

# ATTACHMENTS



## **ATTACHMENT 1: Letters of Support**



**DEPARTMENT OF THE ARMY**  
GALVESTON DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 1229  
GALVESTON, TEXAS 77553-1229

Mr. Phil Wilson  
Executive Director  
Texas Department of Transportation  
125 East 11<sup>th</sup> Street  
Austin, Texas 78701

Subject: Innovative Financial Solutions, Gulf Intracoastal Waterway

Director Wilson,

The U.S. Army Corps of Engineers fully supports the Texas Department of Transportation's pursuit of the Innovative Financial Solutions for sustainability projects related to the Gulf Intracoastal Waterway (GIWW). Our partnership is critical to sustaining this critical national resource and together we are committed to providing a higher level of service to the public and industry.

The Galveston District remains committed to coordinating future O&M objectives with TXDOT on the GIWW. These cooperative efforts will ensure the sustainability and resiliency of the GIWW into the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris W. Sallese".

CHRISTOPHER W. SALLESE  
COL, EN  
Commanding

Copy Furnished:  
Herman Deutsch



## PORT OF HOUSTON AUTHORITY

May 28, 2013

The Honorable Raymond H. "Ray" LaHood  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Dear Secretary LaHood:

The Port of Houston Authority is pleased to add its support to the Texas Department of Transportation's (TxDOT) TIGER V Discretionary Grants application. These grant funds will provide crucial resources for the restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW), which is an important component of the nation's maritime system.

The GIWW spans more than 1,000 miles, 423 of which are in Texas. It links Texas ports, which account for approximately 63 percent of the traffic on the GIWW, with the other states in the Gulf of Mexico and the National Inland Waterway System. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas.

The grant application will benefit the GIWW Dredged Material Management Plan (DMMP) in the area of the Aransas National Wildlife Refuge. The U.S Army Corps of Engineers has identified six areas for dredge material placement that require design and construction in 2014. In addition to supporting the flow of commerce, this material can be utilized to create marshes and natural habitat.

The efficiency of the GIWW is critical to the Port of Houston, the busiest port in the nation. More than 215,000 barge movements occurred at the Port of Houston in 2012. The activity along the Houston Ship Channel, which intersects with the GIWW, is responsible for nearly \$499 billion in economic activity and more than 2.1 million direct and indirect jobs in the U.S.

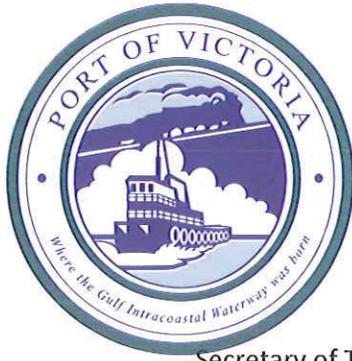
In addition, the Port of Houston is the home of the largest petrochemical complex in the nation. Approximately 87 percent of the cargo transiting the GIWW involves petroleum or petrochemical products. These industries rely on the Houston Ship Channel and GIWW. A recent survey highlights this reliance, showing that capital investments in facilities along the Houston Ship Channel are projected to be \$35 billion from 2012 through 2015.

This restoration and modernization effort will enable the GIWW to continue supporting these employers and manufacturers as they move commerce through Houston and other Texas ports to distribution centers and intermodal facilities across the nation. Efficient freight movement along our nation's waterways provides significant benefits by sustaining and creating jobs and economic activity through a low-cost, reliable, safe, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Leonard Waterworth".

Leonard Waterworth  
Executive Director



28 May, 2012

Robby Burdge  
Chairman

Elton Calhoun  
Vice-Chairman

Claud Jacobs  
Secretary

Robert Loeb  
Commissioner

Kevin Krueger  
Commissioner

Jennifer Stastny  
Executive Director

Duane G. Crocker  
Legal Counsel

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Port of Victoria is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW is important to us for these specific reasons...

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Port of Victoria and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

Jennifer Stastny  
Executive Director

VICTORIA COUNTY  
NAVIGATION DISTRICT

1934 FM 1432  
Victoria, Texas 77905  
Ph. (361) 570-8855  
Fax (361) 570-8854

[www.portofvictoria.com](http://www.portofvictoria.com)



May 15, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Port Isabel-San Benito Navigation District is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Canal and Navigation Commissioners of the Port Isabel-San Benito Navigation District and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

Steven B Bearden  
Port Director/General Manager



# Port of Palacios

MATAGORDA COUNTY NAVIGATION DISTRICT NO. ONE

## Board of Commissioners

Ted R. Bates, Jr. - Chairman  
Jimmy E. Neeley - Secretary  
Victor L. Eggemeyer - Commissioner  
Bryan L. Fields - Commissioner  
Greg T. Seaman - Commissioner

## Port Director

Debbie Morris, CIO

1602 Main Street  
P. O. Box 551  
Palacios, Texas 77465  
Phone: 361-972-5556  
Fax: 361-972-3584  
Email: [info@portofpalacios.com](mailto:info@portofpalacios.com)  
Website: [www.portofpalacios.com](http://www.portofpalacios.com)

May 14, 2013  
File No.: 03-5606

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

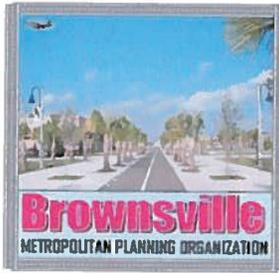
Matagorda County Navigation District No. One is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports such as the Navigation District's Port of Palacios, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of Matagorda County Navigation District No. One and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

Debbie Morris  
Port Director



May 22, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure. This represents an important component of the Texas and United States maritime system.

On behalf of the Brownsville MPO, I support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The timely delivery of gasoline via barge to the Port of Brownsville is vital to the Lower Rio Grande Valley's population. Improvements to the GIWW's infrastructure helps to safeguard economic development prospects in South Texas by ensuring reliable movement of freight cargo. The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. I hereby ask the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Lund". The signature is fluid and cursive, with a large loop at the end.

Mark Lund  
MPO Director



(361) 987-2813 • Fax (361) 987-2189 • 2313 FM 1593 South • P.O. Box 397 • Point Comfort, Texas 77978  
www.calhounport.com

**PORT OF PORT LAVACA - POINT COMFORT**

*Providing Calhoun County Industries with Direct Deep-Draft Access to Global Markets*

May 20, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Calhoun Port Authority is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW is important to the Calhoun Port Authority since the port has over 800 barge movements annually that rely on the GIWW for the transit of products.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Calhoun Port Authority and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

Randy L. Boyd  
Board Chair



CARLOS H. CASCOS, CPA  
COUNTY JUDGE

1100 E. MONROE STREET  
BROWNSVILLE, TEXAS  
78520

COUNTY COURTHOUSE  
(956) 544-0830 FAX: (956) 544-0801  
1-866-544-0830

May 23, 2013

Mr. Ray LaHood  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

RE: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

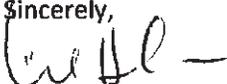
Dear Secretary LaHood:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

Cameron County is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of Cameron County and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,  


