

**Integrated Final Report to Congress and  
Legislative Environmental Impact Statement**

for the

**Mississippi River – Gulf Outlet  
Deep-Draft De-authorization Study**

**Volume 1  
MAIN REPORT**

by  
U. S. Army Corps of Engineers  
New Orleans District

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## LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

### **Mississippi River-Gulf Outlet (MRGO) Deep-Draft De-authorization Study**

**LEAD AGENCY:** U.S. Army Corps of Engineers (USACE), Mississippi Valley, New Orleans District.

**ABSTRACT:** The U.S. Congress has directed the Secretary of the Army, acting through the Chief of Engineers, to develop a plan for de-authorization of deep-draft navigation for the MRGO from the Gulf Intracoastal Waterway (GIWW) to the Gulf of Mexico. The plan shall be integrated into the Louisiana Coastal Protection and Restoration Plan. The MRGO is authorized as a 36-foot deep, 500-foot bottom width waterway (38-foot deep, 600-foot bottom width in the Bar Channel), connecting the city of New Orleans to the Gulf of Mexico. The Sound Reach of the MRGO experienced severe shoaling during Hurricane Katrina. A collaborative planning effort with numerous stakeholders identified common measures supported by many stakeholders. For planning purposes, the future without de-authorization was determined to be continuation of the authorized deep-draft channel at full width. In the December 2006 Interim Report, four alternatives were developed that would allow continued shallow-draft navigation, three that completely closed the MRGO from the GIWW to the Gulf of Mexico, and one that would cease all navigation maintenance activities on the MRGO from the GIWW to the Gulf of Mexico. An economic evaluation of channel navigation use does not demonstrate a Federal interest in continued operation and maintenance of the channel. An assessment of the benefits to costs of the channel shows a ratio of less than unity. All alternatives that included maintenance of shallow-draft navigation were screened from further consideration based on this economic analysis. Two alternatives that would completely close the channel were eliminated due to cost. Four alternatives were studied in detail: The Future Without De-authorization; Alternative 1 – Construct a Total Closure Structure across the MRGO near Bayou La Loutre Immediately; Alternative 2 – Phased Construction of a Total Closure Structure across the MRGO near Bayou La Loutre (Construction would begin with a weir and be completed with a total closure structure); and Alternative 3 – Cease All MRGO Operations and Maintenance Dredging Activities. Alternative 2 was later dropped from further evaluation. Present channel conditions accommodate navigation up to a 22-foot draft. Vessels may attempt to navigate the channel after it is de-authorized; therefore, some form of positive closure of the channel should be constructed. The most suitable closure would be a total closure structure of rock. Locating this structure is based on two main considerations: preventing navigation and engineering criteria. Closure to navigation could occur at any point along the channel, but closure near the Bayou La Loutre ridge provides the most stable foundation because of proximity to the historic Bayou La Loutre ridge and it is the narrowest section of the channel (see Section 2.5.1, Preliminary Engineering on Alternatives Evaluated in Detail). Alternative 1 has been identified as the Recommended Plan. The Recommended Plan calls for de-authorization of navigation on the MRGO from mile 60 at the southern bank of the GIWW to the Gulf of Mexico. This plan could produce environmental benefits through partial restoration of estuarine salinity gradients and tidal conditions. It also could prevent the loss of a significant percent of the 2,343 net acres of marsh expected to be lost with the future without de-authorization. Salinity stratification would be reduced north of the total closure structure which is anticipated to reduce salinity stratification in Lake Pontchartrain. This could improve the aquatic ecosystem in the lake. All of these factors outweigh the disadvantage of Alternative 1, which is a slightly lower average annual net economic benefit than Alternative 3. The existing MRGO bank stabilization features and jetties would be de-authorized, but remain in place. Aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard. The estimated total project construction cost of the total closure structure is \$24,684,150. Total average annual costs for the Recommended Plan (including O&M and cost to navigation) are estimated at approximately \$5.1 million and total average annual benefits are estimated at \$12.5 million. This results in an estimated total average annual net benefit of \$7.4 million.

