 4 is also a deepening by dredge option, the difference being that the channel depth may be reduced in select locations in lieu of affecting channel embankments and side slopes where practical.

C. Preliminary Evaluation of Alternatives

1. Comparison Effects of Alternative Plans

Construction activity required to develop Alternative 3, deepening the navigation channel to 12 ft. and maintaining a 200 ft. bottom width, will require reconstruction of at least one side of the channel wherever deepening will occur in a reach with the minimum channel width. Should this be the case in all areas presently dredged on a routine basis, this alternative would be cost prohibitive. While indications are that specific sites requiring side slope reconstruction will be minimal, a full determination is beyond the scope of this reconnaissance study.

The fourth alternative, which is similar to Alternative 3, also deepens the navigation channel from 9 ft. to 12 ft. but, in contrast and by design, is not intended to impact either side slope, dikes, or other construction features. Assuming the 4:1 slope of the channel embankment as noted on as-built drawings, deepening by 3 ft. will result in a narrowing of the 200 ft. bottom width by 24 ft. if and where any channel width dredge section is as narrow as 200 ft. at a dredge deepening site.

Because only approximately one percent of the waterway is dredged routinely and the deepening project is expected to broaden the area dredged only minimally, a 24 ft. reduction of channel width will have
minimal if any significance on current and/or future cargo operations. Identifying specific locations where minimal channel bottom width is of concern is beyond the scope of a recon study and, therefore, should be addressed in the feasibility phase.

If operational considerations are warranted at select locations where the bottom width is reduced, these considerations will be defined and further addressed in the feasibility phase. As a result, this alternative requires minimal to no impact of any features outside of the thalweg or channel bottom and is the least costly of the two construction alternatives.

2. **Selected Alternative—The Recommended Alternative for Benefit-Cost Analysis**

Because Alternative 4 fulfills the objective of the user needs, is the least costly alternative, provides only minimal impact, requires no additional servitude or land acquisition, and causes minimal to no environmental degradation, it has generated the greatest interest in planning and progress report meetings conducted throughout the recon planning period. It is also the least time consuming construction option. For these reasons, this alternative represents the plan selected for benefits-cost analysis relative to national economic development (NED).

While the alternative may result in a narrowing of the channel bottom width by a maximum of 24 ft. in a few isolated reaches, communications with operators along the waterway indicate that this concern is not significant. If an issue related to the reduction of channel width by a maximum of 24 ft. resulting in a bottom width of 176 ft. becomes a reality with the project, it will occur only when two tow vessels with barges approach. When addressing this issue, operations stakeholders noted that standard operating procedures encourage boat to boat communications. Coordination between approaching vessels will allow proper maneuvering when and if required. These same stakeholders also note that numerous similar shallow draft inland waterways function smoothly with only 125 ft. bottom channel widths. The Gulf Intracoastal Waterway is one example.

A graphic depiction of Alternatives 3 and 4 is presented in Exhibit 4.
Exhibit 4. Section View of Alternatives 3 and 4

ALTERNATE 3: TYPICAL 12' CHANNEL SECTION

ALTERNATE 4: TYPICAL 12' CHANNEL SECTION
D. Benefit-Cost Analysis of Selected Alternative

1. Benefits of the Channel Deepening Plan
Information offered below follows the ten steps used to estimate benefits associated with improvements of the inland navigation system as documented in ER 1105-2-100 (22 Apr 2000), p. 3-6.

a. Identify Commodity Types (1)
Commodity Types are noted in Attachment A as subsections of data provided for each shipper listed and/or otherwise noted herein. The complete data set includes aggregates, liquid petroleum products, petroleum coke, and miscellaneous bulk cargo including rubber chips, iron, and agricultural chemicals. As noted, these commodities reflect those currently transported on the waterway.

b. Identify the Study Area (2)
The study area includes the reach of the J. Bennett Johnston Waterway project from Mile 0 of the Red River at the Mississippi River at Lower Old River to Shreveport, Louisiana, Mile 236. The immediate study area includes five locks and dams and miscellaneous channel works along the waterway, the total length of which is 236 miles. The total reach of the study for purposes of this project, including operations addressed in this recon study, extends along the length of the Mississippi River from the region of New Orleans northward to the Ohio Valley where aggregates and other shipments are loaded from Tennessee, Kentucky, Kansas, etc. Originations and destinations of commodities are also noted in Attachment A.

c. Determine Current Commodity Flow (3)
As referenced previously, current commodity flow was determined by using an average annual cargo flow based on data covering the past five years. Information was provided by the Red River Waterway Commission, the referenced ports, and the listed companies currently moving shipments along the waterway. CLECO is one exception as no five-year history exists for petroleum coke. The company just began moving cargo which is the fuel that will be used by the company’s newest electricity generating unit completed in early 2010. This cargo will be delivered to Boyce (near Alexandria) from petroleum processing facilities located along the Mississippi River in the vicinity of New Orleans.
d. **Determine Current Cost of Waterway Use (4)**

The cost of waterway use was determined by using current (2010) origin-to-destination cargo delivery costs. A competitive rate for each commodity for each origin to destination was incorporated as a function of tonnage to be handled. Rates were provided by the individual haulers interviewed, and these rates remained constant throughout the planning period.

With two exceptions, rates were addressed as a function of two legs of each trip. All shipments move through the Old River Lock, and rates were provided for shipments by barge from the point of origin or destination along the Red River to or from the Old River Lock. A second set of rates by cargo per barge was provided from point of origination or destination to the Old River Lock.

One exception is representative of data provided by one company that distributes refined petroleum product from Shreveport to New Orleans. In this case, a single unit cost was provided as cost per ton from origin to final destination. Additionally, and as noted previously, cost savings estimates by CLECO were provided by the RRWC from data provided to the Commission by CLECO. The savings data was calculated by CLECO from origin to final destination and not as a function of origin to Old River. All rates, cargos, originations, and destinations used in the benefits calculations are included in Attachment A.

e. **Determine the Current Cost of Alternative Movement (5)**

The current cost of alternative movement is based on rates charged for moving cargo to and from the various ports and industrial sites along the JBJW with barges loaded to 9 ft. drafts. The rates used in this recon study are reflective of those actually used on the waterway in early 2010. The rates are as follows:

<table>
<thead>
<tr>
<th>Rates per Ton—Barge Loaded to 9 ft. Draft</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Old River to/from Alexandria</td>
<td>$2.95</td>
</tr>
<tr>
<td>Old River to/from Natchitoches</td>
<td>$3.75</td>
</tr>
<tr>
<td>Old River to/from Red River Parish Port</td>
<td>$4.00</td>
</tr>
<tr>
<td>Old River to/from Shreveport</td>
<td>$4.50</td>
</tr>
<tr>
<td>New Orleans to/from Old River</td>
<td>$2.50</td>
</tr>
<tr>
<td>New Orleans to Boyce</td>
<td>$5.45</td>
</tr>
<tr>
<td>Ohio Valley to Old River</td>
<td>$11.50</td>
</tr>
<tr>
<td>Liquified Petroleum Shreveport to New Orleans</td>
<td>$15.30</td>
</tr>
</tbody>
</table>
f. **Forecast Potential Waterway Traffic by Commodity (6)**

In tabular data provided in Attachment A, cargo forecasts by user and by commodity are provided. While this information does list 9 ft. only cargo data sets, the respective tonnage was not used in the benefits calculation in estimating the forecast of potential waterway traffic. Cargo movements within the Red River system and cargo moving outside of the system, i.e., along the Mississippi River to or from the Red River sites, are presented in columnar fashion. Rates assigned to each movement are noted.

Building upon the base tonnage per port and industrial user by commodity type and/or origin/destination as presented in Attachment A, a 1.3 percent annual increase in tonnage was assigned for the 50 year planning horizon. As referenced previously, this increase was based on average gross state product over the past 12 years as determined by review of historical data obtained from the U. S. Department of Commerce Bureau of Economic Analysis (BEA) and Louisiana Department of Labor (DOL) employment data relative to general industrial and employment growth in Louisiana for the past 12 years. Regional intrastate modeling data was not readily available. The result of this assessment yielded between one and two percent annual growth.

More specific to the project, was projection data obtained from the *Louisiana Marine Transportation System Plan* (DOTD, 2007). In this report, data provided in Exhibit 3-38, U. S. Inland Waterway Traffic Projections by Commodity Groups, indicates a long-term medium average annual growth rate of 1.3 percent in the U. S. inland waterways industry. This rate of increase is relative to the previously referenced BEA and DOL economic indicators yet more industry specific. For this reason, a 1.3 percent annual growth factor was used for all tonnage projections with the exception of CLECO cargo and for the Red River Parish Port cargo.

For the Red River Parish Port, exception was noted because of recent increases in bulk traffic over the past year. Because of this increased tonnage, Ohio Valley quarries shipping aggregate for use in establishing land-based drill sites and production facilities for natural gas exploration in the Haynesville Shale region of northwest Louisiana, a base tonnage other than the five-year average was incorporated. RRWC and Red River Parish Port representatives estimate an average annual cargo flow for the next ten years to approximate 300,000 tons with a decrease to 200,000 per year in year 11 of the deepening project. From that point (year
11), the rate of cargo flow is shown to increase at the
aforementioned 1.3 percent per year. CLECO cargo flow, as
presented by the company, remains constant throughout the
planning period. Using this information, additional waterway
traffic by commodity is presented in totals offered in
Attachment A.

g. **Determine Future Cost of Alternative Mode (7)**
While the cost to haul cargo (rate per ton) remains constant
during the project period for the purpose of benefits analysis,
additional costs are expected in moving a barge loaded fully to 12
ft. (2,000 tons) versus one loaded to 9 ft. (1,500 tons). Industry
operators indicate that the incremental cost of moving a barge
loaded to 12 ft. rather than 9 ft. is no more than 10% greater than
the 9 ft. cost. In the case of moving liquefied petroleum, the
specific incremental cost/ton differentiation was provided. (Note:
With liquid refined petroleum products, tonnage loaded to 9 ft. =
3,437; loaded to 12 ft. = 4,385).

The cost of alternative movement would be a function of
the costs of trips saved (net cost reduction) plus the incremental
cost of hauling heavier loads. Industry representatives indicate that
increasing current rates by no more than 10% will represent the
current cost of alternative movement with the proposed heavier
loads. This 10% factor is used in defining the additional
incremental cost of hauling various cargos if the project is
implemented. These costs are minimal as the only additional cost
to haulers is that of vessels burning slightly more fuel in pushing
heavier loads. No additional labor or time is involved.

h. **Determine Future Cost of Waterway Use (8)**
Cost of alternative movement was calculated as two
separate functions. First, the number of trips saved was
determined. This estimate was determined by dividing the total
number of tons over the planning period by 1,500 tons, the average
tonnage loaded to 9-ft. draft. This same total tonnage was then
divided by 2,000 tons per barge, the average tonnage of a load
shipped at 12-ft. draft. The difference in these two calculations
provides the number of trips saved. (as noted, for liquefied
petroleum shipments, tonnages were 3,437 and 4,385,
respectively.)
i. **Determine Waterway Use, With and Without the Project (9)**

Based upon the methodology described heretofore, the estimated number of barge trips saved is 36,851. Because savings per ton is a function of origination and destination and since commodities and rates vary accordingly, cost savings per ton were calculated. These savings were then applied by commodity type and by O/D location.

j. **Compute NED Benefits (10)**

The benefits estimated by these calculations are presented in Attachments B, Estimation of Benefits Without Project (9 ft. Navigation Channel), and C, Estimation of Benefits With Project (12 ft. Navigation Channel). A base year of 2010 was used, and a discount factor of 4.375 was incorporated over the 50-year period of analysis. Average annual equivalent transportation cost with the current 9 ft. channel is $43,139,232. With the project, i.e., deepening of the channel to a navigable depth of 12 ft., calculations yield an average annual equivalent transportation cost of $35,774,798. The resulting average annual equivalent transportation savings is $7,364,434.