Carlos H. Cascos, CPA  
County Judge



May 23, 2013

Mr. Ray LaHood  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

RE: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary LaHood:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Cameron County Regional Mobility Authority is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Cameron County Regional Mobility Authority and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

David E. Allex  
RMA Chairman



# Hidalgo County Metropolitan Planning Organization

510 South Pleasantview Drive, Weslaco, TX. 78596

(956) 969-5778  
(956) 969-5821 fax

## Planning Partners:

Alamo  
Alton  
Donna  
Edcouch  
Edinburg  
Elsa  
Granjeno  
Hidalgo  
Hidalgo County  
Hidalgo County RMA  
La Joya  
La Villa  
McAllen  
Mercedes  
Mission  
Palmhurst  
Palmview  
Peñitas  
Pharr  
Progreso  
Progreso Lakes  
San Juan  
Sullivan City  
TxDOT  
Valley Metro  
Weslaco

May 22, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Hidalgo County MPO is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Hidalgo County MPO and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

## Additional Partners:

FHWA  
FTA  
Fish & Wildlife  
Hidalgo County Commuter  
Rail District  
Metro  
Rio Grande Valley Partnership  
Weslaco Chamber of Commerce  
Gobierno de Tamaulipas  
San Juan Economic Development

Sincerely,

Andrew A. Canon  
Transportation Director  
Hidalgo County MPO

/file



May 9, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

Eagle Ford Field Services, LLC. is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW is important to us for these specific reasons...

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of Eagle Ford Field Services, LLC. and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

  
John H. Happ III  
General Manager, Marketing and Midstream

1425 Lake Front Circle  
The Woodlands, TX 77380

Phone: (281) 363-9161  
Fax: (281) 363-9181



May 9, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

Geosouthern Energy Corporation is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW is important to us for these specific reasons...

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of Geosouthern Energy Corporation and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

Margaret Woodward Molleston  
Vice President



## HARLINGEN – SAN BENITO METROPOLITAN PLANNING ORGANIZATION

May 22, 2013

### TRANSPORTATION POLICY COMMITTEE

**Chris Boswell, Chair**  
Mayor  
City Of Harlingen

**Joe Hernandez, Vice Chair**  
Mayor  
City Of San Benito

**Silvestre Garcia**  
Mayor  
City Of Combes

**Rick Bennet**  
Mayor  
City of Los Indios

**John Cutney**  
Mayor  
City of Palm Valley

**Pat Patterson**  
Mayor  
City Of Primera

**Gustavo Olivares**  
Mayor  
City Of Rio Hondo

**Steve Brewer**  
Mayor  
City Of La Feria

**Ruben Ochoa**  
Mayor  
City Of Santa Rosa

**Manuel Lara**  
City Manager  
City Of San Benito

**Carlos Yerena**  
City Manager  
City Of Harlingen

**David Garza**  
Cameron County  
Commissioner, Pct. 3

**Dan Sanchez**  
Cameron County  
Commissioner, Pct. 4

**Mario Jorge**  
District Engineer  
TxDOT-Pharr District

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

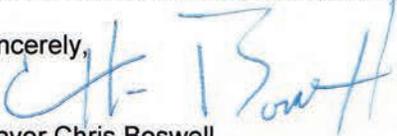
The Harlingen-San Benito Metropolitan Planning Organization is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

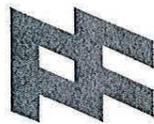
The GIWW is important to us for these specific reasons...

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has the enthusiastic support of the Harlingen-San Benito Metropolitan Planning Organization and I strongly urge the U.S. Department of Transportation to give serious consideration to this application.

Sincerely,

  
Mayor Chris Boswell  
HSBMPO Chairperson

*"Working together for better mobility"*



**PORT FREEPORT<sup>SM</sup>**  
**THE COAST IS CLEAR**

200 W. SECOND ST., 3<sup>rd</sup> FL. • FREEPORT, TX 77541  
(979) 233-2667 • 1 (800) 362-5743 • FAX: (979) 233-5625

May 23, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

RE: Support for the Texas Department of Transportation TIGER V  
Discretionary Grants Application

Dear Secretary:

I am writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide crucial major restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

Port Freeport is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW is important to us for these specific reasons...

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is very much appreciated. This application has

PORT COMMISSION

BILL TERRY, CHAIRMAN; RAVI K. SINGHANIA, VICE CHAIRMAN; JOHN HOSS, SECRETARY; SHANE PIRTLE, ASSISTANT SECRETARY;  
PAUL KRESTA, COMMISSIONER; THOMAS S. PERRYMAN, COMMISSIONER; GLENN A. CARLSON, EXECUTIVE PORT DIRECTOR/CEO



# PORTCORPUSCHRISTI

John P. LaRue  
EXECUTIVE DIRECTOR

May 15, 2013

Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Texas Department of Transportation TIGER V Discretionary Grant Application

Dear Secretary:

I would like to extend my support for the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grant Application that will provide critically needed restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure that represents an important component of the Texas and United States maritime system.

The Port of Corpus Christi recognizes the importance of this transportation and marine port infrastructure system that is a critical link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles, of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida, and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

I understand the proposed restoration and modernization of the GIWW will improve freight movements in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and benefit in positioning the state to expand its global trade profile. The Panama Canal expansion expected for 2015 will dramatically impact and increase domestic and international commerce within the next six years. As such, modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The GIWW has become especially important to the Port of Corpus Christi to accommodate the increased outbound transport of Eagle Ford Crude and its locally produced refined products, while it continues to be essential for the supply of liquid and dry bulk commodities to support our local refineries and chemical companies. In addition, the GIWW allows the movement of building materials and equipment to support the construction of new and existing industries and their expansions.





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**PORT DIRECTOR**

Michael J. Mierzwa

May 30, 2013

The Honorable Ray LaHood  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington D.C. 20590

Re: Support for the Texas Department of Transportation TIGER V Discretionary Grants Application

Dear Mr. Secretary:

The Port of Galveston is writing to support the Texas Department of Transportation (TxDOT) TIGER V Discretionary Grants Application that will provide restoration and modernization of the Texas Gulf Intracoastal Waterway (GIWW) infrastructure. The GIWW represents an important component of the Texas and United States maritime system.

The Port is pleased to support this important transportation and marine port infrastructure project that is a key link for Texas waterborne freight traffic. The GIWW spans over 1,000 miles of which 423 miles are in Texas. This national asset connects Texas ports and links them with ports in Louisiana, Mississippi, Alabama, Florida and the National Inland Waterway System. Texas accounts for approximately 63 percent of the traffic on the GIWW. In 2010, approximately 73 million tons of cargo, valued at \$28 billion, was transported in the GIWW in Texas. Approximately 87 percent of this cargo was petroleum or petrochemical products.

The restoration and modernization of the GIWW will enhance freight movement in major trade corridors, into and out of Texas ports, to distribution centers and intermodal facilities and position the state to expand its global trade profile. Modernization of this national resource is critical to providing a low-cost, reliable, safe, secure, multimodal, and environmentally sustainable supply chain based on sound logistics to serve existing and emerging national and global markets.