**Comments or Questions:** Please send comments or questions on this LEIS to the U.S. Army Corps of Engineers, New Orleans District, Attention: Sean P. Mickal., P.O. Box 60267, New Orleans, LA 70160-0267. Phone: (504) 862-2319. **The official closing date of document availability will be 30 days from the date on which the Notice of Availability for this Final LEIS appears in the *Federal Register*.**

## **EXECUTIVE SUMMARY**

### **S.1. FINAL REPORT TO CONGRESS AND LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT**

This Final Report to Congress and Legislative Environmental Impact Statement (LEIS) present the findings of a congressionally requested study on the de-authorization of deep-draft navigation on the Mississippi River-Gulf Outlet (MRGO) between the Gulf Intracoastal Waterway (GIWW) and the Gulf of Mexico. This document provides comprehensive documentation of the MRGO Deep-Draft De-authorization Study. Traditionally, a Report to Congress and LEIS would be produced as two separately bound documents. However, a single integrated document meets the requirements of the National Environmental Policy Act (NEPA) and the USACE decision-making process without duplication. The main table of contents includes asterisks for traditional NEPA required chapters and sections to allow ready access for those specifically interested in the NEPA compliance review.

The report organization and contents are intended to allow the reader to become familiar with the history of the MRGO Deep-Draft De-authorization Study. The information provided includes study purpose, background, and decision process. The document also describes the direct, indirect, and cumulative environmental effects attributable to alternative plans. Public involvement and agency coordination efforts are documented, as well as technical analyses. The document concludes with a detailed description of the Recommended Plan, which is to construct a total closure structure across the MRGO near Bayou La Loutre in one construction effort.

A Legislative Environmental Impact Statement (LEIS) is the detailed statement required by Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), to be included in a recommendation or report on a legislative proposal to the Congress. Preparation of a LEIS must conform to the requirements of the NEPA implementing regulations, codified at 40 CFR pts. 1500-1508, except that (1) there need not be a scoping process; and (2) the LEIS shall be prepared in the same manner as a draft statement, but shall be considered the “detailed statement” required by statute, 40 CFR § 1506.8(b).

### **S.2 STUDY AUTHORITY**

The U.S. Congress has directed the Secretary of the Army, acting through the Chief of Engineers, to develop a plan for de-authorization of deep-draft navigation for the Mississippi River-Gulf Outlet (MRGO) from the Gulf of Mexico to the Gulf Intracoastal Waterway (GIWW). The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234), reads in part:

*“...the Secretary of the Army, acting through the Chief of Engineers, utilizing \$3,300,000 of the funds provided herein shall develop a*

*comprehensive plan, at full Federal expense, to de-authorize deep-draft navigation on the Mississippi River-Gulf Outlet, Louisiana, extending from the Gulf of Mexico to the Gulf Intracoastal Waterway: Provided further, That, not later than 6 months after the date of enactment of this Act, the Secretary shall submit an interim report to Congress comprising the plan: Provided further, That the Secretary shall refine the plan, if necessary, to be fully consistent, integrated, and included in the final report to be issued in December 2007 for the Louisiana Coastal Protection and Restoration Plan.”*

House Report 109-494 provides a Congressional conference committee manager’s statement accompanying the legislative language further directing that:

*“The plan shall include recommended modifications to the existing authorized current use of the Outlet, including what navigation functions, if any, should be maintained and any measures for hurricane and storm protection. The plan shall be developed in consultation with St. Bernard Parish, the State of Louisiana, and affected Federal Agencies.”*