2. **Construction Cost of the Channel Deepening Plan**

During the data collection phase of this recon study, construction issues relative to the channel, channel training works, the five locks, and approaches to the locks were considered. The primary construction aspect of this channel deepening project is to deepen the channel by the same mechanical means used in routine dredge cycles, i.e., suction dredge with in-channel disposal. The key difference without and with the project is that the navigation channel will be deepened by three ft., from 9 ft. to 12 ft., only in select locations where channel depth does not already exceed 12 ft. As a result, the bottom width will be reduced by a maximum of 24 ft. thereby yielding a minimum bottom width of 176 ft. at some locations where dredging occurs. As noted in previously in Section V. C of this report, this occasional narrowing of the bottom channel width will not have a significant impact on current or future barging operations.

In the case of the Red River, deepening of the channel will occur only where the channel is less than 12 ft. deep in its present and future configurations. Based upon recent historical dredge cycles, this dredging occurs along less than one percent of the length of the waterway at approximately ten locations. Half of those locations are near approaches on the downstream side of each lock. This historical data indicates that, with rare exception, the channel depth exceeds 12 ft. in depth along 99 percent of its length between Shreveport and the Old River Structure.
Depth-finder readings taken along the entire length of the waterway during the late summer of 2009 indicated that depths along the channel range from the 20 ft. to deeper than 80 ft. in all but a few locations—typically those locations highlighted in the channel and dredging summary graphic presented in Exhibit 3.

In establishing first time costs, initial dredging was of primary consideration. This conclusion was verified by the fact that less than one percent of the channel length is dredged annually for maintenance purposes. Additionally, no pipeline relocations will be required.

Therefore, existing annual maintenance dredge data was utilized as a basis to determine the length of the required collective dredge footprint used in the volume calculation. This data was based on the 2008 cycle which was defined as a typical annual dredge cycle. A channel width of 176 ft. was used, and 3 ft. was incorporated as the differential depth. An additional 20 percent factor was added to supplement this volume in accounting for additional dredge footprint. These calculations yielded approximately 300,000 cubic yards of initial dredge material, which is roughly one-third the dredge material relocated in a typical recent year.

Dredge cost in 2008 was $2.00 per cubic yard along the Red River according to information collected from MVK. With an additional 20% added in contingencies, the estimated total first time cost for dredging is $720,000. Adding survey, testing, design, administration costs, etc. of $280,000 yields a total first time dredge cost of $1,000,000. This cost
assumes construction methods used in routine dredging cycles, i.e., the same equipment and in-channel disposal. However, to ensure a conservative benefits-cost analysis, this cost is doubled to $2,000,000.

During preliminary scoping meetings with USACE MVK personnel, several items were discussed that may be of concern regarding using 12 ft. of navigable waterway depth. While none of the items brought forth are significant enough to halt the project in the reconnaissance stage, they will require further scrutiny in the feasibility phase of study. These items of discussion included the following:

- hydrologic issues relative to the reduced water volume in the locks and the passage of vessels
- verification of sill depths at low pool
- a remnant coffer dam structure upstream of Lock No. 2
- the impact of hinging at Lock No. 3
- modification to at least one approach apron where rock is routinely encountered during current maintenance dredging operations
- modification of channel training works that may be required if and where deepening affects existing embankments
- reducing channel width to 176 ft. and the “304” document
- any operational procedures that may be required of tow boat operators either in or near locks or as a result of reduced bottom channel width

Only one of these issues, the apparently shallow rocks on one side of one lock, has a relatively high probability of actual first time construction expenditure. Because of the indefinite nature of these concerns, an additional first time cost of $10,000,000 is included in the initial cost scenario. Further analysis of the items listed above must be completed by the Corps for a more detailed cost estimate to be prepared. This cost plus the initial dredging cost of $2,000,000 brings the total first time cost of the project to $12,000,000.

3. **Operational and Maintenance Cost of the Channel Deepening Plan**

Assuming the volume of material removed as a function of the initial dredge cycle (as detailed in the previous section) is re-deposited annually, approximately 300,000 cubic yards of additional dredging will be required each year as a function of routine maintenance cycles. Using the previously referenced $2.00 per cubic yard costs, annual differential maintenance cost will be $600,000. Because the volume of annually dredged material is insignificant when compared to the volume of the waterway, no additional dredge disposal sites will be required. For purposes of this recon report, an annual O&M factor of $1,000,000 is used to account for contingencies.
4. **Environmental Aspects of the Channel Deepening Plan**

The national or federal objective of water and related land resource project planning is to contribute to National Economic Development (NED) in a manner consistent with protecting the nation's environment pursuant to national environmental statutes, applicable executive orders, and other federal requirements. Environmental aspects of the channel deepening plan that will require follow-up in the feasibility phase include but are not limited to those listed previously in Section V. A. 1. b, specifically the endangered Interior Least Tern and possible nesting sites along the river as well as the two small fish species that dwell in the Red River that are considered rare, the Bluehead Shiner and the Blue Sucker. Biologists with the Louisiana Department of Wildlife and Fisheries did not indicate that either of these species would be affected by the proposed project. Nonetheless, this hypothesis must be confirmed during the feasibility phase. In addition, other rare, threatened, and endangered species are listed as inhabiting the parishes along the Red River. Any potential project impact on these habitats will require detailed assessment in the feasibility phase.

5. **Summary of the Analysis of the Channel Deepening Plan**

The economic justification of the 9 to 12 ft. channel deepening plan was developed in accordance with the data presented herein and in accordance with procedures established by the USACE. The total annualized costs, which include annualized construction first costs and operations and maintenance costs, are compared to average annual transportation benefits (savings) in the computation of average annual net benefits and the resulting benefit-cost ratio. The benefit-cost ratio for this project is 4.6:1, and, based upon the impact of existing dredging activities along the Red River in the study area, no significant negative impact to the environment is envisioned by way of construction or operations activity. Therefore, the channel deepening project is economically justified.

A summary of the plan benefit-cost analysis is presented in Exhibit 5, Summary of Benefit-Cost Analysis. The total annualized costs, which includes annualized construction first cost as well as operations and maintenance costs, are compared to the average annual transportation benefits to compute the benefit-cost ratio. Net average annual equivalent transportation benefits associated with implementation of the project are also listed.

Based upon this data, these benefits offer a first supportable cost of approximately $123,000,000.
<table>
<thead>
<tr>
<th>EXHIBIT 5. SUMMARY OF BENEFIT-COST ANALYSIS, 2010 DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION FIRST COSTS</td>
</tr>
<tr>
<td>Pipeline Relocation</td>
</tr>
<tr>
<td>Pre-construction Survey and Design</td>
</tr>
<tr>
<td>Construction (dredging)</td>
</tr>
<tr>
<td><strong>Subtotal—Project First Cost</strong></td>
</tr>
<tr>
<td>ANNUALIZED COSTS</td>
</tr>
<tr>
<td>Project First Costs</td>
</tr>
<tr>
<td>Operations and Maintenance</td>
</tr>
<tr>
<td><strong>Total Ave. Annualized Project Costs</strong></td>
</tr>
<tr>
<td>TRANSPORTATION SAVINGS BENEFITS</td>
</tr>
<tr>
<td>Average Annual Equivalent Transportation Costs (without project)</td>
</tr>
<tr>
<td>Average Annual Equivalent Transportation Costs (with project)</td>
</tr>
<tr>
<td>Difference in Without and With Project Cost</td>
</tr>
<tr>
<td>Total Discounted Benefits</td>
</tr>
<tr>
<td>Annualized Project Benefits</td>
</tr>
<tr>
<td>BENEFIT COST RATIO</td>
</tr>
<tr>
<td>First Cost</td>
</tr>
<tr>
<td>Average Annual Equivalent First Cost</td>
</tr>
<tr>
<td>Annual Operation and Maintenance</td>
</tr>
<tr>
<td>Total Average Annual Equivalent Cost</td>
</tr>
<tr>
<td>Average Annual Equivalent Benefit</td>
</tr>
<tr>
<td>Benefit-Cost Ratio</td>
</tr>
</tbody>
</table>
VI. **FEDERAL INTEREST**

Contributions to national economic development (NED outputs) are increases in the net value of the national output of goods and services expressed in monetary units and are the direct net benefits that accrue in the planning area and the rest of the nation. Contributions include increases in the net value of goods and services, those marketed and also those that may be not be marketed. Protection of the nation’s environment is achieved when damage to the environment is eliminated or avoided and important cultural and natural aspects of our nation’s heritage are preserved.

Data collected for the reconnaissance phase of study to address deepening the Red River in Louisiana from a navigable depth of 9 ft. to a depth of 12 ft. indicates a highly substantial benefit to cost ratio of 4.6 to 1. Based on the number of trips saved and the collective savings accrued over the 50-year planning period, the project is clearly justified within the NED parameters established by USACE guidance. In addition, environmental impacts are expected to be nil as implementation of the project is not expected to negatively affect any flora or fauna in the channel or outside of the channel unless circumstances unforeseen in the reconnaissance phase of analysis are encountered. Therefore, based on preliminary appraisal of costs, benefits, and environmental impacts of identified potential project alternatives, the channel deepening plan presented herein contributes to the NED objective and is consistent with federal interest.

VII. **PRELIMINARY FINANCIAL ANALYSIS**

A. **Future Cost Sharing Considerations and the Project Management Plan (PMP)**

In lieu of the preparation of a PMP, which requires full attention of the USACE Vicksburg District, the level of detail presented in this section is presented for the edification of the RRWC and other stakeholders not necessarily familiar with USACE PMP and feasibility study procedures.

According to the Corps Planning Guidance Handbook (ER 1105-2-100, 22 April 2000, the federal cost sharing agreement is intended to promote a partnership for the conduct of the feasibility study. Both parties will conduct planning within the framework established by Principles and Guidelines (P&G) and additional guidance as may be required. As the local sponsor, the Red River Waterway Commission has expressed a willingness to discuss the possibility of conducting the required feasibility study under Section 203 of the Water Resources Development Act of 1986.

If the Commission pursues the Section 203 route, in following program requirements, the Commission will be required to provide 100 percent of the cost of preparing the Feasibility Study. However, should the project proceed to construction, the Commission will receive a credit or reimbursement for share of the cost of general navigation features such as land, rights-of-way, etc. As the local sponsor, the Red River Waterway
Commission is aware of the cost sharing requirements for project implementation, and the Commission understands that the federal share of the cost of the feasibility study will be credited to the Commission as part of its share of implementation costs.

While developing the Project Management Plan (PMP), which will be incorporated in the Feasibility Cost Sharing Agreement (FCSA), the District Commander must discuss with the prospective non-federal sponsor the objectives of the feasibility study to reduce uncertainties in areas such as design and cost. During negotiations, the prospective non-federal sponsor must be informed that the level of accuracy of alternative plan evaluation and cost estimates to be developed in the feasibility study will depend on the extent of uncertainties and the depth of investigations made during the feasibility study.

The PMP negotiated between the Corps and the non-federal sponsor will ensure that the work required for the feasibility phase has been carefully developed and considered. The PMP forms the basis for estimating the total study cost and local share. It also is the basis for assigning tasks between the Corps and the sponsor and for establishing the value of in-kind services. The responsibility for the preparation of the PMP rests with Corps study manager in coordination with the Corps project manager. During the feasibility phase, significant changes to the PMP may require modification of the FCSA.

In the case of this project, the PMP will be completed by the USACE Vicksburg District and negotiated with the non-federal sponsor following the review and completion of the reconnaissance phase and will be revised and updated, as appropriate, based on discussions, resolution of issues, and agreements on actions at the Feasibility Scoping Meeting.