The action of TxDOT in choosing the GIWW major restoration and modernization project as a priority for the State's transportation is appreciated. The Port of Galveston urges the U.S. Department of Transportation to give consideration to this application.

Sincerely,

Michael J. Mierzwa  
Port Director

**ATTACHMENT 2: Memorandum of Understanding**

GULF INTRACOASTAL WATERWAY  
(MAIN CHANNEL - TEXAS SECTION)

RESOLUTION

W I T N E S S E T H:

THAT WHEREAS, the main channel of the Gulf Intracoastal Waterway running from the Sabine River southward to the Brownsville Ship Channel near Port Isabel, hereinafter referred to as the Main Channel Project, has been authorized in accordance with the following Federal legislation:

<u>YEAR</u>	<u>PUBLIC LAW NO.</u>	<u>HOUSE DOCUMENT</u>	<u>DESCRIPTION</u>
1927	560	No. 238, 68th Congress, 1st Session	9-foot channel from the Sabine River to Corpus Christi
1942	675	-----	12-foot enlargement of existing channel and its extension to the vicinity of the Mexican Border
1946	525	No. 700, 79th Congress, 2d Session	Redfish Bay Relocation
1950	516	No. 196, 81st Congress, 1st Session	Galveston Bay Alternate Channel
1962	87-874	No. 556, 87th Congress, 2d Session	16-foot channel from the Sabine River to the Houston Ship Channel with 12-foot relocations in Matagorda and Corpus Christi Bays; and

WHEREAS, various elements of non-Federal cooperation are required by the above referenced statutes and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law No. 91-646); and,

WHEREAS, the State hereby represents that it has the authority by virtue of Articles 3266b and 5415e-2, Vernon's Texas Civil Statutes, and the capability to furnish said non-Federal cooperation for the Main Channel Project in accordance with Article 5415-e-2 section 7, V.T.C.S. which states, "The legislature is hereby authorized to appropriate from the General Revenue Fund funds in the amount necessary to accomplish the purposes of this Act."; and

WHEREAS, the State Highway and Public Transportation Commission, on the 20th day of June 1975, by Commission Minute No. 70103, a certified copy of which is attached hereto, authorized the State Engineer-Director for

Highways and Public Transportation to execute these presents on its behalf and as its act and deed,

NOW THEREFORE, in consideration of the benefits accruing to its citizens by the construction, operation and maintenance of the Main Channel Project, the State, in accordance with the herein cited Federal legislation, assures the United States, to the extent permitted by Texas law, as follows:

1. With respect to the 1942 12-foot channel enlargement and extension, it shall defray the cost of constructing or remodeling all highway bridges, together with their subsequent maintenance and operation, and shall furnish, without cost to the United States, all rights-of-way and necessary spoil disposal areas as approved by the State. However, this resolution shall not have the effect of diminishing any rights or obligations the State would otherwise have under the terms of the Truman-Hobbs Act (33U.S.C.A. Sec. 511 et seq.). The State hereby gives the United States a right to enter upon, at reasonable times and in a reasonable manner, lands which the State owns or controls, for access to said highway bridges for the purpose of inspection, and for the purpose of discharging the obligations of local cooperation assumed by the State if such inspection shows that the State for any reason is failing to comply with its obligations concerning the operation and maintenance of said bridges and has persisted in such failure after a reasonable notice in writing by the United States delivered to the State Engineer-Director for Highways and Public Transportation. No such action by the United States in such event shall operate to relieve the State of responsibility to meet its obligations as set forth herein or to preclude the United States from pursuing any other remedy at law or equity.

2. With respect to the 1946 Redfish Bay Relocation, it will furnish free of cost to the United States all lands, easements, and rights-of-way as approved by the State necessary for construction of the project and for subsequent maintenance as and when required: and hold and save the United States free from damages due to the construction works, except for damages due to the fault or negligence of the United States or its contractors.

3. With respect to the 1950 Galveston Bay Alternate Channel, it will furnish without cost to the United States all lands, easements, rights-of-way, and suitable spoil disposal areas as approved by the State for construction and maintenance of the alternate channel, when and as required;

and hold and save the United States free from any damages resulting from construction and maintenance of the alternate channel, except for damages due to the fault or negligence of the United States or its contractors.

4. With respect to the 1962 16-foot channel and the 12-foot relocations in Matagorda and Corpus Christi Bays it will provide without cost to the United States all lands, easements, and rights-of-way required for construction and subsequent maintenance of the project and of aids to navigation upon the request of the Chief of Engineers, including suitable areas determined by the Chief of Engineers and approved by the State to be required in the general public interest for initial and subsequent disposal of spoil, accomplish and maintain without cost to the United States all alterations to pipelines, cables, and any other utilities necessary for the construction of the project; and hold and save the United States free from damages resulting from the construction work and the maintenance of the channels, except for damages due to the fault or negligence of the United States or its contractors.

5. With respect to the Main Channel Project as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law No. 91-646), hereinafter called the Act:

a. Fair and reasonable relocation payments and assistance shall be provided to or for displaced persons, as are required to be provided by a Federal agency under section 202, 203, 204 of the Act.

b. Relocation assistance programs offering the services described in section 205 of the Act shall be provided to such displaced persons.

c. Within a reasonable period of time prior to displacement, decent, safe and sanitary replacement dwellings will be available to displaced persons in accordance with section 205(c) (3) of the Act.

d. In acquiring real property it will be guided, to the greatest extent practicable under State Law, by the land acquisition policies in section 301 and the provisions of section 302 of the Act.

e. Property owners will be paid or reimbursed for necessary expenses as specified in section 303 and 304 of the Act.

IN WITNESS WHEREOF, execution of this resolution on the date below stated is authorized and approved for State Highway and Public Transportation Commission under Authority of Commission Minute Order

No. 80590 dated March 30, 1983

THE STATE OF TEXAS

Certified as being executed for the purpose and effect of activating and/or carrying out the orders, established policies, or work programs heretofore approved and authorized by the State Highway and Public Transportation Commission:

By: M. G. Wade  
Engineer-Director

Date: 3/30/83

Executed and approved for the State Highway and Public Transportation Commission under authority of Commission Minute Order No. 78501, dated May 20, 1981.