Congressional direction to prepare a deep-draft de-authorization plan for the MRGO also requires that the plan be fully consistent and integrated with the Louisiana Coastal Protection and Restoration (LACPR) plan. Development of the LACPR plan focuses on identifying a comprehensive plan for flood control, coastal restoration, and hurricane protection in south Louisiana. The future of the MRGO navigation channel is a key decision that affects directions on related projects in the area such as hurricane protection, ecosystem restoration, and navigation. Resolving questions about the future depth and use of the MRGO channel could provide a baseline for developing plans and designs for other related projects. The MRGO de-authorization plan is being integrated into ongoing work to develop and evaluate measures for the LACPR plan. Specific work to integrate the components of the MRGO plan with the LACPR plan includes storm surge modeling, environmental planning, and prioritization. Every effort has been made to accelerate completion of the MRGO Final Report and LEIS in accordance with the Congressional direction found in Title IV, Chapter 3, Section 4304 of the "U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007" (Public Law 110-28). The MRGO Final Report and LEIS will be transmitted to the Congress as soon as is practicable. The MRGO Final Report and LEIS will also be included in the LACPR Final Report.

At the time this report was being released for State and Agency review, the Water Resources Development Act of 2007 (WRDA 2007) became law expanding the scope of the study authority provided by Public Law 109-234 to include ecosystem restoration. In addition, pursuant to WRDA 2007 Section 7013, upon submission of the final report to Congress, the MRGO from the Gulf of Mexico to Mile 60 at the southern bank of the GIWW is no longer authorized. Section 7013 also authorizes the Secretary of the Army to carry out a plan to close the MRGO and to restore and protect the ecosystem substantially in accordance with the final report subject to the Secretary’s determination

that the plan is cost-effective, environmentally acceptable, and technically feasible. This report preliminarily addresses the ecosystem restoration requirements of WRDA 2007; however, a supplemental report to completely address the ecosystem restoration requirements of WRDA 2007 will be submitted at a later date.

WRDA 2007 Section 7013 is provided below in its entirety:

*SEC. 7013. MISSISSIPPI RIVER-GULF OUTLET.*

*(a) DEAUTHORIZATION.—*

*(1) IN GENERAL.—Effective beginning on the date of submission of the plan required under paragraph (3), the navigation channel portion of the Mississippi River-Gulf Outlet element of the project for navigation, Mississippi River, Baton Rouge to the Gulf of Mexico, authorized by the Act entitled “An Act to authorize construction of the Mississippi River-Gulf outlet”, approved March 29, 1956 (70 Stat. 65) and modified by section 844 of the Water Resources Development Act of 1986 (100 Stat. 4177) and section 326 of the Water Resources Development Act of 1996 (110 Stat. 3717), which extends from the Gulf of Mexico to Mile 60 at the southern bank of the Gulf Intracoastal Waterway, is not authorized.*

*(2) SCOPE.—Nothing in this paragraph modifies or deauthorizes the Inner Harbor navigation canal replacement project authorized by that Act of March 29, 1956.*

*(3) CLOSURE AND RESTORATION PLAN.—*

*(A) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a final report on the deauthorization of the Mississippi River-Gulf outlet, as described under the heading “INVESTIGATIONS” under chapter 3 of title II of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (120 Stat. 453).*

*(B) INCLUSIONS.—At a minimum, the report under subparagraph (A) shall include—*

*(i) a plan to physically modify the Mississippi River-Gulf Outlet and restore the areas affected by the navigation channel;*

*(ii) a plan to restore natural features of the ecosystem that will reduce or prevent damage from storm surge;*

*(iii) a plan to prevent the intrusion of saltwater into the waterway;*

*(iv) efforts to integrate the recommendations of the report with the program authorized under section 7003 and the analysis and design authorized by title I of the Energy and Water Development Appropriations Act, 2006 (119 Stat. 2247); and*