The PMP should include the costs for the tasks for non-federal sponsors that have been historically accomplished without charge such as the following: supervision and administration, study management; attendance at meetings, both public and technical; and overhead and indirect costs which are directly related to the feasibility study. It is expected that detailed scopes of work may be needed for individual items in the PMP. Work items will also include those tasks typically necessary to support the review process from the signing of the report through the ASA (CW)'s request to the Office of Management and Budget for the views of the Administration.

Hence, the PMP will guide the allocation of study funds among tasks to assure that all interests are given adequate attention. As a minimum, the PMP will address work tasks, their milestones and negotiated costs, and responsibility for the accomplishment; Corps and
other professional criteria used to assess adequacy of the completed work effort; procedures for reviewing and accepting the work of both parties; the schedule of performance; the coordination of a mechanism between the Corps and the non-federal sponsor; and references to regulations and other guidance that will be followed in conducting the tasks.

The PMP will address the appropriate level of engineering detail required for the feasibility phase. Engineering studies and analysis should be scoped to the minimum level needed to establish project features and elements that will form an adequate basis for the project construction schedules and cost estimate. Uncertainties should be reflected in contingencies which will be resolved during feasibility and/or planning, engineering, and design.

To ensure that the sponsor is afforded the opportunity to participate in any significant effort as a result of Washington level policy review, review support will be included as a work item in the PMP for District and non-federal sponsor costs only. These costs, including any necessary travel, will be limited to those reasonable costs associated with the review and processing of the feasibility report.

In summary, the total cost of the feasibility phase will be established through negotiations of the PMP. Costs will be defined by task and type (i.e., labor, materials, equipment, indirect costs, etc.) and will be fully supported and documented. Procedures will be established for tracking expenses and cost accounting including the allocation of costs between the federal government and the non-federal sponsor. All parties to the Feasibility Cost Sharing Agreement must agree to the funding schedule established in the PMP.

B. Feasibility Study and the Cost Sharing Agreement

The Feasibility Cost Sharing Agreement (FCSA) is intended to promote a partnership for the conduct of the feasibility study. The Department of the Army remains responsible for representing the federal interest by following federal policies and budgetary priorities. Both parties will conduct planning within the framework established by Planning and Guidelines and additional guidance as may be provided in by USACE regulations. In addition, the District Commander shall be satisfied that the non-federal sponsor has authority to enter into agreement and that the FCSA is legally sufficient.

According to ER 1105-2-100, the purpose of the feasibility study is to identify, evaluate, and recommend to decision makers an appropriate, coordinated, implementable solution to the identified water resources problems and opportunities. The resulting report should be a complete decision document. The report will (1) provide a complete presentation of study results and findings including those developed in the reconnaissance phase so that readers can reach
independent conclusions regarding the reasonableness of recommendations, (2) indicate compliance with applicable statutes, executive orders, and policies, and (3) provide a sound and documented basis for decision makers at all levels to judge the recommended solution(s).

Under normal circumstances, the cost of the feasibility phase will be shared equally between the federal government and the non-federal sponsor(s) during the study. Of the non-federal sponsor’s share (50 percent of the total feasibility phase cost), 50 percent (25 percent of the total feasibility phase cost) must be in cash and the remainder may be in-kind products and services. Section 105(a) of WRDA of 1986 requires the sponsor to contribute 50 percent of the study during the period of such study. No credit may be given to the non-federal sponsor for work prior to the start of the feasibility phase or after its completion.

Exception to this 50/50 rule relative to inland waterway projects is addressed in Appendix G, Amendment #1 of ER 1105-2-100, in section G-9. This section indicates that cost sharing is not applicable to single purpose inland navigation studies on the nation’s inland waterways system. If this is the case, then no feasibility cost or construction cost will be applied to the local sponsor for this project other than that which may be required for lands, rights-of-way, real estate, relocations, etc. which, in all likelihood, will be minimal if any.

Section 203 of WRDA 1986 states that a non-federal interest may on its own undertake a feasibility study of a proposed harbor or inland harbor project and submit it to the Secretary. If the project is authorized, the Secretary of the Army shall credit toward the non-federal share of the cost of construction of such project an amount equal to the portion of the cost of developing such study that would be the responsibility of the United States if such study were developed by the Secretary.

Should the inland rule be deemed not applicable, the USACE has established cost sharing between federal and non-federal partners for the implementation of a proposed commercial navigation project. For a project that increases the navigation channel depth from 9 ft. to 12 ft., the federal government will pay 90 percent and the non-federal sponsor (the Red River Waterway Commission) will pay 10 percent for all general navigation feature costs (channel, jetties, breakwaters, and other features required for navigation) of the proposed plan during the period of construction. The non-federal sponsor must provide all lands, easements, rights-of-ways, relocations, and disposal areas required for project implementation and operation and maintenance. All operations and maintenance costs for the project will be apportioned fully (100%) to the federal government.

As the non-federal sponsor, the Red River Waterway Commission shall also pay an additional 10 percent of the project costs for general navigation features in payments over a period not to exceed 30 years, at an interest rate
determined pursuant to Section 106. The 10 percent repayment is reduced by the non-federal sponsor's cost of lands, easements, rights-of-ways, relocations, and dredged material disposal areas if applicable. The local sponsor is also aware of the cost sharing requirements for potential project implementation.

A letter of intent from the local sponsor stating a willingness to pursue the feasibility study and to share in its cost, and an understanding of the cost sharing that is required for project construction is included as Attachment D.

VIII. SUMMARY OF FEASIBILITY STUDY ASSUMPTIONS
The following assumptions are applicable to the project.

1. Size and means of transporting inland barges will remain constant throughout the planning period. Typical barge width is 35 ft.

2. Maintenance dredging operations (in CY of material) has stabilized and will remain relatively constant. The same will hold true with a 12 ft. channel. In all likelihood, deepening can take place during normal dredge cycles. Areas dredged will fill annually thereby increasing annual maintenance cost accordingly (approx. 300,000 CY per year).

3. Commercial users and permitting authorities will approve/accept 24 ft. bottom channel width reduction from 200 ft. to 176 ft.

4. Only deepening from 9 ft. to 12 ft. was studied. No additional benefits will result from a deeper channel.

5. From an engineering perspective, it is assumed that no physical constraints will impede implementation of the project. However, more detailed analyses will be required during the feasibility phase.

6. No underground pipelines, etc. will be impacted.

7. Existing soils and other natural subsurface conditions will be sufficient to accommodate deeper dredging.

8. Existing dredge disposal sites are adequate to accept additional material.

9. The proposed action, including a dredged material disposal plan, is not expected to have adverse impacts on the natural environment inclusive of threatened and endangered species and their habitat. To confirm this assumption, more detailed investigations in compliance with NEPA and permitting laws will be conducted during the Feasibility Study stage.

10. Operations and maintenance of the Red River between Old River and Shreveport (i.e., waterway, locks, and dams, etc. by the COE; non-federal functions by the RRWC) will maintain the status quo for the project planning period.
11. Current in-channel disposal will be utilized. If required, current defined disposal locations will be utilized. No additional real estate is required for implementation of the proposed project.

12. Data collected during the Recon Study suggests that the construction period will be one year or less, assuming that no engineering-based construction activity is required on existing structures.

13. Economic development along the Red River J. Bennett Johnson Waterway Project will continue at rates comparable to the Louisiana economy at-large. In that regard, a growth rate of 1.3 percent compounded assumes continued growth in the study area in central and northwest Louisiana. Benefits and costs are expressed in equivalent economic terms using a base year of 2010, a 50-year project life, and a federal discount rate of 4 3/8 percent. Only existing cargo operations were included in benefits calculations.

14. Construction impacts will not negatively impact the Interior Least Tern, and construction activities will not negatively affect water quality or the Bluehead Shiner and the Blue Sucker.

15. The Feasibility Report will be based on a package of engineering information provided by the USACE and incorporated via the PMP.

IX. FEASIBILITY PHASE MILESTONES

Completion of Feasibility phase milestones will be conducted in accordance with ER 1105-2-100, Appendix H, Amendment No. 1, dated November 20, 2000, and the final Project Management Plan.

X. FEASIBILITY PHASE COST ESTIMATE

A. Preliminary Feasibility Cost Estimate Based on Pre-PMP Estimates

Based on previous dredging-based feasibility studies similar to that required for the Red River 9 ft. to 12 ft. deepening project, the cost estimated to complete the Feasibility Study recommended above will likely be in the magnitude of $2,500,000 to $4,000,000, inclusive of both the federal and non-federal expenses. Once a PMP is negotiated between the Corps and the Commission, more detailed estimates can be provided. A pre-PMP feasibility cost estimate is provided in Exhibit 6.
### EXHIBIT 6. Pre-PMP Feasibility Cost Estimate

<table>
<thead>
<tr>
<th>Task</th>
<th>Low Range</th>
<th>High Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project and Study Management</td>
<td>$200,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>$200,000</td>
<td>$350,000</td>
</tr>
<tr>
<td>Cultural Resources Studies</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Hazardous, Toxic, Radiological, and Waste Studies</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Economic Studies</td>
<td>$700,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Engineering Studies</td>
<td>$750,000</td>
<td>$1,250,000</td>
</tr>
<tr>
<td>Independent Technical Review</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Value Engineering</td>
<td>$100,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Report Review</td>
<td>$50,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Subtotal Cost Estimate</strong></td>
<td>$2,200,000</td>
<td>$3,550,000</td>
</tr>
<tr>
<td><strong>Contingencies</strong></td>
<td>$300,000</td>
<td>$450,000</td>
</tr>
<tr>
<td><strong>Total Study Cost</strong></td>
<td>$2,500,000</td>
<td>$4,000,000</td>
</tr>
</tbody>
</table>

### B. Preliminary Cost Share Apportionment

By way of example, an estimate of the cost apportioned by way of anticipated USACE requirements for the channel deepening project is presented below in Exhibit 7. This estimate assumes a Section 203 approach, i.e., local sponsor funds the feasibility study and is credited for this expenditure as a function of construction cost sharing. The cost of the feasibility study is a relative of magnitude cost based on the preliminary finding of the recon study and not on a fully defined Project Management Plan (PMP) as the PMP will be prepared by the USACE, Vicksburg District. The PMP will be required, revised, and updated, as appropriate, based on discussions, resolution of issues, and agreements on actions at the official Feasibility Scoping Meeting.
EXHIBIT 7. PRELIMINARY COST SHARE APPORTIONMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Federal</th>
<th>Non-federal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconstruction Engineering and</td>
<td>100%</td>
<td>0%</td>
<td>$500,000</td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering, Design, and Planning</td>
<td>$500,000</td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td>Construction Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General navigation Features</td>
<td>100%</td>
<td>0%</td>
<td>$11,500,000</td>
</tr>
<tr>
<td>Dredging from 9 ft. to 12 ft.</td>
<td>$11,500,000</td>
<td></td>
<td>$11,500,000</td>
</tr>
<tr>
<td>Total Design and Constructin Costs</td>
<td>$12,000,000</td>
<td></td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Feasibility Study</td>
<td>$4,000,000</td>
<td></td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Credit/Reimbursement for Feasibility Study (noted only if applicable)</td>
<td>$4,000,000</td>
<td></td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Lands, Easements, Right-of-Way,</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Relocations, Disposal, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cost Allocation</td>
<td>$16,000,000</td>
<td></td>
<td>$16,000,000</td>
</tr>
</tbody>
</table>

XI. RECOMMENDATIONS

Based upon data collected for this initial investigation of a WRDA Section 905(b) Reconnaissance Study addressing deepening the J. Bennett Johnston Waterway from a navigable depth of 9 ft. to 12 ft., the justification for moving the project to feasibility study phase is extremely positive, i.e., having a benefit to cost ratio of 4.6 to 1. Because this investigation was prepared with peripheral assistance from the Corps of Engineers Vicksburg District but not by the District itself, two options become operative.