RECOMMENDED FOR APPROVAL:

Steve Klemm  
Bridge Engineer

L. E. Clarke  
Right-of-Way Engineer

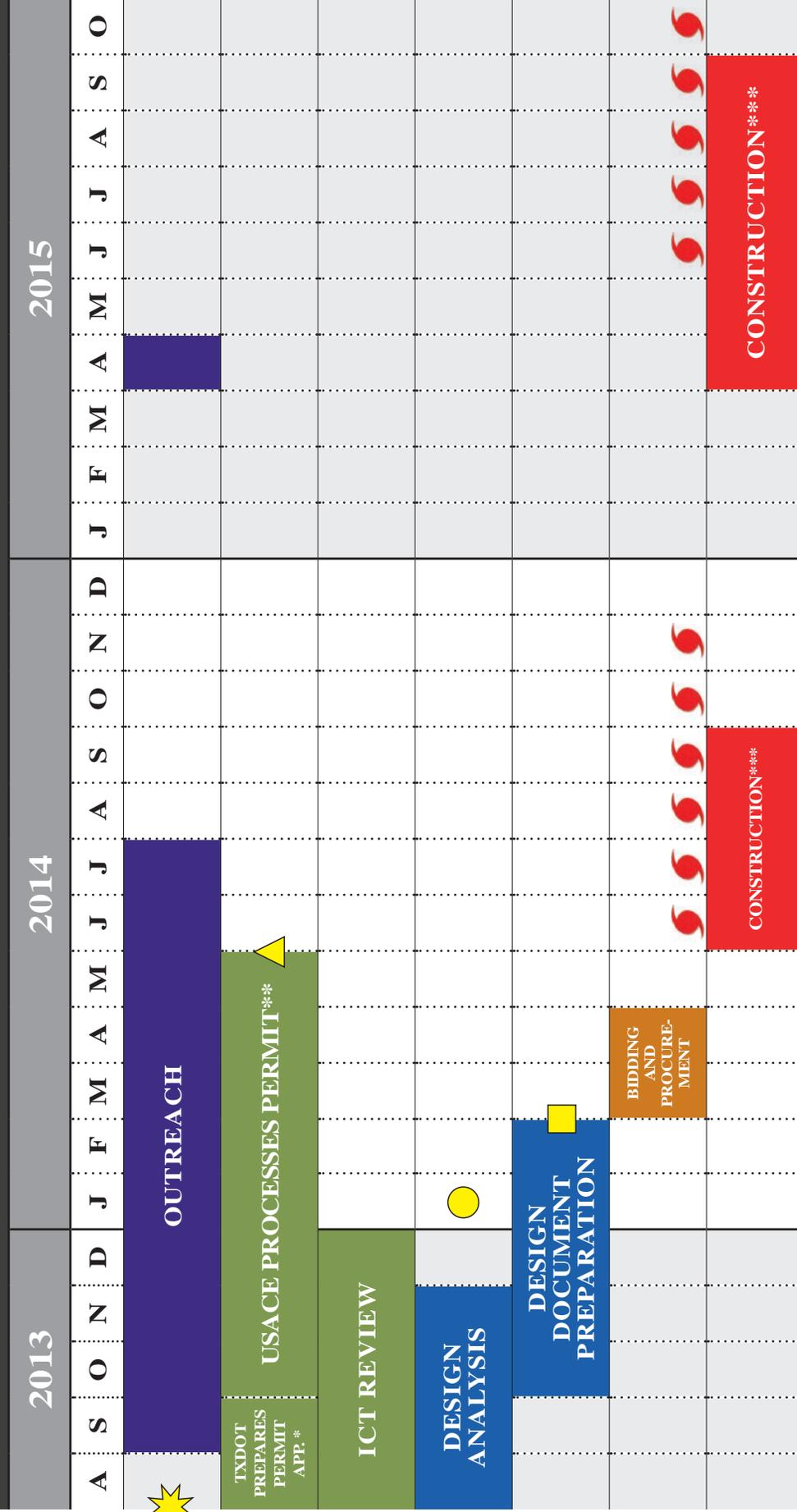
S. P. Cantello  
Director, Finance

James D. Frasier  
Legal Counsel

Henry Rawson  
Assistant Engineer-Director

## **ATTACHMENT 3: Proposed Project Schedule**

# PROPOSED PROJECT SCHEDULE



\* Includes pre-application meeting with USACE/Interagency Coordination Team  
 \*\* Includes Public Hearing  
 \*\*\* Limited construction in ANWR due to nesting of Whooping Crane

- = Potential Grant Award Date
- = Permit Issued
- = Contact Contracting Community
- = Approval of PS&E
- = Hurricane Season

**ATTACHMENT 4: Preliminary Project Budget**

## PRELIMINARY PROJECT BUDGET

### Breakwaters (10,000 linear feet)

DESCRIPTION	VOLUME	UNIT	UNIT PRICE	SUB-TOTAL
Riprap	182,000	tons	\$42	\$7,644,000
Bedding	12,000	tons	\$42.00	\$504,000
Geotextile	31000	sq yds	\$3.50	\$108,500
Survey	1	LS	\$150,000	\$150,000
Care of Water	1	LS	\$175,000	\$175,000
Outreach				\$2716.67
<b>Sub-total =</b>				<b>\$8,584,216 .67</b>
<b>Mob and Demob (5% of contract Price) =</b>				<b>\$429,075</b>
<b>Total =</b>				<b>\$9,013,291.67</b>

### Development of 444 Acres of Beneficial Use

DESCRIPTION	VOLUME	UNIT	UNIT PRICE	SUB-TOTAL
Riprap	300,000	ton	\$35	\$10,500,000
Bedding	16,000	ton	\$39	\$624,000
Geotextile Fabric	60,000	sq yds	\$3.50	\$210,000
Levees / Ditches	1	ls	\$2,650,000	\$2,650,000
Survey	1	ls	\$350,000	\$350,000
Dredging / Excavation	100,000	cu yds	\$6	\$600,000
Care of Water	1	ls	\$375,000	\$375,000
Outreach				\$2716.67
<b>Sub-total =</b>				<b>\$15,311,716.67</b>
<b>Mob and Demob (5% of contract Price) =</b>				<b>\$765,450</b>
<b>Total =</b>				<b>\$16,077,166.67</b>

### Construction of 9 Cells

DESCRIPTION	VOLUME	UNIT	UNIT PRICE	SUB-TOTAL
Riprap	400,000	ton	\$38	\$15,200,000
Bedding	25,000	ton	\$39	\$975,000
Geotextile Fabric	60,000	sq yds	\$3.50	\$210,000
Cellular Concrete / Other	1	ls	\$2,500,000	\$2,500,000
Survey	1	ls	\$500,000	\$500,000
Dredging / Excavation	100,000	cu yds	\$6	\$600,000
Care of Water	1	ls	\$500,000	\$500,000
Outreach				\$2716.67
<b>Sub-total =</b>				<b>\$20,487,716.66</b>
<b>Mob and Demob (4.5% of contract Price) =</b>				<b>\$921,825</b>
<b>Total =</b>				<b>\$21,409,541.66</b>

**PROJECT TOTAL**

**\$46,500,000.00**

## **ATTACHMENT 5: Benefit-Cost Analysis**

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# Quantitative Benefit-Cost Analysis

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GIWW Marine Highway  
and Aransas National  
Wildlife Refuge: A  
Beneficial Partnership

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Texas Department of  
Transportation

## **1.0 QUANTITATIVE BENEFIT – COST ANALYSIS**

### **1.1 INTRODUCTION**

A Benefit-Cost Analysis (BCA) was conducted for the Gulf Intracoastal Waterway (GIWW) and Aransas National Wildlife Refuge (ANWR) project which provides a monetized and discounting of project costs and benefits over a 20-year project life in a common unit of measurement in present day dollars. This BCA attempts to be comprehensive and objective in identifying and quantifying project benefits and costs, and to follow closely the guidelines for BCA as delineated by the U.S. DOT in the Federal Register Notice of Funding Availability (NOFA). The benefits that have been estimated for this project have been categorized by the long-term outcomes specified in the Selection Criteria section of the NOFA. A conservative approach has been taken in all cases where judgment was used in estimating the extent of benefits. In addition, an effort has been made to present the BCA in as transparent a fashion as possible.