*(v) consideration of—*

*(I) use of native vegetation; and*

*(II) diversions of fresh water to restore the Lake Borgne ecosystem.*

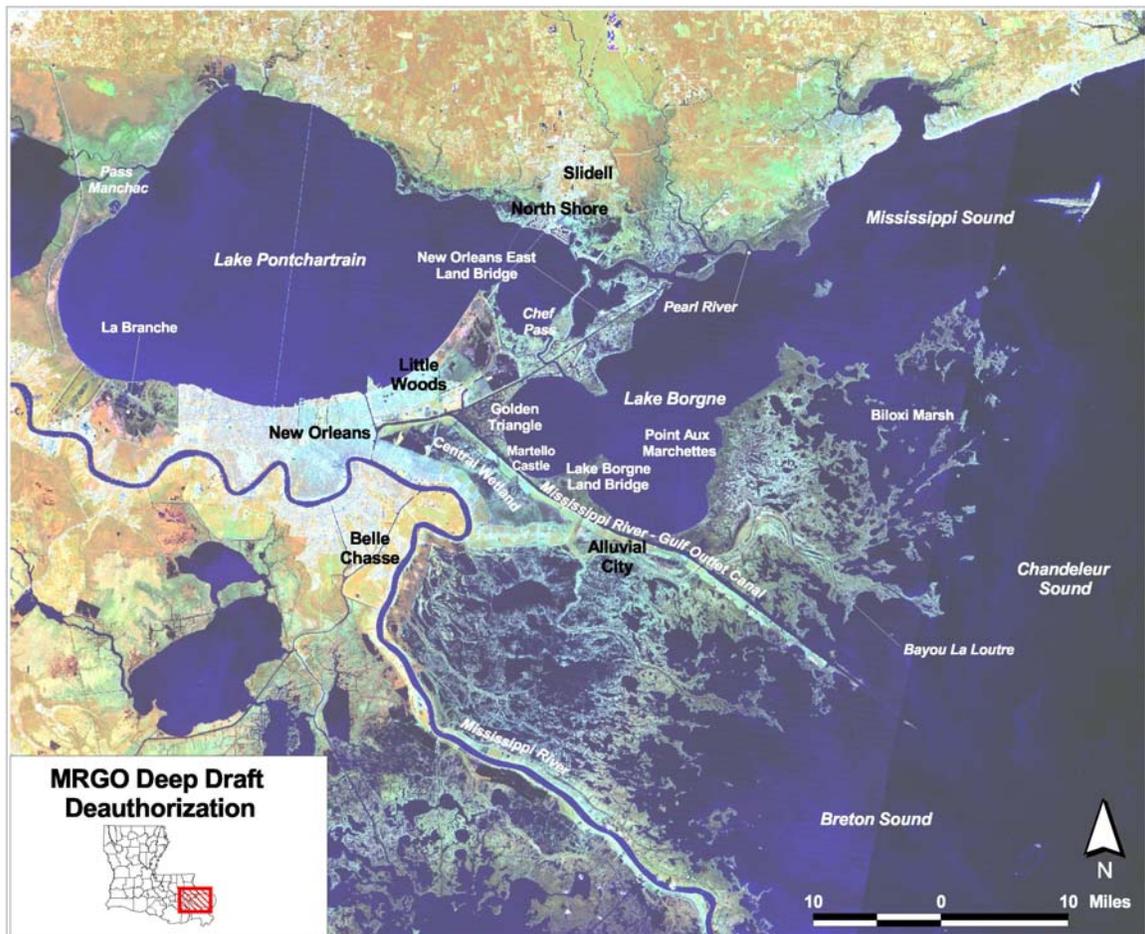
*(4) CONSTRUCTION.—The Secretary shall carry out a plan to close the*

*Mississippi River-Gulf Outlet and restore and protect the ecosystem substantially in accordance with the plan required under paragraph (3), if the Secretary determines that the project is cost-effective, environmentally acceptable, and technically feasible.*

### **S.3 OVERVIEW OF STUDY AREA**

The study area is located in southeastern Louisiana in St. Bernard, Orleans, Jefferson, St. Tammany, St. Charles, St. John the Baptist, and Tangipahoa Parishes. It covers the Middle and the Lower Pontchartrain Basin. The Middle Basin consists of Lake Pontchartrain with its adjacent cities and towns, and surrounding wetlands. The Lower Basin consists of Lake Borgne, the MRGO channel, Chandeleur and Breton Sounds, a small portion of the Gulf of Mexico, and the surrounding wetlands (Figure S.1).