Option 1 is to obtain congressional appropriation for the Corps to participate in finalizing the Recon Study thereby allowing full Corps participation in the development of a Project Management Plan (PMP). Once this PMP is prepared, authority and subsequent appropriation to fund the preparation of a Feasibility Study will be required.

Option 2 offers the opportunity for the Corps to provide assistance to the RRWC in meeting to prepare a PMP as part of this 905(b) reconnaissance effort. Once the PMP is prepared within the parameters of the USACE guidelines, the RRWC will continue moving forward with the Feasibility Phase in accordance with WRDA Section 203 parameters.

Coordination, collaboration, and cooperation among the Corps at the District level, the Corps at the Division level, Corps Headquarters in Washington, D. C., the RRWC, and the congressional delegation are highly recommended in this decision-making process.
XII. POTENTIAL ISSUES AFFECTING INITIATION OF FEASIBILITY PHASE

No issues affecting the initiation of the feasibility phase have been identified at the time of completion of the reconnaissance phase of study. Continuation of this study into the cost-shared feasibility phase is contingent upon an executed FCSA. Failure to achieve an executed FCSA within 18 months of the approval date of the Section 905(b) Analysis will result in termination of the study. Other than funding, there are no apparent issues at this time that impact on the implementation of the feasibility phase. As iterated previously, should the USACE choose not to continue to the feasibility phase, the Red River Waterway Commission has expressed interest in investigating the possibility of proceeding with the feasibility phase under the authority of Section 203 of the Water Resources Development Act of 1986 as soon as practical.

XIII. VIEWS FROM OTHER RESOURCE AGENCIES

Because this initial investigation requires only limited coordination with other resource agencies and no major impacts are expected, views from other agencies were limited to the Louisiana Department of Environmental Quality (DEQ) and the Louisiana Department of Wildlife and Fisheries (LDWF). Representatives of LDWF commented on the need for further review to minimize or alleviate potential impact to the endangered and/or threatened including but not limited to the Interior Least Tern, which has been known to nest along riverbanks in Louisiana, and the Bluehead Shiner and the Blue Sucker, two rare small fish species known to inhabit the shallows of the Red River. More detailed data from LDWF and DEQ can be expected during the PMP process.

XIV. PROJECT AREA MAP

A map of the study area is provided in Exhibits 1 and 2.
## ATTACHMENT A. CARGO ESTIMATE BY PROVIDER, TYPE, AND ORIGIN AND DESTINATION

<table>
<thead>
<tr>
<th>Cargo Provider</th>
<th>Part of Available Tonnage</th>
<th>Pool/Tonnage</th>
<th>Lodic Brothers Tonnage</th>
<th>Vulcan Metals</th>
<th>MaritimeMetals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Total</td>
<td></td>
<td>% of Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td>Tonnage in Old River to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Old River</td>
<td></td>
<td>Old River</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Page</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>2</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>3</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>4</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>5</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>6</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>7</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>8</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>9</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>10</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>11</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>12</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>13</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>14</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>15</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>16</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>17</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>18</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>19</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>20</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>21</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>22</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>23</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>24</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>25</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>26</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>27</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>28</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>29</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>30</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>31</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>32</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>33</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>34</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>35</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>36</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>37</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>38</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>39</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>40</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>41</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>42</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>43</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>44</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>45</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>46</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>47</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>48</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>49</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
<tr>
<td>50</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
</tr>
</tbody>
</table>

**Atchment A: Cargo Estimate by Provider, Type, and Origin and Destination**

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>52</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>53</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>54</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>55</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>56</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>57</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>58</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>59</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
<tr>
<td>60</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
</tr>
</tbody>
</table>

**Table:**

- **1st Column:** Source Provider
- **2nd Column:** Type of Service
- **3rd Column:** Total Volume
- **4th Column:** Total Revenue
- **5th Column:** Total Revenue per Service

**Note:**

- The table above represents a summary of cargo estimates by provider, type, and origin and destination. Each column contains specific data related to cargo volume, revenue, and revenue per service for various providers.

**Source:**

- Information provided in the table is based on historical data and can be used for planning and budgeting purposes.

**Further Information:**

- Detailed reports and analyses can be found in the associated documents and reports mentioned in the table.

**Contact:**

- For more information or inquiries, please contact the relevant department or provider directly.
### ATTACHMENT B. Estimation of Benefits Without Project (9 ft. channel)

Deepening of Red River Waterway
With 9-Foot Channel

<table>
<thead>
<tr>
<th>Base Year</th>
<th>Total Present Value</th>
<th>$870,143,197</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rate</td>
<td>4.375%</td>
<td>Annual Equivalent Value</td>
</tr>
<tr>
<td>Period of Analysis</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

| Capital Recovery Factor | 0.049577164 |

<table>
<thead>
<tr>
<th>Number</th>
<th>Year</th>
<th>Present Value Factor</th>
<th>Total</th>
<th>Present Value W/O Trans Costs</th>
<th>of W/O Trans Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.95808383</td>
<td>$37,767,900</td>
<td>$36,184,814</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.91792463</td>
<td>$38,068,823</td>
<td>$34,944,310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.87944875</td>
<td>$38,373,657</td>
<td>$33,747,665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.84258563</td>
<td>$38,682,455</td>
<td>$32,593,281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.80726767</td>
<td>$38,995,267</td>
<td>$31,479,618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.77343010</td>
<td>$39,312,145</td>
<td>$30,405,196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.74101087</td>
<td>$39,633,143</td>
<td>$29,368,590</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.70995054</td>
<td>$39,958,314</td>
<td>$28,368,427</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.68019213</td>
<td>$40,287,712</td>
<td>$27,403,385</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.65168108</td>
<td>$40,621,392</td>
<td>$26,472,193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.62436511</td>
<td>$40,955,102</td>
<td>$25,564,785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.60768383</td>
<td>$41,289,002</td>
<td>$24,671,970</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.59184212</td>
<td>$41,624,002</td>
<td>$23,793,850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.57676767</td>
<td>$41,959,002</td>
<td>$22,929,420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.56252777</td>
<td>$42,304,002</td>
<td>$22,078,700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>0.54909711</td>
<td>$42,659,002</td>
<td>$21,231,780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0.53642121</td>
<td>$43,014,002</td>
<td>$20,397,560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>0.52444944</td>
<td>$43,370,002</td>
<td>$19,576,040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.51316515</td>
<td>$43,727,002</td>
<td>$18,766,220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.50255333</td>
<td>$44,085,002</td>
<td>$17,968,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.49259711</td>
<td>$44,443,002</td>
<td>$17,171,680</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>0.48332777</td>
<td>$44,802,002</td>
<td>$16,386,960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>0.47464944</td>
<td>$45,162,002</td>
<td>$15,614,040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>0.46654944</td>
<td>$45,523,002</td>
<td>$14,852,820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.45893715</td>
<td>$45,885,002</td>
<td>$14,103,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0.45180278</td>
<td>$46,249,002</td>
<td>$13,365,480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>0.44514944</td>
<td>$46,615,002</td>
<td>$12,639,360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>0.43907715</td>
<td>$46,983,002</td>
<td>$11,924,840</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>0.43359711</td>
<td>$47,353,002</td>
<td>$11,221,920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.42870278</td>
<td>$47,725,002</td>
<td>$10,529,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>0.42439711</td>
<td>$48,100,002</td>
<td>$9,848,880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>0.42067715</td>
<td>$48,478,002</td>
<td>$9,179,760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>0.41754944</td>
<td>$48,859,002</td>
<td>$8,521,240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>0.41491944</td>
<td>$49,242,002</td>
<td>$7,873,320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.41288715</td>
<td>$49,627,002</td>
<td>$7,236,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>0.41144944</td>
<td>$49,915,002</td>
<td>$6,608,280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>0.41050278</td>
<td>$50,205,002</td>
<td>$5,990,240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>0.40995944</td>
<td>$50,497,002</td>
<td>$5,382,880</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>0.40971944</td>
<td>$50,791,002</td>
<td>$4,796,120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.40979944</td>
<td>$51,087,002</td>
<td>$4,220,960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>0.40997944</td>
<td>$51,385,002</td>
<td>$3,656,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>0.41025944</td>
<td>$51,685,002</td>
<td>$3,102,440</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>0.41053944</td>
<td>$51,987,002</td>
<td>$2,559,080</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>0.41082944</td>
<td>$52,292,002</td>
<td>$2,016,320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.41112944</td>
<td>$52,599,002</td>
<td>$1,484,160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>0.41144944</td>
<td>$52,909,002</td>
<td>$0,962,560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>0.41177944</td>
<td>$53,222,002</td>
<td>$0,451,560</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>0.41212944</td>
<td>$53,539,002</td>
<td>$0,251,040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>0.41244944</td>
<td>$53,859,002</td>
<td>$0,050,960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.41279944</td>
<td>$54,182,002</td>
<td>$0,050,960</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** | $2,327,198,296 | $870,143,197 |
### ATTACHMENT C. Estimation of Benefits With Project (12 ft. channel)

**Deepening of Red River Waterway With a 12 Foot Channel**

<table>
<thead>
<tr>
<th>Base Year</th>
<th>Total Present Value</th>
<th>Interest Rate</th>
<th>Annual Equivalent Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$721,598,317</td>
<td>4.375%</td>
<td>$35,774,798</td>
</tr>
</tbody>
</table>