### **2.0 PROJECT MATRIX**

For the purpose of the quantitative BCA, the cost of diversion of freight traffic from the current GIWW to other modes (ocean and over-land modes) will contribute most directly to the quantifiable project benefits. However, TxDOT does not rely on this benefit alone in order to make the project economically viable. Other elements of the overall project offer benefits that are less directly quantifiable. These include improvements to the environmental health of the GIWW through the ANWR with the creation of additional habitat for endangered species such as the Whooping Crane (*Grus Americana*) as well as many other bird, plant and marine species that will benefit from the development in beneficial use areas and the construction of rock breakwater.

The analysis is summarized in the Project Matrix (Table 1). The baseline is based on the current status of the GIWW as well as the capabilities for the GIWW to be properly maintained over the next 20 years without construction of the project components. Alternatives to the construction of these components involve an extensive delay to comply with environmental compliance to existing plans including the Dredged Material Management Plan for the GIWW in the ANWR (USACE 1998) and the U.S. Fish and Wildlife Service's Biological Opinion.

**Table 1: PROJECT MATRIX**

Project Component	Current Status/Baseline & Problem Addressed	Changes to Baseline/Alternatives	Types of Impacts	Population Affected by Impacts	Economic Benefit	Summary of Results	Page Reference in BCA
<b>GIWW improvements in the GIWW and ANWR</b>	Construct 10,000 LF of rock breakwater to reduce erosion	Reduces dredging requirements by preventing erosion, provides protection to existing shoreline, may result in additional habitat. Provide planned capacity for dredged material in compliance with DMMP and BO. Develop two beneficial use areas (total 444 acres) as placement sites for future dredge material	Reduces dredging requirements by preventing erosion, provides protection to existing shoreline, may result in additional habitat	Users of GIWW,	Total Quantified Benefits ERT \$696,354,199.89 at 3% Discount Rate, \$451,822,929.49 at 7% Discount Rate	BCA of 15.0 at 3% Discount Rate, 9.7 at 7% Discount Rate	Pgs. 3 and 4
	Inability to meet planned schedule of cell development according to DMMP; potential loss of functionality of GIWW			USACE Galveston District maintenance/operations			
	Inability to meet planned capacity for dredged material through creation of beneficial use areas			Whooping Crane and various plant and marine species  Local tourism Local recreational fishermen			

Analysis indicates the GIWW could be inoperable for inland barges as early as 2033 without this project.

The total development cost of the project, as detailed in the application, is estimated at \$46,500,000. A TIGER V grant of \$43,500,000 is sought. For the BCA analysis, the full project cost is used in computing the BC ratio, as specified in the Federal Register guidance. No additional operations and Maintenance costs have been added to the project development cost.

The project schedule anticipates the completion of the project in the third quarter of 2015. The project will allow the normal maintenance of the GIWW in the reach to continue up to and through its construction by diverting dredged material into other nearby placement areas. Therefore benefits are assumed to accrue beginning in 2014.

Tables 2 and 3 summarize the results of the BCA for a 7 percent and 3 percent discount rate, respectively, while the following sections describe the methodology, and the basis of assumptions including references to sources for the development of the BCA. In addition to the description and tables that are included in the following sections, the complete Excel Workbook that incorporates the calculations for the BCA is provided in Table 6.

### **3.0 ASSUMPTIONS AND METHODOLOGY**

#### **3.1 VOLUME AND GROWTH PROJECTIONS**

##### **3.1.1. Oil, Gas and Petroleum Liquids:**

The GIWW runs from the southern tip of Brownsville, Texas, to Carabella, Florida. The Texas portion of the canal spans some 423 navigable miles of the Texas coastline. It connects to the GIWW in Louisiana and provides a highway to ports along the GIWW throughout the Gulf of Mexico. In 2010, the GIWW was the Nation's third busiest inland waterway moving more than 116.2 million tons of cargo. Texas handled 63 percent of this traffic. The Houston to Corpus Christi segment of the GIWW, which is directly impacted by this project, handles 26.3 million per year (USACE 2013).

Since 2009, well production of oil, gas and petroleum liquids in the Eagle Ford Shale formation have surged to previously unseen levels. The shale formation has the potential to become the most active oil and natural gas field in North America with approximately 235 active drilling rigs.

**Table 2: Benefit Cost with NPV 7% Discount Rate**

Long Term Outcomes	Total Net Benefit
<b>State of Good Repair</b>	
▪ Pavement	\$12,124,957.69
▪ Dredging	\$4,237,605.70
<b>Subtotal Quantified Benefits State of Good Repair</b>	\$16,362,563.39
<b>Economic Competitiveness</b>	
▪ Oil Import Costs – Truck	
▪ Freight Savings	\$432,309,786.55
<b>Subtotal Quantified Benefits Economic Competitiveness</b>	\$432,309,786.55
<b>Livability</b>	
▪ Congestion	\$2,100,386.37
▪ Noise	\$190,944.22
<b>Subtotal Quantified Benefits Livability</b>	\$2,291,330.59
<b>Environmental Sustainability</b>	
▪ Pollution – Truck	
▪ SCC – Truck	
<b>Subtotal Quantified Benefits Environmental Sustainability</b>	0
<b>Safety</b>	
▪ Crash – Truck	\$859,248.97
<b>Subtotal Quantified Benefits Safety</b>	\$859,248.97
<b>Total Quantified Benefits</b>	\$451,822,929.49
<b>GIWW Project Cost</b>	46,500,000
<b>Discount Rate</b>	7%
<b>Benefit Cost Ratio</b>	9.7

*Note: The original Excel spreadsheet for Table 2 is included in the BCA Workbook*

**Table 3: Benefit Cost with NPV 3% Discount Rate**

Long Term Outcomes	Total Net Benefit
<b>State of Good Repair</b>	
▪ Pavement	\$18,919,583.10
▪ Dredging	\$5,950,989.94
<i>Subtotal Quantified Benefits State of Good Repair</i>	\$24,870,573.05
<b>Economic Competitiveness</b>	
▪ Oil Import Costs – Truck	
▪ Freight Savings	\$666,567,514.69
<i>Subtotal Quantified Benefits Economic Competitiveness</i>	\$666,567,514.69
<b>Livability</b>	
▪ Congestion	\$3,277,408.10
▪ Noise	\$297,946.19
<i>Subtotal Quantified Benefits Livability</i>	\$3,575,354.29
<b>Environmental Sustainability</b>	
▪ Pollution – Truck	
▪ SCC – Truck	
<i>Subtotal Quantified Benefits Environmental Sustainability</i>	0
<b>Safety</b>	
▪ Crash – Truck	\$1,340,757.86
<i>Subtotal Quantified Benefits Safety</i>	\$1,340,757.86
<b>Total Quantified Benefits</b>	\$696,354,199.89
<b>GIWW Project Cost</b>	46,500,000
<b>Discount Rate</b>	3%
<b>Benefit Cost Ratio</b>	15.0

*Note: The original Excel spreadsheet for Table 3 is included in the BCA Workbook*

Currently, more than 20 operators are working in 21 active fields located primarily in rural areas of Texas. A recent study the Texas Railroad Commission's Eagle Ford Task Force found that one key challenge for the continued prosperity of the region is addressing the impact of increased truck traffic on secondary roadways.