**Figure S.1 Study Area**



### **S.4 BACKGROUND ON THE MRGO**

The MRGO provides a shorter navigation route from the Gulf of Mexico to the Port of New Orleans tidewater facilities compared to using the Mississippi River to access the port. Construction of the MRGO channel began in 1958 and was completed in 1968.

The channel extends from the Inner Harbor Navigation Canal (IHNC) in New Orleans to the 38-foot depth contour in the Gulf of Mexico (see Figure S.2). The stretch contiguous with the GIWW is called the GIWW Reach (mile 66-60). Where the channel diverts from the GIWW and runs through wetlands for 37 miles is known as the Inland Reach (mile 60-23), which defines the southwest boundary of the Golden Triangle (see Sections 1.4, 4.5 and 4.6 of the Report). The 23 miles through Breton and Chandeleur Sounds is called the Sound Reach (mile 23-0). The portion in the Gulf of Mexico is the Bar Channel (mile 0 to -9.4). All reaches of the MRGO navigation channel are authorized as a 36-foot deep, 500-foot bottom width waterway with the exception of the Bar Channel which is authorized as a 38-foot deep, 600-foot bottom width waterway.

MRGO channel construction was authorized by a March 29, 1956 Act of Congress (Public Law 84-455) as a modification to the existing project for Mississippi River, Baton Rouge to the Gulf of Mexico. The Act authorized construction of the MRGO Project substantially in accordance with the recommendation of the Chief of Engineers contained in House Document No. 245, 82<sup>nd</sup> Congress. In addition to recommending construction of the channel, the Chief of Engineers recommended the construction of (1) protective jetties at the entrance to the channel from the Gulf of Mexico; (2) a permanent retention dike through Chandeleur Sound and a wing dike along the islands as required; (3) a turning basin with a project depth of 36 feet Mean Low Gulf (MLG), a width of 1,000-feet and a length of 2,000 feet at the junction of the new channel and the Inner Harbor Navigation Canal; and (4) a highway bridge with approaches to carry Louisiana State Highway 61 over the channel. All of these features were constructed, with the exception of the permanent retention dike through Chandeleur Sound and the wing dike along the islands.

Public Law 84-455 also authorized replacement of the existing IHNC Lock when economically justified. In 1968, the River and Harbor Act (Public Law 90-483) authorized the Michoud Canal Project as a modification of the MRGO Project. The Michoud Canal Project authorized a deep-draft navigation channel in the GIWW and Michoud Canal by enlargement to a depth of 36 feet over a bottom width of 250 feet from the MRGO channel to and including a turning basin 800 feet square at the north end of the Michoud Canal. The Michoud Canal Project was constructed; however, the IHNC Lock has not yet been replaced.

The Federal government is responsible for constructing, operating, and maintaining all features of the MRGO Project, including the Michoud Canal Project, with the exception of the highway bridge and its approaches, which is owned, operated, and maintained by non-Federal entities. The Port of New Orleans, the non-Federal project sponsor, is responsible for furnishing free of cost to the Federal government all lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) required for construction and maintenance of the MRGO Project.

When the MRGO Project was built approximately 3,150 acres of marsh, 100 acres of wetland forest and 830 acres of shallow open water were converted to the deep water navigation channel between the GIWW and the Gulf of Mexico. The dredge material

from channel construction was placed in a disposal area that was about 4,000 feet wide in most places and immediately southwest of the channel. The material in this disposal area was piled about 10 feet high and covered about 12,440 acres of marsh, 1,410 acres of wetland forest and 3,920 acres of shallow open water (USACE 1999).