**Capital Recovery Factor** 0.04957164

| Period of Analysis | 50 |

<table>
<thead>
<tr>
<th>Number</th>
<th>Year Factor</th>
<th>With Project Trans Cost</th>
<th>Of With Proj Trans Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.95808383</td>
<td>$31,308,050</td>
<td>$29,995,736.53</td>
</tr>
<tr>
<td>2</td>
<td>0.91792463</td>
<td>$31,558,150</td>
<td>$28,668,003.02</td>
</tr>
<tr>
<td>3</td>
<td>0.87944875</td>
<td>$32,068,146</td>
<td>$27,020,158.63</td>
</tr>
<tr>
<td>4</td>
<td>0.84258563</td>
<td>$32,328,127</td>
<td>$26,097,451.46</td>
</tr>
<tr>
<td>5</td>
<td>0.80726767</td>
<td>$32,591,488</td>
<td>$25,207,237.52</td>
</tr>
<tr>
<td>6</td>
<td>0.77343011</td>
<td>$32,858,272</td>
<td>$24,348,336.97</td>
</tr>
<tr>
<td>7</td>
<td>0.74101087</td>
<td>$33,128,525</td>
<td>$23,519,614.07</td>
</tr>
<tr>
<td>8</td>
<td>0.70995054</td>
<td>$33,402,291</td>
<td>$22,719,975.48</td>
</tr>
<tr>
<td>9</td>
<td>0.68019213</td>
<td>$33,679,616</td>
<td>$21,948,368.62</td>
</tr>
<tr>
<td>10</td>
<td>0.65168108</td>
<td>$33,951,406</td>
<td>$21,194,840.76</td>
</tr>
<tr>
<td>11</td>
<td>0.62436511</td>
<td>$34,206,572</td>
<td>$20,461,422.86</td>
</tr>
<tr>
<td>12</td>
<td>0.60895495</td>
<td>$34,462,288</td>
<td>$19,746,104.97</td>
</tr>
<tr>
<td>13</td>
<td>0.59452909</td>
<td>$34,710,529</td>
<td>$19,048,956.14</td>
</tr>
<tr>
<td>14</td>
<td>0.58092357</td>
<td>$34,951,361</td>
<td>$18,369,077.28</td>
</tr>
<tr>
<td>15</td>
<td>0.56794022</td>
<td>$35,185,728</td>
<td>$17,696,578.48</td>
</tr>
<tr>
<td>16</td>
<td>0.55554209</td>
<td>$35,414,703</td>
<td>$17,031,579.64</td>
</tr>
<tr>
<td>17</td>
<td>0.54369286</td>
<td>$35,637,274</td>
<td>$16,364,360.76</td>
</tr>
<tr>
<td>18</td>
<td>0.53236187</td>
<td>$35,854,377</td>
<td>$15,695,241.86</td>
</tr>
<tr>
<td>19</td>
<td>0.52139194</td>
<td>$36,066,081</td>
<td>$15,024,712.92</td>
</tr>
<tr>
<td>20</td>
<td>0.51074140</td>
<td>$36,271,378</td>
<td>$14,342,363.97</td>
</tr>
<tr>
<td>21</td>
<td>0.49988178</td>
<td>$36,471,341</td>
<td>$13,656,905.02</td>
</tr>
<tr>
<td>22</td>
<td>0.48908248</td>
<td>$36,666,918</td>
<td>$12,968,406.02</td>
</tr>
<tr>
<td>23</td>
<td>0.47825346</td>
<td>$36,858,057</td>
<td>$12,275,817.02</td>
</tr>
<tr>
<td>24</td>
<td>0.46749537</td>
<td>$37,045,776</td>
<td>$11,578,988.97</td>
</tr>
<tr>
<td>25</td>
<td>0.45680838</td>
<td>$37,230,087</td>
<td>$10,878,600.92</td>
</tr>
<tr>
<td>26</td>
<td>0.44618528</td>
<td>$37,411,010</td>
<td>$10,174,682.82</td>
</tr>
<tr>
<td>27</td>
<td>0.43562962</td>
<td>$37,588,527</td>
<td>$9,466,124.80</td>
</tr>
<tr>
<td>28</td>
<td>0.42515390</td>
<td>$37,761,620</td>
<td>$8,753,006.76</td>
</tr>
<tr>
<td>29</td>
<td>0.41476449</td>
<td>$37,930,276</td>
<td>$8,036,338.72</td>
</tr>
<tr>
<td>30</td>
<td>0.40446531</td>
<td>$38,094,532</td>
<td>$7,316,190.68</td>
</tr>
<tr>
<td>31</td>
<td>0.39425856</td>
<td>$38,254,422</td>
<td>$6,586,582.63</td>
</tr>
<tr>
<td>32</td>
<td>0.38414512</td>
<td>$38,410,000</td>
<td>$5,846,604.59</td>
</tr>
<tr>
<td>33</td>
<td>0.37413225</td>
<td>$38,559,261</td>
<td>$4,996,376.55</td>
</tr>
<tr>
<td>34</td>
<td>0.36422454</td>
<td>$38,699,219</td>
<td>$4,136,798.51</td>
</tr>
<tr>
<td>35</td>
<td>0.35439874</td>
<td>$38,831,022</td>
<td>$3,267,910.45</td>
</tr>
<tr>
<td>36</td>
<td>0.34467424</td>
<td>$38,962,951</td>
<td>$2,389,692.34</td>
</tr>
<tr>
<td>37</td>
<td>0.33491855</td>
<td>$39,090,411</td>
<td>$1,492,074.22</td>
</tr>
<tr>
<td>38</td>
<td>0.32511965</td>
<td>$39,219,203</td>
<td>$678,280.98</td>
</tr>
<tr>
<td>39</td>
<td>0.31538597</td>
<td>$39,348,099</td>
<td>$3,840,023.89</td>
</tr>
<tr>
<td>40</td>
<td>0.30562090</td>
<td>$39,474,102</td>
<td>$2,964,747.79</td>
</tr>
<tr>
<td>41</td>
<td>0.29582090</td>
<td>$39,596,337</td>
<td>$2,082,029.68</td>
</tr>
<tr>
<td>42</td>
<td>0.28598439</td>
<td>$39,711,681</td>
<td>$1,183,042.54</td>
</tr>
<tr>
<td>43</td>
<td>0.27598439</td>
<td>$39,816,190</td>
<td>$2,290,997.64</td>
</tr>
<tr>
<td>44</td>
<td>0.26598439</td>
<td>$39,910,691</td>
<td>$3,400,952.75</td>
</tr>
<tr>
<td>45</td>
<td>0.25598439</td>
<td>$39,990,691</td>
<td>$4,510,907.86</td>
</tr>
<tr>
<td>46</td>
<td>0.24598439</td>
<td>$40,064,691</td>
<td>$5,620,862.97</td>
</tr>
<tr>
<td>47</td>
<td>0.23598439</td>
<td>$40,120,691</td>
<td>$6,730,818.10</td>
</tr>
<tr>
<td>48</td>
<td>0.22598439</td>
<td>$40,160,691</td>
<td>$7,840,774.23</td>
</tr>
<tr>
<td>49</td>
<td>0.21598439</td>
<td>$40,191,691</td>
<td>$8,950,730.36</td>
</tr>
<tr>
<td>50</td>
<td>0.20598439</td>
<td>$40,212,691</td>
<td>$10,060,686.49</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>$1,930,213,852</td>
<td>$721,598,317</td>
</tr>
</tbody>
</table>
Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Red River Below Denison Dam, Arkansas, Louisiana, Oklahoma, and Texas, published as House Document No. 304, 90th Congress, 2nd Session, and any other pertinent reports to determine whether modifications to the recommendations contained therein are advisable at the present time in the interest of providing a 12-foot navigation channel, ecosystem restoration, bank stabilization, flood damage reduction and related purposes on the J. Bennett Johnston Waterway, Mississippi River to Shreveport, Louisiana.

Adopted: June 28, 2006

ATTEST:

DON YOUNG
CHAIRMAN
ENERGY AND WATER APPROPRIATIONS BILL, 2006

JUNE 16, 2005.—Ordered to be printed

Mr. DOMENICI, from the Committee on Appropriations, submitted the following

REPORT

[To accompany H.R. 2419]

The Committee on Appropriations, to which was referred the bill (H.R. 2419) making appropriations for energy and water development for the fiscal year ending September 30, 2006, and for other purposes, reports the same to the Senate with an amendment and recommends that the bill as amended do pass.

Amount in new budget (obligational) authority, fiscal year 2006

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of bill as reported to the Senate</td>
<td>$31,245,000,000</td>
</tr>
<tr>
<td>Amount of 2005 appropriations</td>
<td>$29,832,280,000</td>
</tr>
<tr>
<td>Amount of 2006 budget estimate</td>
<td>$29,746,728,000</td>
</tr>
<tr>
<td>Amount of House allowance</td>
<td>$29,746,000,000</td>
</tr>
</tbody>
</table>

Bill as recommended to Senate compared to—

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 appropriations</td>
<td>+$1,412,720,000</td>
</tr>
<tr>
<td>2006 budget estimate</td>
<td>+$1,498,272,000</td>
</tr>
<tr>
<td>House allowance</td>
<td>+$1,499,000,000</td>
</tr>
<tr>
<td>Project Description</td>
<td>Total Area</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Atchafalaya River and Bayous Chene, Boeuf and Black, LA</td>
<td>585</td>
</tr>
<tr>
<td>Bayou Sorrel Lock, LA</td>
<td>1,500</td>
</tr>
<tr>
<td>Bossier Parish, LA</td>
<td>150</td>
</tr>
<tr>
<td>Calcasieu Lock, LA</td>
<td>450</td>
</tr>
<tr>
<td>Calcasieu River Basin, LA</td>
<td>612</td>
</tr>
<tr>
<td>Calcasieu River Pass Ship Channel Enlargement, LA</td>
<td>700</td>
</tr>
<tr>
<td>Cross Lake Water Supply Enhancement, LA</td>
<td>200</td>
</tr>
<tr>
<td>Grand Bayou, Plaquemines Parish, LA</td>
<td>100</td>
</tr>
<tr>
<td>Hurricane Protection, LA</td>
<td>250</td>
</tr>
<tr>
<td>J. Bennett Johnston Waterway Study, LA</td>
<td>100</td>
</tr>
<tr>
<td>Louisiana Coastal Area Ecosystem Rest, LA</td>
<td>5,000</td>
</tr>
<tr>
<td>Louisiana Coastal Area Ecosystem Restoration, LA</td>
<td>15,000</td>
</tr>
<tr>
<td>Plaquemines Parish Urban Flood Control, LA</td>
<td>250</td>
</tr>
<tr>
<td>Port of Iberia</td>
<td>750</td>
</tr>
<tr>
<td>St. Bernard Parish Urban Flood Control, LA</td>
<td>636</td>
</tr>
<tr>
<td>St. Charles Parish Urban Flood Control, LA</td>
<td>450</td>
</tr>
<tr>
<td>West Baton Rouge Parish, LA</td>
<td>150</td>
</tr>
<tr>
<td>West Pearl Navigation, LA and MS</td>
<td>100</td>
</tr>
<tr>
<td>West Shore Lake Ponchartrain, LA</td>
<td>250</td>
</tr>
<tr>
<td>Maine</td>
<td></td>
</tr>
<tr>
<td>Searskport Harbor, ME</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td></td>
</tr>
<tr>
<td>Anacostia River and Tributaries, MD and DC</td>
<td>180</td>
</tr>
<tr>
<td>Anacostia River and Tributaries, PG County Levee, MD &amp;</td>
<td>400</td>
</tr>
<tr>
<td>Baltimore Metro WTR Res-Patapsco and Back Rivers, MD</td>
<td>180</td>
</tr>
<tr>
<td>Chesapeake Bay Comprehensive Plan, MD</td>
<td>500</td>
</tr>
<tr>
<td>Chesapeake Bay Shoreline, Maryland Coastal Management</td>
<td>200</td>
</tr>
<tr>
<td>Chesapeake Bay Shoreline—Sedi Buoy Model</td>
<td>525</td>
</tr>
<tr>
<td>Chesapeake Bay Shoreline, Maryland Ecosystem Model</td>
<td>1,000</td>
</tr>
<tr>
<td>Chesapeake Bay Shoreline—Sedi Buoy Model</td>
<td>525</td>
</tr>
<tr>
<td>Eastern Shore, MD Chesapeake Bay Island, MD</td>
<td>900</td>
</tr>
<tr>
<td>Middle Potomac River Greater Seneca/Muddy Branch, MD</td>
<td>500</td>
</tr>
<tr>
<td>Massachusetts</td>
<td></td>
</tr>
<tr>
<td>Blackstone River Watershed Restoration, MA and RI</td>
<td>500</td>
</tr>
<tr>
<td>Coastal Massachusetts Ecosystem Rest, MA</td>
<td>500</td>
</tr>
<tr>
<td>Boston Harbor (45-foot Channel), MA</td>
<td>150</td>
</tr>
<tr>
<td>Michigan</td>
<td></td>
</tr>
<tr>
<td>Detroit River Masterplan, MI</td>
<td></td>
</tr>
</tbody>
</table>
Letters of Support
August 31, 2016

Colonel Michael C. Derosier, Commander
U.S. Army Corps of Engineers
Vicksburg District
155 Clay Street
Vicksburg, Mississippi 39183-3435

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

Dear Colonel Derosier:

The Red River Waterway Commission (RRWC) is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The Red River Valley Association Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and the Gulf Intracoastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons. The estimated cost savings range from $1.50 to $4.00 per ton.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.
As the Chair of the Red River Waterway Commission and Secretary of the Department of Transportation and Development, I support the 12 foot draft request.

If you have questions, please contact Phil Jones at (225) 379-3030.

Sincerely,

[Signature]

Shawn D. Wilson, Ph.D.
Secretary

SDW:SJB:sjb
August 31, 2016

U.S. Army Corps of Engineers

RF: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet and Cleco is supporting the efforts of the Red River Waterway Commission in accomplishing such modification.