### 3.2 FREIGHT DIVERSION AVOIDED

According to USACE (2013), the GIWW Galveston to Corpus Christi freight volumes in 2011 was equal to 25.5 million tons (Table 4). The cargo tonnage was primarily liquid in nature (Table 5). Additional cargo detail can be found in Table 7.

**Table 4: GIWW Galveston to Corpus Christi volume summary**

Direction	Volumes 1,000 tons (2011)
Inbound Receiving	442
Outbound Shipping	1,057
Thru	24,064
Local	0
<b>Total</b>	<b>25,563</b>

*Note: The original Excel spreadsheet for Table 4 is included in the BCA Workbook*

**Table 5: GIWW – Galveston to Corpus Christi Commodity Summary**

Commodity Name	Volumes 1000 tons (2011)
Crude Petroleum	3,038
Other Hydrocarbon	2,490
Residual Fuel	2,378
Naphtha & Solvents	2,075
Distillate Fuel	1,938
Gasoline	1,550
Benzene & Toluene	1,306
Sand & Gravel	1,219
Alcohols	1,119
Nitrogen Func.	1,078
Other	7,372

*Note: The original Excel spreadsheet for Table 5 is included in the BCA Workbook*

The length of the Galveston to Corpus Christi segment of the waterway is equal to 2000 miles and if the waterway becomes inaccessible by inland barges due to failure to maintenance, the alternate modes of transport should be sought. The rail, truck and ocean distance of Houston to Corpus Christi (which are considered as alternate mode) are equal to 229 miles, 222 miles and 245 nautical miles respectively (USRail 2013; PC\*Miler 2013; and Veson Nautical, 2013 respectively).

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The following diversion scenario is assumed to take place in “no-project case”:

- The waterway volume growth rate is assumed at 1 percent annually (USACE 1995);
- The channel depth will reduce from its current 9 feet to 6 feet in 2033;
- Once the channel reaches the depth of 6 feet, no traffic can go through it;
- between now and 2033, inland barges will continue using the channel but they will operate lighter than their design weight;
- Operating under lighter than designed conditions will increase the transportation cost of the inland barge and make it less desirable compared to the ocean going barge;
- This increase in the transportation cost will lead to the loss of market share for inland barges;
- It is assumed that by 2018 inland barges will lose 50 percent of their market to alternate modes of transportation (in 2018 transportation costs of inland barge and ocean going barge are almost equal);
- Diversion to other modes are broken down as 80 percent to ocean barge, 15 percent to rail, and 5 percent to truck;
- Inland barge will continue to lose its market through 2033 when it hits 0.

### **3.3 BENEFIT BASED ON AVOIDANCE IN THE FREIGHT DIVERSION:**

Aside from the higher distances, other modes have higher per ton transportation cost between Houston and Corpus Christi. Based on USACE publication (USACE 2004) on operating costs of shallow draft vessels, TxDOT has estimated the per ton transportation cost of the tone freight between Houston and Corpus Christi using the inland barge to be equal to 4.67 \$/ton. The average load consists of 3,759 ton of liquid cargo. The per ton transportation costs of alternates modes are estimated as:

- Inland Barge Cost: 7.01 \$/ton at 2506 tons per barge (shallow draft restrictions)
- Ocean Barge: 5.24 \$/ton
- Rail: 11.85 \$/ton (USRail 2013)
- Truck Cost: 16.50 \$/ton (PC\*Miler 2013)
- Truck Avoidance Cost: 1.78 \$/ton

These diversions will increase the average per ton transportation cost of 4.67 \$/ton in 2013 to 6.89 \$/ton in 2033. This increase in transportation cost coupled with increases in volumes will impose an additional transportation cost of \$14.4 million to the society in 2015 and will continue to increase to \$31.8 million in 2033.

### **3.4 BENEFITS BASED ON THE REDUCTION IN DREDGING COSTS**

In addition to cost savings resulted from the avoidance in freight diversion, based on Tout's estimations the project will avoid the increase of the dredging cost from its current estimated \$400,000 per year (in the project area) to \$800,000. This is based on approximately 1000,000 cubic yards of dredged material shoaling annually in the GIWW reach slated for breakwater, cell construction within placement areas and beneficial use area development in compliance with the 50-year DMMP. With beneficial use placement, the cost of placement is approximately \$6 per cubic yard, not including the costs of the levees, breakwaters, etc. constructed as part of this project. Without this project, the dredged material would have to be placed in new upland confined placement areas, land for which has not been acquired, with additional pumping distance. This is estimated to increase the dredging costs along, not including cost of land, levees, etc. to approximately \$8 per cubic yard.

### **3.5 BENEFITS BASED ON ADDITIONAL VEHICLE MILES TRAVELED IN THE WITHOUT PROJECT CASE**

#### **3.5.1. VMT Savings**

An estimate is made of the additional truck VMT that would result from the without-project condition. For the 5 percent of cargo diverted to trucks in the "without project" scenario, there are an additional 330 truck-miles traveled for each 20 tons diverted (based on 40 tons loaded trip plus return trip). Based on the truck-miles saved, and considering return trips, annual truck VMT savings in the first year of operations is approximately 6,650 VMT in 2014 increasing to 1.12 million VMT in 2033.

#### **3.5.2. Monetizing Additional Truck VMT reduction**

In addition, the truck VMT reductions resulting from the with-project condition are valued based on the Federal Highway Cost Responsibility tables (FHWA, 2000). The values used are an average of those for 80 kip 5 axle vehicles on rural highways. The per-mile values are applied to pavement wear, congestion, crash avoidance, and noise. (Although air pollution costs may add benefits they were not considered in present analysis.) The costs per miles in this study are presented in year 2000 dollars, therefore, for this BCA have been escalated using the Bureau of Labor Statistics CPI calculator ([http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)) to represent costs in 2013 dollars. The values used for each category are:

- Pavement (0.127 cents/mile) – represent the contribution of a mile of travel to pavement deterioration and the costs of repairing the damage.
- Congestion (0.022 cents/mile) – reflect the value of added travel time due to additional increments of traffic.
- Crash (0.009 cents/mile) – include medical costs, property damage, lost productivity, pain and suffering and other costs associated with highway crashes.
- Noise (0.002 cents/mile) – reflect changes in the value of adjacent properties caused by motor vehicle noise.

These values are applied to the VMT estimated as described earlier to estimate annual savings in each of these categories.