It is estimated that habitat shifts caused by saline waters brought in by the MRGO might have caused the following in areas adjacent to the MRGO: 3,350 acres of fresh/intermediate marsh and 8,000 acres of cypress swamp converted to brackish marsh and 19,170 acres of brackish marsh and swamp became saline marsh (USACE 1999). Bank erosion along the MRGO has been estimated to occur at rates of between 27 and 38 feet per year on the Inland Reach (USACE 2004). Between 1964 and 1996, 5,324 acres of marsh have been lost adjacent to the MRGO channel (mile 66 to 21).

Operation and maintenance of the MRGO channel has required the construction of additional project features. Bank stabilization measures, also called foreshore protection, have been constructed along several reaches of both the north and south banks of the GIWW and Inland Reaches to prevent sloughing of the bank into the channel and to protect adjacent wetlands and levees. Bank stabilization measures exist in the following locations: 1) MRGO north bank (Miles 66-60, Miles 56 - 50.5, Miles 43 – 41, Miles 37.2 - 36.5, Miles 36.1 - 35.6, Miles 33.8 - 32.6), and 2) MRGO south bank (Miles 66-60, Miles 60 - 47, Articulated Concrete Mattress (ACM) Miles 38.9 - 38.5 and 37.3 to 36.5). In addition, Miles 23.2 to 20.8 of the north and south jetties provide foreshore protection for adjacent wetlands.

Many disposal sites have been designated for maintenance of the MRGO Project. These include numerous upland disposal sites and beneficial use sites for wetlands restoration and nourishment. Dredged material was used beneficially from 1985 to 2003. An average of about 16 acres per year was created in the Inland Reach. Shallow open water areas on the north and south side of the jetties have been used for the placement of dredged material in a manner conducive to wetland creation. An average of about 17 acres per year was created behind the jetties. Dredged material has also been placed at an offshore feeder berm to nourish Breton Island and in shallow open water immediately adjacent to Breton Island to restore barrier island habitat destroyed by erosion and storms. About 21 acres per year were created on Breton Island. In the area behind the south jetty, dredged material has been placed in an effort to create marsh. Dredged material also has been placed at two-mile intervals across Breton Sound in an attempt to create islands. These areas have been used, but no islands have been created. There is also an approximately 5,000 acre EPA-designated Ocean Dredged Material Disposal Site (ODMDS) located parallel to and south of the channel from mile 4 to mile -10. Only the portion from mile -4 to mile -10 has been recently used for disposal.

Direct costs of construction, operation, and maintenance of the MRGO have been funded by the Federal government. These direct costs have totaled over \$580 million since 1958. The average annual operations and maintenance expenditures for the MRGO were \$12.5 million (in 2000 dollars). However, following tropical storms and hurricanes, supplemental expenditures have often been required to return the MRGO to the

authorized dimensions. Since 1998, the \$12.5 million has not allowed for dredging of the channel to its full-authorized dimensions. The GIWW Reach has not been dredged since 1998. From 1998 to 2005, the Inland Reach was maintained to a minimum 300-foot bottom width; the Sound Reach to a minimum 450-foot bottom width; and the Bar Channel to a minimum 500-foot bottom width. There has been no channel maintenance dredging in any reach of the MRGO since Hurricane Katrina in 2005.

Sections of the MRGO experienced severe shoaling during Hurricane Katrina, leading to a current controlling channel depth of approximately 22 feet. The estimated cost to return the channel to authorized dimensions (36 feet deep by 500 foot bottom width; 38 feet deep by 600 foot bottom width in Bar Channel) is \$130,444,870 based on October 2006 price levels. However, as discussed previously, for the past several years prior to Hurricane Katrina the channel has been maintained to reduced dimensions in some reaches. The estimated cost to return the channel to 36 feet deep by 300 foot bottom width in all reaches is \$62,380,000 based on October 2006 price levels. For this de-authorization study, although no current plans exist to dredge the MRGO, it is important to estimate these costs for comparison purposes in evaluating future alternatives for modifying the channel.