In 2009 Cleco put into commercial operation its latest edition to our generation fleet; Madison Unit 3 located in Lena, La. Madison 3 is a Circulating Fluidized Bed (CFB) unit that can burn a multitude of fuels in its boilers for the purpose of generating power. The addition of Madison 3 was to diversify our generation portfolio and become less reliant on a particular fuel. On site with Madison 3 is our Rodemacher Unit 2; a Powder River Basin coal fired unit that receives and burns over 2 million tons of coal each year. At the time of Rodemacher 2’s construction the option of water transportation was not available.

Madison 3’s entire fuel supply is delivered by barge from Mississippi River origins and then up the Red River to Cleco’s unloading facility. The current 9-foot draft limitation on the Red River limits the advantage of utilizing the U.S. Waterways to deliver commodities that originate on a 12-foot draft waterway.

Cleco currently moves up to 2.5 million tons of commodities such as petroleum coke, Illinois Coal, and Limestone (Chemstone) per year. Cleco, through our logistics provider, operates 3 to 6 boats pushing 42 to 66 barges annually delivering products to our dock.

Cleco believes by increasing the channel depth to 12-feet they could reduce the total number of tows by 20%, as well as reduce the boat requirements by as much as 25%. Fewer barges would be required to move the same amount of tonnage as well as reducing boat fuel. Cleco estimates the increase in draft depth could reduce overall logistics costs by as much as $2 to $3 per ton or up to $8.1 million annually.

A 12-foot draft on the Red River would increase the economic development opportunities along the river by reducing the overall costs and creating a more competitive environment with alternative means of transportation such as the railroads.

It is Cleco’s understanding that about 90% of the entire 210 miles of the Red River is at 12-foot draft. Increasing the draft depth of the Red River will be benefited from supply sources to end users by eliminating the un-used cargo capacity or dead freight of barges being loaded on the Mississippi River.
with a Red River destination; therefore reducing overall transportation costs. Cleco's goal is to produce the lowest cost power for it's customers; utilization of the U.S. navigable waterways has helped us do that. The increase in draft depth will ensure that Cleco will continue to fuel the Madison 3 unit with the most reliable and lowest transportation cost possible.

Cleco fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel, as well as, strongly encouraging the Corp pursue the 12-foot channel modifications necessary that would increase the productivity, efficiency, and reliability of the Red River.

Respectfully,

Calvin Johnson
Manager Fuel Supply & Strategy
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Priefert Steel has been moving 1,500 tons of steel coils per barge to the Port of Caddo Bossier since the beginning of 2015; we import steel coils to up the Red river to Shreveport.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

The Red River Waterway Commission and the Port of Caddo Bossier have been successful in assisting our company to increase tonnage. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. Justifications include:

1. A 12-foot channel is essential to keep the waterway open (has been closed to navigation over 21 weeks in past 18 months primarily to silt buildup and only a 9ft channel).
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company and does not allow us to barge Steel from the Northern United States that is more cost effective for Priefert.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system and each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.

The estimated cost savings to our company would range from $1.00 to $2.00 per ton. We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet. Priefert Manufacturing strongly supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel.

Sincerely,

Chris Shipp
General Manager Priefert Steel

HEADQUARTERS: EAST TEXAS
2630 S. Jefferson | Mt. Pleasant, TX | 75455
1-800-572-8616 • Fax 903-572-2798
www.priefertsteel.com

ARKANSAS
1325 River St. | Benton, AR | 72015
501-778-1600

NORTH TEXAS
3430 McCart | Ft. Worth, TX | 76110
1-844-572-2798
August 19, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Terral RiverService is in support of the request from the Red River Waterway Commission.

Terral RiverService is an inland boat and barge company that operates on the Red River. Terral has been moving barges and selling barge freight on the Red River since 1992. Currently Terral moves around 2,000,000 tons of cargo on the Red River System. Terral employs around 50 people whose jobs are dependent on the viability of barge navigation on the Red River.

The main benefit to deepen the Red River is to reduce freight rates to customers relying on barge traffic on river. Almost every barge Terral tows on the red river is coming from or is going to a river that is already authorized to a 12 foot draft. Increasing the draft of the Red River would make Terral’s customers more competitive and in many cases would result in a cost savings being passed on to the end user, the public. 90% of the Red River already exceeds a 12 foot draft and the authorization would only result is extra dredging for 10% of the river. The locks are currently capable of passing a 12 foot draft tow, but would only need additional dredging at the approaches.

A 9 foot draft tow of 6 barges holds around 9000 tons. A 12 foot draft tow of 6 barges would hold over 12000 tons of material. Barges loaded out of St Louis heading to the Port of Alexandria currently cost around $15 per ton. The only reason they would be loaded to 9 foot is due to the last 90 miles of the 920 mile trip. If we could load to around 12 foot drafts the effective rate would be about $11.25 per ton. This is a $3.75 per ton savings that would save a customer moving 100,000 tons $375,000. This cost savings would change the economics of moving barges on the Red River and would likely open up the area to greater economic prosperity.

Terral is certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable Terral to provide our customers with as much as $4,000,000 in savings per year (this is a blended rate of towing and barge freight sold per year). To develop and realize full potential, the Waterway must be authorized at 12 feet.
Terral RiverService fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. Terral strongly encourages the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully,

Gabe Gattle
VP of Transportation

Terral RiverService, Inc.
DATE: August 8, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway

Support for a 12-Foot Channel

Ladies and Gentlemen:

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Since commencing operations in the mid-1990’s, the Caddo Bossier Parishes Port Commission’s (“Port’s”) mission has been to serve, not only as a multi-modal commerce hub, but also as a key economic development agency working to attract investments and create and retain jobs at The Port complex, as well as throughout Caddo and Bossier parishes. Fortunately, The Port has a successful track record of creating as well as retaining jobs. As a result, 1,700 people work at the companies at The Port complex alone.

Shortly after Benteler Steel chose The Port complex as the site for their $975 million steel tube manufacturing facility, The Port began a thoughtful process for land acquisition for one reason: only 700-acres of greenfield sites remained available and that acreage was made up of much smaller tracts of land. The Port no longer owned a site that could accommodate another Benteler Steel or Pratt Industries in our area.

As part of an in-depth Five Year Master Plan, this comprehensive expansion plan was completed in the fall of last year and revealed 18 viable sites in both Caddo and Bossier Parishes. These sites were determined “viable” because each site met a list of pre-determined criteria. Within these 18 sites are hundreds of separate tracts of land. The Port’s goal is to purchase 3,000 acres and develop at least two 500-acre “mega” sites for large footprint companies. The remainder of the property would be for smaller developments in the 10-100 acre range. The top site on our radar includes some 3000 +/- acres and over four miles of river frontage!

We believe additional land will facilitate the fulfillment of The Port’s mission, which is to enhance commerce, attract dollar investment and create employment for the parishes of Caddo and Bossier. In addition, it could lead to the creation of 15,000 direct and indirect jobs for the region.

“"This institution is an equal opportunity provider and employer."

MEMBERS: Sam N. Gregorio, President; Rick C. Prescott, Vice President; Roy Griggs, Secretary-Treasurer Lynn Austin; Erica R. Bryant; James D. Hall; Capt. Thomas F. Murphy; James L. Pannell; Steve Watkins
Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway is currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The Caddo Bossier Parishes Port Commission fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Eric England, PPM
Executive Port Director
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
    Support for a 12-Foot Channel

I’m writing to ask your support of the Red River Waterway Commission’s request to deepen the J. Bennett Johnston Waterway from 9 feet to 12 feet. Deepening the channel would ensure efficient transport of commercial tows, support employment in the Caddo-Bossier area and would provide increased safety benefits.

Genesis Energy, L.P. is a midstream energy services provider that offers infrastructure and logistics to move our customers’ products to market in a safe, efficient and cost effective manner. Our operations are primarily in the Gulf Coast region of the United States, including Texas, Louisiana, Arkansas, Mississippi, Alabama, Florida, Wyoming and in the Gulf of Mexico. Genesis utilizes the Red River to move and store product for our customers.

- Genesis operates the Red River Terminal, located at the Port of Shreveport-Bossier. Genesis and its refinery customers depend on the Terminal to store refined products and the Red River is the primary means for southbound transportation.
- Genesis Marine facilitates this transportation need, but only if its barges can access the Terminal.
- The Refinery Services division utilizes the Terminal and uses the Red River to move and store caustic soda for its and its customers’ operations.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. However there are challenges in using the waterway. Typically the waterway has high water or low water and there is no intermediary level. This leads to occurrences of unexpected shoaling. By dredging the waterway, it will make the channel more reliable to use.

In addition, the current depth makes the waterway inefficient and costly to use. Our businesses have been required to light load barges and use multiple barges to complete a haul that would normally only take one barge. Genesis and its customers incur substantial unnecessary costs as a result. In addition, we have encountered lost business opportunities due to the inefficiency and unreliability of the river. By deepening the channel it would allow the barges to be loaded to their full capabilities thus allowing more efficient, cost effective and reliable transport.

Changing the depth of the waterway to 12 feet would allow for safe, reliable and efficient transportation of cargo. More importantly, the change would allow the Red River to be competitive with commercial inland waterways, most of which already operate at a depth of 12 feet. The waterway is already set up to support a channel that is 12 feet as each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.

Genesis Energy, L.P. • 919 Milam, Suite 2100 • Houston, Texas 77002 • Tel: (713) 860-2500 • Fax: (713) 860-2640
Genesis Energy fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Thank you for your consideration.

Sincerely,

[Signature]

Grant Sims
CEO
Genesis Energy, L.P.
Date: 8/18/2-16

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Florida Marine Transporters (FMT) transports a variety of products on the Red River (rolled coil steel, Frac Sand, Scrap Metal, Aggregate, Coal, Pet Coke, etc.) by barge to several companies. FMT also owns and operates a terminal located at mile 97 on the Red River where we move, store and sell products.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable as possible.

Unfortunately, a 9-foot draft has proven to be less than reliable during low water events and when silting from high water events occur. In order to provide a business friendly, reliable, efficient, economically sound river transportation and spur economic growth along the Red River a 12-foot channel is needed.

The reasons and justifications why such action must be taken include:

1. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons or more depending on barge size.
2. By increasing barge capacity along the Red River, Economic Development professionals will have a fighting chance to bring new industrial businesses along the red river that supports communities with taxable revenues and high wage job creation.
3. Increasing barge capacity and marine transportation will reduce CO2 emissions by rail and truck (see attached chart). A reduction in CO2 emissions benefits everyone.
4. Competition for long haul rail and trucking to reduce freight rates which attracts new businesses to the region.
5. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company and customers.
6. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
7. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
The estimated annual cost savings to our company with a 12-foot channel would range from $1.50 to $4.00 per ton or $1,500,000 to $4,000,000. Savings of this nature is often shared with the companies we move cargo for. Most important to note is that when barge transportation rates and capacities on the Red River are comparable to other rivers transportation rates, new businesses will open. This is the type of economic impact is needed in Central Louisiana.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our company to continue grow and encourage new business to locate along the Red River creating high paying jobs in Central Louisiana. To develop and realize the full potential, the Waterway must be authorized at 12 feet.

Florida Marine Transporters is a Louisiana based company that fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Kirk C. Landry
Vice President Government Relations
985-502-4805
Kirk.landry@flmarine.com
2360 5th Street
Mandeville Louisiana 70448
TON-MILES TRAVELED PER GALLON OF FUEL

- 616 Miles
- 478 Miles
- 150 Miles

TONS OF CO₂ PER MILLION TON-MILES

- 171.83
- 21.55
- 16.41
Date: August 2, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Central Louisiana Regional Port, a public port located in Rapides Parish, has a variety of companies that depend upon the stability of the Red River.