#### **4.0 BENEFIT-COST ANALYSIS**

The final BCA is as follows:

TOTAL BENEFITS:	\$ 696,354,200
TOTAL PROJECT COST:	\$ 46,500,000
COST BENEFIT:	15.0%

**Table 6: 20-Year Benefit Cost Analysis**

Discount Rate: 7%

Freight Diversion Share: 80%  
 Ocean Barge: 15%  
 Rail: 5%  
 Truck:

Savings NPV: 451,822,929  
 Project Cost: 46,500,000  
 CBA Ratio: 9.7

Waterway Volume Growth Rate: 1%  
 4.67 \$/ton at 3759 tons per barge  
 7.01 \$/ton at 2506 tons per barge  
 5.24 \$/ton  
 11.85 \$/ton  
 16.50 \$/ton  
 1.78 \$/ton

Inland Barge Cost between Houston and Corpus Christi:  
 Inland Barge Cost between Houston and Corpus Christi:  
 Ocean Barge Cost between Houston and Corpus Christi:  
 Rail Cost between Houston and Corpus Christi:  
 Truck Avoidance Cost between Houston and Corpus Christi:

Year	Investment Scenario				No Investment Scenario										
	Inland Waterway Tonnage	Inland Barge Cost	Dredging cost	No-Investment Transportation Cost	No-Investment Dredging Cost	Modal Distribution	Light Inland Barge	Other Modes	Light Inland Barge	Light Inland Barge Cost Per Ton	Ocean Going Barge Cost	Rail Cost	Total Truck Cost	Truck Cost	Truck Avoidance Cost
2013															
2014	26,337,594	123,035,393	400,000	123,035,393	800,000	100%	123,035,393	0%	123,035,393	4.67	138,137,237	312,200,480	481,408,904	434,570,144	45,838,760
2015	26,600,960	124,265,747	400,000	138,673,601	800,000	80%	127,535,899	20%	132,114,110	4.79	139,518,609	315,322,485	486,222,993	438,915,895	47,307,148
2016	26,896,970	125,508,405	400,000	147,996,873	800,000	70%	136,771,433	30%	141,508,084	4.92	140,913,795	318,475,710	491,085,223	443,303,004	47,780,219
2017	27,135,640	126,763,489	400,000	156,825,568	800,000	60%	146,326,097	40%	145,183,624	5.04	143,322,933	321,660,467	495,996,075	447,738,054	48,258,021
2018	27,406,996	128,031,124	400,000	165,142,188	800,000	50%	151,226,320	50%	146,635,461	5.16	143,746,163	324,877,072	500,956,036	452,215,434	48,740,602
2019	27,681,066	129,311,435	400,000	171,266,199	800,000	44%	156,209,915	56%	148,101,815	5.29	145,183,624	328,125,894	505,965,596	456,737,588	49,228,008
2020	27,957,877	130,604,549	400,000	175,774,543	800,000	41%	161,278,059	59%	149,582,833	5.41	146,635,461	331,407,101	511,025,252	461,304,964	49,720,288
2021	28,237,455	131,910,595	400,000	180,138,970	800,000	38%	166,431,945	63%	151,078,662	5.53	148,101,815	334,711,172	516,135,505	465,918,014	50,217,491
2022	28,519,830	133,229,701	400,000	184,353,980	800,000	34%	171,672,780	66%	152,589,448	5.65	149,582,833	338,068,383	521,296,860	470,577,154	50,719,666
2023	28,805,028	134,561,998	400,000	188,413,957	800,000	31%	177,001,790	69%	154,115,343	5.78	151,078,662	341,449,067	526,509,828	475,282,966	51,226,862
2024	29,093,079	135,907,618	400,000	192,313,166	800,000	28%	182,420,212	72%	155,656,496	5.90	152,589,448	344,863,558	531,774,927	480,035,796	51,739,131
2025	29,384,009	137,266,694	400,000	196,045,750	800,000	25%	187,929,302	75%	157,213,061	6.02	154,115,343	348,312,194	537,092,676	484,836,154	52,256,522
2026	29,677,849	138,639,361	400,000	199,605,729	800,000	22%	193,530,332	78%	161,976,774	6.15	155,656,496	351,795,316	542,463,603	489,684,515	52,779,087
2027	29,974,628	140,025,754	400,000	202,886,998	800,000	19%	195,24,590	81%	166,431,945	6.27	157,213,061	355,313,269	547,888,239	494,581,360	53,306,878
2028	30,274,374	141,426,012	400,000	206,183,323	800,000	16%	205,013,380	84%	168,420,212	6.39	158,785,192	358,896,401	553,367,121	499,527,174	53,839,947
2029	30,577,118	142,840,272	400,000	209,188,341	800,000	13%	210,898,023	88%	169,530,332	6.52	160,373,044	362,455,065	558,900,792	504,522,446	54,378,347
2030	30,882,889	144,268,675	400,000	211,995,557	800,000	9%	216,879,858	91%	195,24,590	6.64	161,976,774	366,079,616	564,489,800	509,567,670	54,922,130
2031	31,191,718	145,711,362	400,000	214,598,342	800,000	6%	219,165,415	94%	205,013,380	6.76	163,596,542	369,740,412	570,134,698	514,663,347	55,471,351
2032	31,503,635	147,168,475	400,000	216,889,930	800,000	3%	222,960,240	97%	210,898,023	6.88	165,232,507	373,437,816	575,896,045	519,809,980	56,026,065
2033	31,818,672	148,640,160	400,000	219,165,415	800,000	0%		100%	216,879,858	7.01	166,894,832	377,172,194	581,594,406	525,008,080	56,586,325

Note: The original Excel spreadsheet for Table 6 is included in the BCA Workbook

**Table 7: Commodity Transportation on the GIWW**

Commodity Name	TONS	Commodity Name	TONS	Commodity Name	TONS
Crude Petroleu	1	Petro. Jelly &	3	Nitrogenous Fe	99
Residual Fuel	86	Asphalt, Tar &	355	Phosphatic Fer	7
Petro. Jelly &	1	Other Hydrocar	712	Alcohols	528
Liquid Natural	143	Alcohols	1	Organo - Inorg	10
Potassic Fert.	5	Inorg. Elem.,O	11	Metallic Salts	32
Fert. & Mixes	19	Metallic Salts	8	Plastics	63
Benzene & Tolu	846	Chem. Products	3	Aluminum	5
Alcohols	590	Sand & Gravel	142	Fab. Metal Pro	4
Nitrogen Func.	4	Waterway Impro	49	Animal Feed, P	59
Organic Comp.	90	Aluminum Ore	3	Crude Petroleu	2,180
Ammonia	233	Machinery (Not	1	Asphalt, Tar &	572
Sodium Hydroxi	165	Crude Petroleu	103	Liquid Natural	260
Inorg. Elem.,O	277	Gasoline	703	Nitrogenous Fe	38
I&S Plates & S	142	Distillate Fue	14	Acyclic Hydroc	642
Primary I&S NE	133	Asphalt, Tar &	38	Nitrogen Func.	265
Machinery (Not	46	Benzene & Tolu	460	Sand & Gravel	737
Waste and Scra	1	Organo - Inorg	5	Iron & Steel S	284
Coal Lignite	15	Chemical Addit	1	Slag	13
Coal Coke	10	Non-Metal. Min	17	Non-Metal. Min	0
Crude Petroleu	25	I&S Pipe & Tub	8	Ferro Alloys	7
Residual Fuel	30	Machinery (Not	8	Corn	25
Lube Oil & Gre	3	Coal Coke	39	Manufac. Prod.	2
Lube Oil & Gre	10	Kerosene	7		
Nitrogen Func.	809	Residual Fuel	35		<b>25,563</b>
Sodium Hydroxi	142	Fert. & Mixes	11		
Waterway Impro	14	Acyclic Hydroc	334		
Aluminum Ore	493	Other Hydrocar	1,778		
Non-Ferrous Or	7	Carboxylic Aci	252		
I&S Primary Fo	16	Organic Comp.	94		
I&S Plates & S	4	Sulphuric Acid	737		
Sugar	142	Inorg. Elem.,O	8		
Machinery (Not	0	Chem. Products	44		
Crude Petroleu	729	Sand & Gravel	340		
Distillate Fue	1,226	Iron & Steel S	2		
Naphtha & Solv	849	Fab. Metal Pro	62		
Naphtha & Solv	1,226	Rice	69		
Carboxylic Aci	206	Machinery (Not	38		
Sulphur (Liqui	46	Machinery (Not	49		
Sodium Hydroxi	6	Machinery (Not	0		
Manganese Ore	3	Gasoline	847		
Pig Iron	14	Distillate Fue	698		
Aluminum	5	Residual Fuel	1,669		
Corn	9	Residual Fuel	478		
Water & Ice	0	Lube Oil & Gre	175		
Machinery (Not	57	Petroleum Coke	37		
Manufac. Prod.	1	Petroleum Coke	108		
Manufac. Prod.	2	Petro. Product	169		
Residual Fuel	80	Petro. Product	45		

*Note: The original Excel spreadsheet for Table 7 is included in the BCA Workbook*

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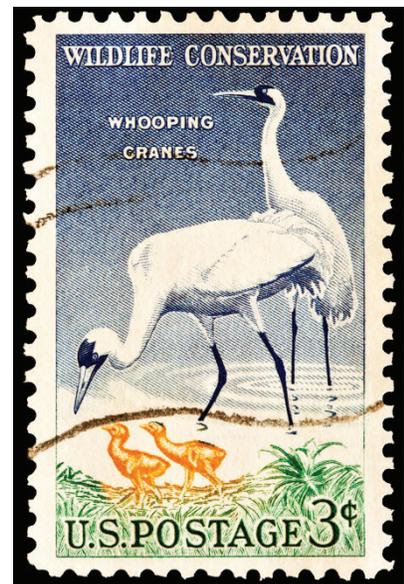
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**ATTACHMENT 6: Environmental Information Document**

# GIWW Marine Highway and Aransas National Wildlife Refuge: A Beneficial Partnership

Environmental Information Document



**Environmental Information**

One of the more compelling aspects of this project is its profound effect on regional environmental sustainability. Construction of the proposed project facilitates movement of barge commerce along the GIWW while enhancing the environmental health of the Gulf Intracoastal Waterway (GIWW) and the Aransas National Wildlife Refuge (ANWR).

**National Environmental Policy Act (NEPA)**

The proposed project has obtained clearance under NEPA as part of an assessment of methodologies to reduce impacts to and protect critical whooping crane habitat through a Record of Decision in 1995, which is supported by *The Gulf Intracoastal Waterway – Aransas National Wildlife Refuge, Texas Feasibility Report and Final Environmental Impact Statement*, also from 1995. Contained within and forming a key component of the *Final Environmental Impact Statement* (FEIS) was the development of beneficial use areas within ANWR. These beneficial use areas will be created and implemented as part of the 50-year Dredged Material Management Plan (DMMP), developed by the U.S. Army Corps of Engineers (USACE) to guide ongoing activities within this stretch of the GIWW. The action is a vital component of the effort to reduce habitat loss within ANWR as a result of erosion occurring within the GIWW. Without the proposed effort, whooping crane habitat will continue to be impacted by erosion and will suffer degradation and loss of this valuable natural resource. Approximately 2,078 acres of whooping crane (*Grus Americana*) habitat has been lost since the construction of the GIWW in 1940. The proposed activity as defined in the Feasibility Study and FEIS will create 1,614 acres of this habitat and will be a vital component in the protection and preservation of this habitat. This project is in support of these ongoing commitments and therefore is in compliance with NEPA.

**Endangered Species Act (Biological Opinion)**

Compliance with the Endangered Species Act is documented in the Biological Opinion (BO) issued by the U.S. Fish and Wildlife Service dated October 12, 1995. The BO states that the construction and maintenance of the existing and proposed erosion and spill control structures will ensure the continued presence of the GIWW within the critical habitat of the whooping crane and does not indirectly cause the habitat's destruction or adverse modification.

Numerous other species will benefit from the establishment of these beneficial use areas including such wading birds as the great blue heron (*Ardea Herodias*), great egret (*A. alba*), snowy egret (*Egretta thula*), little blue heron (*E. caerulea*) and many others of the more than 390 species known to occur in the ANWR.

### **Dredge Material Management Plan**

The DMMP is a 50-year plan to develop beneficial use areas within the ANWR. The goals included creation of marsh similar to nearby natural marshes, including both high and low marsh, without adversely affecting the critical habitat and while minimizing impacts to other natural habitats and navigation. The objectives are to create whooping crane habitat, stabilization and accommodation of dredged material, support vegetation communities similar to those of nearby marshes, protect and preserve contiguous habitat, avoid creation or increase in navigation problems or changes in dredging volume or frequency, and develop habitat for fisheries support. The amount of habitat originally planned to be created was approximately 1,614 acres. Approximately 23 percent, or 370 acres, of this habitat has been created to date. This project will create an additional 444 acres of habitat, or more than double the habitat created to date, and would provide a substantive amount of habitat for the endangered whooping crane, in addition to helping fulfill all of the other stated objectives of the DMMP.

### **Section 404/10**

The proposed project will require authorization under the Clean Water Act and/or Section 10 under the Rivers and Harbors Act. The proposed creation of beneficial use areas within currently planned footprints will be a continuation of ongoing activities of the USACE in the ANWR and has been determined by the USACE–Galveston District, to be consistent with the public interest for purposes of executing their navigation mission. While construction of a project by the local sponsor, rather than by the USACE, does require issuance of a permit, USACE guidance provides for the issuance of that permit on the basis of information previously developed by the USACE for its own compliance. The Galveston District has pledged their support for the proposed project in a letter from the District Commander, Colonel Christopher Sallèse (Attachment 1 to the application).

**ATTACHMENT 7: Federal Wage Rate Certification**

## Federal Wage Rate Certification

The Texas Department of Transportation certifies that it will ensure compliance with the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code (federal wage rate requirements), as required by the FY 2012 Appropriations Act for any projects that receive federal funding under the National Infrastructure Program.

A handwritten signature in black ink, appearing to read "Herman Deutsch", written over a horizontal line.

Herman Deutsch  
Maritime Division Director  
Texas Department of Transportation

5-22-13

Date