Currently the J. Bennett Johnston Waterway is authorized and has maintained a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. Our customers tell us the reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
3. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
4. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The estimated cost savings to port tenants would range from $1.50 to $4.00 per ton. Recent shipments of bulk fertilizer could show a minimum savings of approximately $150,000 and can be achieved with a 12-foot channel. Many of the Central Louisiana Regional Port’s customers depend on these savings as the margin of such commodities is minimal. Savings can certainly impact the surrounding economy by way of increased capital investment, jobs, benefits, bonuses, etc.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and utilize at its full potential, the Waterway must be authorized at 12 feet.

The Central LA Regional Port fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Blake K. Cooper
Executive Director
August 17, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Bierden Construction Company uses the Red River Waterway by receiving rock, lime and frac sand into the Hanna Port. We depend on this waterway to supply our customers with material needed at a fair and competitive price.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include competition for long haul rail to reduce freight rates, which is a national benefit. Also loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

The estimated cost savings to our company would range from $1.50 to $2.00 per ton. Recent shipments of Ag Lime show that a potential savings of $18,000 per tow could be realized with a 12-foot channel.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our company to continue to supply our customers with competitive rates and to develop and realize the full potential of using the Red River as a source to receive material.

Bierden Construction Company fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Ryan Dupree
Vice President
August 19, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. Savage Inland Marine is in support of the request from the Red River Waterway Commission.

Savage Inland Marine is an Inland Marine Logistics and Freight handling company that provides logistics and dock operations on the Red River. Savage has been moving barges and selling barge freight on the Red River since 1992. Annually Savage unloads and provides logistics for around 2,200,000 tons of cargo on the Red River. Savage employs around 20 people whose jobs are dependent on the viability of barge navigation on the Red River.

The main benefit to deepen the Red River is to reduce freight rates to customers relying on barge traffic on river. Almost every barge Savage handles on the red river is coming from or is going to a river that is already authorized to handle a 12' draft. Increasing the draft of the Red River would make Savage’s customers more competitive and in many cases would result in a cost savings being passed on to the end user, the public. Currently 90% of the Red River exceeds a 12’ draft and the authorization would only result in dredging for 10% of the river. The locks are currently capable of passing a 12’ draft tow, but would only need additional dredging at the approaches.

A 9’ draft tow of 6 barges holds around 9000 tons. A 12’ draft tow of 6 barges would hold over 12000 tons of material. Barges loaded out of St Louis heading to the Port of Alexandria currently cost around $15 per ton. The only reason they would be loaded to 9 foot is due to the last 90 miles of the 920 mile trip. If we could load to around 12’ drafts the effective rate would be about $11.25 per ton. This is a $3.75 per ton savings that would save our customer $8,250,000 annually. This doesn’t include the saving and efficiency that would be realized by decreasing the number of shifts at the loading and unloading facilities. A savings of this magnitude would drastically increase the viability of the Red River to similar end users.

Savage is certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To recognize the savings per ton, and entice future construction along the Red River the Waterway must be authorized at 12 feet.

Savage Inland Marine fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. Savage strongly encourages the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully,  

Joshua Knichel
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Pine Bluff Sand and Gravel ships material from the deeper Mississippi River to our material yard on the Red River at Alexandria, Louisiana and we intermittently tow crushed stone to various locations up the Red River. A 12' channel on the Red River would allow us to put at least 40% more in each barge.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RR VA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

To lower costs to state and federal agencies, customers, consumers and all involved, the 12' channel would make a very significant difference. In addition to the additional 40% tonnage in each barge, there would be a considerable reduction in greenhouse gases and diesel fuel consumption. We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.

Pine Bluff Sand and Gravel Company fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

PINE BLUFF SAND AND GRAVEL COMPANY

W. Scott McGeorge, Senior Vice President
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
   Support for a 12-Foot Channel

The Ports Association of Louisiana (PAL) is writing to support the Red River Waterway Commission’s request of modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

PAL has several member ports located along the Red River and deepening of the J. Bennett Johnston Waterway would greatly improve shipping efficiency and productivity in shipping agricultural products, fertilizers, wood products, steel and pipe.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this waterway safe and reliable. Now it is time to make it more efficient.

These waterway proponents have been successful in assisting our company to increase tonnage and developing new users. However, there is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Inter-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for our company.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons.

Without this proposed project modification, our member ports will be unable to take advantage of a deepened channel and the benefits and cost-savings it will afford.

We are certain that the benefits far outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. To develop and realize full potential, the Waterway must be authorized at 12 feet.

PAL fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel, and we strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Joseph Accardo, Jr.
Executive Director
Ports Association of Louisiana
August 8, 2016

To: U.S. Army Corps of Engineers

Re: J. Bennett Johnston Waterway
   Support for a 12-Foot Channel

Annex Marine, Inc. supports the modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet. The proposed modification would reduce the volatility we have seen on the river, over the last two years in particular, and would also allow better utilization of our equipment which can operate variously at maximum drafts of 9’-6” up to 11’-0”.

Not only would risk of damage to equipment be reduced due to operating in a deeper channel but ton-mile costs would drop significantly with the ability to bring more tonnage per trip. We often are limited to an 8’-6” draft, occasionally less, for barge movements to Shreveport due to river conditions. A comparison of tonnage at 8’-6” vs. the maximum tonnage we could accommodate with the deeper channel per trip for our two typical barge configurations is as follows:

<table>
<thead>
<tr>
<th>Config.</th>
<th>8’-6”</th>
<th>9’-6”</th>
<th>11’-0”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3,600SST (short tons)</td>
<td>4,200SST</td>
<td>4,400SST</td>
</tr>
<tr>
<td>2</td>
<td>2,850SST</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*an increase of 600SST per trip

*an increase of 1,550SST per trip

The increase in tonnage per trip could mean a reduction in ton-mile costs of 10% or more keeping Annex’s current volume to Shreveport constant.

Our understanding is that all locks on the Waterway are capable of passing 12 foot tows and that more than 90% of the Waterway is already at or exceeding a 12 foot channel so only roughly 20 miles would need to be altered in order to allow industry to take advantage of authorized 12 foot channel depths in the Lower Mississippi River, Arkansas River, Atchafalaya River and Intracoastal Waterway.

For all these reasons, Annex Marine, Inc. fully supports the proposed deepening of the J. Bennett Johnston Waterway.

Respectfully yours,

Donique Browsh
Vice President, Annex Marine, Inc.

P.O. Box 708  Gladwyne, PA 19035
T: 610-574-2247  F: 484-603-7136
E: DONIQUE@ANNEXMARINE.COM
TO: U.S. Army Corps of Engineers  
RE: Authorization for 12' Channel, J. Bennett Johnston Waterway  

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, NWS, RRWC, public ports, and industry, have made great efforts to make this Waterway safe and reliable. Now it is time to make it efficient. The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet and this Association is in full support of this initiative.

There is one major action that will provide the Waterway with the most competitive edge against rail, a 12-foot channel. Following are the reasons and justifications why such action must be taken.

- **Competition:** As long as rail rates drop to meet waterborne rates, industry cannot be expected to change the way they conduct business if they are experiencing the benefits. We must continue to do what is necessary to reduce waterborne rates.

- **Authorization of Adjacent Systems:** **ALL** major Waterways south of Cairo, Illinois, are currently authorized for a 12 foot channel, **except our Waterway**, to include: Mississippi River, Arkansas River, Atchafalaya River and Gulf Intra Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 foot, creating a great inefficiency for industry and shippers.

- **Current Channel Depths:** It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.

- **Lock Capability:** Each of the five locks on the Waterway is capable of passing 12-foot draft vessels.

- **Additional Cargo Capacity:** As a ‘rule of thumb’ one barge carries 1,500 tons of cargo, loaded at 9’. Loading a barge to 12 feet provides an additional 3’, 1/3 more capacity, or 500 tons per barge. A typical tow for this Waterway pushes 6 barges. Loading to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons; therefore, a 6 barge tow would be carrying the same volume as 8 barges. An important factor is that the same tow and crew would be used keeping the cost the same, providing a lower cost per ton.

- **Ecosystem Benefits:** Positive impacts due to ‘notched’ dikes, fish habitat and Least Tern habit restoration could be included in this project.

**Economic Analysis:** The most important reason to justify a 12-foot channel would be the economics. Estimates comparing the potential cost per ton and savings to industry were considered for various commodities. Rates also vary depending on the port destination, using the Port of Shreveport-Bossier as the example port, which would experience the most savings. The main commodities considered were liquid petroleum, construction stone, fertilizer and coal. Costs per ton will vary depending on type product and product value.
The estimated cost savings would range from $1.50 to $4.00 per ton. Recent shipments of liquid petroleum show that a potential savings of $10,000 per barge would be realized if there was a 12-foot channel.

Another example of an economic benefit is for a user such as the CLECO and their Rodemacher power plant near Boyce, LA. With the potential to move 3 million tons of coal and limestone per year the transportation savings would be a major factor in reduced power rates to customers.

Currently sand & gravel to Shreveport and Bossier City move by unit train, which are lower than waterborne rates. A 12-foot channel would make barge transport more competitive and potentially transfer that commodity from rail to barge.

**Conclusion:** We are certain that the benefits outweigh the costs for our Waterway to be maintained at 12 feet. Minimum maintenance dredging and navigation structures would be required. The RRWC had The Shaw Group conduct a study for a 12-foot channel which is included in the official submission. The savings per ton will enable the public ports to market the Waterway and be competitive to recruit industries, such as the paper industries, to use waterborne transportation. To compete and realize the full potential, the Waterway must be authorized at 12 feet.

The Red River Valley Association supports the Red River Waterway Commission in their efforts to modify the J. Bennett Johnston Waterway from a 9 foot to 12 foot navigation channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Respectfully Presented:

[Signature]

Richard Brontoli
Executive Director
August 15, 2016

U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 to 12 feet. Luhr Bros., Inc. has an aggregate yard at mile 82 which services several private contractors as well as many municipalities, government agencies and highway supply contractors with a variety of materials used in their operations. We bring in over 500,000 tons of material each year for this purpose.

The RRVA navigation committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports and industry, has worked tirelessly to make the waterway reliable and safe for transportation of goods. We feel it is time to make it more efficient.

These waterway proponents have been successful in assisting Luhr Bros., Inc. to increase tonnage on the river and to bring in new users. The one major factor that would provide the waterway with the most competitive advantage would be a maintained 12 foot channel. Our material has to transit rivers that are already authorized at 12 feet, which is the Mississippi, Atchafalaya, and the ICWW. We must load our barges to 9 feet because of the waterway and this causes a great inefficiency for our company. It is estimated that the waterway is at or more than 12 feet 90% of the year. Our volume of material would increase from approx., 9,000 tons to 12,200 tons per 6 barge tow.

The cost savings to our company with the 12 foot channel could range from $1.75 to $3.50 per ton depending on the type of material. Recent shipments of aggregates could potentially save us on average $8,400.00 per tow which could be passed on to our customers. This would also reduce the number of tows needed per year which would be a great economic benefit to us. We are certain that the benefits outweigh the costs of the minimum construction and O&M that would be required to have a 12 foot channel.

Luhr Bros., Inc. fully supports the efforts of the Red River Waterway Commission to get the waterway authorized at 12 feet. We strongly encourage the USACE to authorize the 12-foot channel modification.

Sincerely,

Lonnie Dunn
Project Manager
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The City of Bossier City strongly supports the Red River Waterway Commission and the projects they need. Our City and region has received outstanding economic development as a direct result of the J. Bennett Johnston Waterway. The Port of Shreveport/Bossier City would not have happened without this waterway system.

Increasing the channel depth to 12 feet will have a major impact on the region’s continued economic development. The jobs created as a result of the waterway have been enormous and will grow significantly with the increased channel depth and resulting barge traffic. It is all the more important due to the rapid congestion of the Interstate and State Highways and resulting demand for more barge capacity as a viable, cost effective transportation mode.

The improved quality of life for State residents is reflected in the dramatic increase of fishing, boating, parks and walking trails along the river through creation of this waterway. We urge you to approve increasing the channel depth to 12 feet.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
TO: U.S. Army Corps of Engineers  
RE: J. Bennett Johnston Waterway  
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Red River has been a vital part of the City of Shreveport since the original settlement in 1836. Currently, the citizens of the City of Shreveport enjoy the Red River waterway in many different ways. One of the main attractions is recreational boating and fishing. The City of Shreveport also feels the impacts of the River as a shipping route. The Port of Caddo-Bossier has been and continues to have a large economic impact on the City of Shreveport. A key to our ability to recruit and retain businesses is based upon our multi-modal system, which offers a real competitive advantage to other sites that utilize truck and rail. Presently, the Port has seventeen (17) companies with over 1,700 employees.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
3. Each of the five locks on the Waterway is currently capable of passing 12-foot draft tows.
4. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
5. In increasing barge traffic, the long term effects are not only fiscal savings, but they also benefit local safety and the environment. Barge transportation is the safest and greenest method of transportation.
6. Not only do barge transportation safety incidents number exponentially less than trucking and rail, they also have the added benefit of reducing the number of trucks on the road, which reduces traffic congestion.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The City of Shreveport fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Ollie S. Tyler
MAYOR

August 18, 2016
August 8, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

On behalf of the Bossier Chamber of Commerce Board of Directors and 900 Members we support the Red River Waterway Commission's efforts to deepen the channel from 9 feet to 12 feet. The contribution our Ports and Waterway have made to the economic development of our region is astronomical. Bentler Steel alone will have generated over 675 new and high quality jobs for our region.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRWA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include the competition for long haul rail to reduce freight and competition for long haul rail to reduce freight rates, which is a national benefit and each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The Bossier Chamber of Commerce fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Michelle Cavanaugh
Director of Government Relations
To: U.S. Army Corps of Engineers

Re: J. Bennett Johnston Waterway - Project Modification for 12-Foot Channel

I am writing in support of a project modification request submitted by The Red River Waterway Commission (RRWC) to deepen the authorized channel on the J. Bennett Johnston (JBJ) Waterway from 9 feet to 12 feet.

Deepening the authorized channel to 12 feet makes sense for both navigation and commerce. Each of the five locks on the JBJ Waterway are capable of passing 12-foot draft tows and it is estimated that the controlling depth of the JBJ Waterway is at or exceeds 12 feet for over 90 percent of the 210-mile system. Currently, barges destined for the JBJ Waterway from 12-foot authorized channels have to be special loaded to accommodate a 9-foot draft. Deepening the channel to 12 feet will ameliorate this problem and allow 6-barge tows to increase tonnage from 9,000 to 12,000 tons. This will also increase competition with long haul rail and help reduce freight rates.

The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make the JBJ Waterway safe and reliable. Deepening the authorized channel to 12 feet would have the added benefit of making it more efficient and help attract new industry and jobs to a rural and underserved region.

As U.S. Representative of Louisiana’s Fifth Congressional District, I know how important this project is to the state of Louisiana and the surrounding region. I strongly support the RRWC’s request to deepen the authorized channel to 12 feet and respectfully urge the Corps to give full consideration to this project modification.

Sincerely,

Ralph Abraham, M.D.
Member of Congress
TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The Bossier Parish Police Jury has provided financial support for various projects to enhance The Port. The Benteler Steel/Tube Project at The Port assisted with the creation of a training facility at the Bossier Parish Community College. Over the years, The Port has provided a substantial economic impact for this region, with a large majority of the workforce at The Port residing and shopping in the Parish of Bossier, creating a positive economic impact for the Parish of Bossier.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The Bossier Parish Police Jury fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

William R. Altimus
Parish Administrator

WRA/rdh
August 15, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

The City of Natchitoches has fostered a strong relationship with the Red River Waterway Commission and the Natchitoches Port Commission. The Natchitoches Port and the Red River Waterway Commission plays an important role in economic development, creating a positive economic ripple that strengthens Natchitoches Parish.

Currently the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the Waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.
We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.

The City of Natchitoches fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Sincerely,

Mayor, Lee Posey
August 5, 2016

TO: U.S. Army Corps of Engineers

RE: J. Bennett Johnston Waterway
   Support for a 12-Foot Channel

The Central Louisiana Regional Chamber of Commerce fully supports the Red River Waterway Commission’s requested modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

Currently, the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made the waterway safe and reliable. Deepening the authorized channel would make it more productive and efficient, increasing barge traffic and tonnage.

The Central LA Regional Port, located in Alexandria, recently reorganized into a parish-wide entity to position it for future growth. The 256 acres of current port property, is occupied by a host of industrial enterprises that have created jobs, generated tax revenues, and enhanced the local economy.

Of the planned $15 million in infrastructure investments at the port, $10 million has already been spent to add an operations center, roadways, and to prepare the site for Cool Planet’s operation at the port. Funds are coming from the state of Louisiana, the Red River Waterway Commission and the company itself.

Other port-based operations continue to make a significant impact on the local economy, including DIS-TRAN Packaged Substations—a subsidiary of Crest Industries, Calvary Industries, CHS, and Terral River Service. The port was also employed in 2015 to barge in new electric generators for the city of Alexandria, and by Pineville-based Hayes Manufacturing to ship manifolds for the oil industry. The U.S. Army and National Guard have also used the port to move large shipments of equipment and vehicles.

Plans are in place to foster future growth at the Central LA Regional Port. For example, the port could conceivably develop a dock facility on the north side of the river at the former International Paper mill site. That spot is where Revolution Aluminum, LLC has announced plans to build a $2.4 billion aluminum mill complex that would create 1,400 jobs with an average salary of $70,000.

While waterway industries have located in our region, recruiting new users is critically important. There is one major action that will provide the RRW with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:
1. Competition for long haul rail to reduce freight rates, which is a national benefit.
2. Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
3. It is estimated that the controlling depth of the waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.
4. Each of the five locks on the waterway are currently capable of passing 12-foot draft tows.
5. Loading barges to 12 feet increases the tonnage for a 6-barge tow from 9,000 tons to 12,000 tons, reducing the cost per ton.

Estimates comparing the potential cost per ton and savings to industry of a 12-foot channel were considered for various commodities. Rates also vary depending on the port destination. The example shown below uses the Caddo-Bossier Port which would experience the most savings. The main commodities considered were liquid petroleum, construction stone, fertilizer and coal. Costs per ton will vary depending on type product and product value.

The estimated cost savings would range from $1.50 to $4.00 per ton. Recent shipments of liquid petroleum show that a potential savings of $10,000 per tow would have been realized had there been a 12-foot channel.

Another example of great economic benefit is for a user such as CLECO and its Rodemacher power plant near Boyce, L.A. With the potential to move 3 million tons of coal per year, the transportation savings would be a major factor in reduced power rates to customers.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries.

For these reasons, the Central Louisiana Regional Chamber of Commerce strongly supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great natural resource.

Sincerely,

Deborah Randolph
President
Central LA Regional Chamber of Commerce
U. S. Army Corps of Engineers

To Whom It May Concern:

Re: J. Bennett Johnston Waterway Support for a 12-Foot Channel

The Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway to deepen the authorized channel from 9 feet to 12 feet.

One of the most exciting economic engines for Caddo Parish is activity at the Port of Caddo-Bossier (the "Port") which has been a significant contributor of economic growth in Caddo Parish. An economic impact report prepared by Dr. Loren Scott found that for every job created at the Port, four more indirect jobs are created in the Caddo and Bossier communities. The Red River Waterway Commission (RWC) is an active partner in helping the Port achieve its mission to promote job growth in Caddo and Bossier. The Red River connects the Caddo Parish region to the world and the Port and the RWC work hand in hand to promote recreational and commercial opportunities on the Red River. The Port has collected over $88 million in property tax revenue since 1993 and the return on property tax is 17:1. Total public and private investment at the Port has exceeded $1.5 billion.

Currently, the J. Bennett Johnston Waterway is authorized and maintained for a 9-foot channel. The RRVA Navigation Committee, which includes the Corps of Engineers, U.S. Coast Guard, RRWC, public ports, and industry, has made great efforts to make this Waterway safe and reliable. Now it is time to make it more efficient.

Waterway industries have located in our region; however, recruiting new users is important. There is one major action that will provide the Waterway with the most competitive edge, a 12-foot channel. The reasons and justifications why such action must be taken include:

- Competition for long-haul rail to reduce freight rates, which is a national benefit.
- Authorization of navigable waterways, south of Cairo, Illinois, are authorized to 12-foot channels, which include the Mississippi River, Arkansas River, Atchafalaya River and Intra-Coastal Waterway. Barges destined for our Waterway must be special loaded to 9 feet, creating a great inefficiency for companies.
- It is estimated that the controlling depth of the Waterway is currently at or exceeds 12 feet for over 90% of the 210-mile system.

We are certain that the benefits outweigh the costs for the minimum construction required and the annual O&M to maintain a 12-foot channel. The savings per ton will enable our community and ports to attract additional industries. To develop and realize full potential, the Waterway must be authorized at 12 feet.
The Parish of Caddo fully supports the efforts of the Red River Waterway Commission to get the J. Bennett Johnston Waterway authorized for a 12-foot channel. We strongly encourage the Corps to authorize the 12-foot channel modification to increase the productivity and efficiency of this great Waterway.

Very truly yours,

Dr. Woodrow Wilson, Jr.
Administrator & CEO

WWjr/kkb
August 30, 2016

TO: U. S. Army, Corps of Engineers

RE: J. BENNETT JOHNSTON WATERWAY
SUPPORT FOR A 12-FOOT CHANNEL

As the local sponsor, the Red River Waterway Commission is requesting a modification to the J. Bennett Johnston Waterway that would authorize deepening the channel from nine feet to twelve feet. This is to inform you that the Natchitoches Parish Port Commission supports this modification.

As a member of the Red River Valley Association’s Navigation Committee, I can say that all of the companies and government agencies that are involved with the waterway have worked very hard to make the river safe and reliable. We support the proposed modification as a means of making the river more efficient and competitive.

The Natchitoches Parish Port is one of the four public ports located on the river. Having been operational since 1996 we have seen a large amount of cargo pass through the Port. As of the end of 2015 almost 1.7 million tons of material has moved in or out of the Port via barge. Over the same time frame almost 2.4 million tons of cargo has been moved by rail. This disparity in the tonnage figures is increasing each year due to the disparity in freight rates between the two modes of transportation. Deepening the river from nine feet to twelve feet would increase the efficiency of barge transportation thereby making it more competitive with the rail transportation. This increased efficiency would make barge transportation more appealing for the Port’s existing tenants as well as companies the Port is trying to attract.

Currently frac sand is arriving at the Port by both rail and barge. Deepening the river would result in greater competition for the unit train rates that are presently in effect. This would mean that more of this material would move by barge. An identical situation exists concerning the aggregate that arrives at the Port.

We feel sure that the benefits of the proposed deepening of the channel would outweigh the costs of the required construction. It is estimated that the depth of the navigation channel is twelve feet or greater for over 90% of the river system. As an extra bonus, each of the five locks on the river is already capable of passing 12-foot draft tows.

Again, the Natchitoches Parish Port Commission fully supports the proposed modification and the Red River Waterway Commission’s efforts to achieve this modification. We urge the Corps to authorize the 12-foot channel modification.
Should you have any questions, please feel free to contact me at this office.

Sincerely,

R. E. L. Breedlove, Jr.
Executive Director