After Hurricane Katrina, the U.S. Congress passed two laws providing funds for emergency repairs or authorizing other actions related to the MRGO navigation channel. Chapter 3, under Division B of Title I of the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (Public Law 109-148) provided \$75,000,000 for authorized operation and maintenance (O&M) activities along the MRGO. Section 2304 of Chapter 3 in Title II of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234) clarified that these funds were to be used for "the repair, construction or provision of measures or structures necessary to protect, restore or increase wetlands, to prevent saltwater intrusion or storm surge." The USACE currently plans to use these funds for shoreline protection and marsh creation in the vicinity of the MRGO and Lake Borgne.

In addition to providing funds to develop a comprehensive plan to de-authorize deep-draft navigation on the MRGO, Public Law 109-234 authorized and provided \$350 million for construction of enhanced hurricane protection for the IHNC, and \$170 million to armor critical areas of the levee system. Efforts to plan and design these items are underway.

Figure S.2 Mississippi River-Gulf Outlet Area



## S.5 PURPOSE AND NEED

The purpose of the study is to provide to Congress a comprehensive plan to de-authorize deep-draft navigation on the MRGO from the GIWW to the Gulf of Mexico. As requested in the authorizing legislation, an Interim Report to Congress was submitted in December 2006. The Interim Report to Congress stated that preliminary analysis indicated that the best plan was to close the MRGO from the GIWW to the Gulf of Mexico to both deep- and shallow-draft navigation. The MRGO comprehensive de-authorization plan is consistent with ongoing design and planning efforts related to storm protection and coastal restoration and long-term planning related to LACPR. In terms of design and planning, this MRGO de-authorization study and subsequent Congressional action defines the navigation future of the MRGO and thus enables other related projects to move forward with more certainty. The study also comports with the Chief of Engineer's "12 Actions for Change" calling for effectively implementing comprehensive systems approaches to water resources problems.

## S.6 STUDY GOALS AND OBJECTIVES

The goals and objectives for the MRGO deep-draft de-authorization study are derived entirely from the Congressional authorizing language and accompanying committee report. Those goals and objectives are:

- Develop a comprehensive plan to de-authorize deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico
- Evaluate any navigation functions that should be maintained on the MRGO channel
- Identify measures for hurricane and storm damage reduction
- Refine the plan to be fully integrated and consistent with the LACPR Final Report to Congress

## **S.7 PUBLIC INVOLVEMENT**

In response to Congressional direction to develop a MRGO de-authorization plan, the USACE established a plan of action for developing the Interim and Final Reports to Congress. Federal, state and local government parties, environmental groups, landowners, navigation interests, other organizations and individuals were invited to assist in preparation of the reports. A series of public stakeholder forums was held which included technical presentations and open discussions on topics including wetlands, navigation, storm protection, and the local economy. Each stakeholder was asked to identify their own plans for de-authorization of the MRGO from the GIWW to the Gulf of Mexico, environmental restoration measures in the vicinity of the MRGO, and hurricane protection components. Several stakeholder groups prepared such plans and presented them to the group.

A public meeting was held on October 18, 2006 at the University of New Orleans and involved an open house where stakeholder groups were offered display space to present their plans. More than 150 people attended the public meeting, which included a formal presentation of the study process and scope from the USACE and an open comment period for public statements from citizens, organizations, and elected officials. Public comments made during this meeting were considered in formulating options for the Interim Report to Congress which was submitted in December 2006.

A public information meeting was held on May 19, 2007 at Nunez Community College in Chalmette, Louisiana. The meeting offered attendees an opportunity to view a series of posters presented by the USACE on the study. In addition, various stakeholders displayed information and interacted with the meeting attendees. More than 100 attendees listened to a formal presentation regarding the alternatives evaluated in detail and the Recommended Plan. Following the presentation, attendees had the opportunity to ask questions. All attendees were made aware of the study schedule and process.

Through the collaborative process some consensus measures emerged that were supported by many of the stakeholders. However, the different stakeholders could not agree on a plan to close or de-authorize the channel. Stakeholder recommendations varied from total closure to a sector gate allowing passage of vessels with a draft of up to 28 feet. Many of the measures from the stakeholder plans were incorporated into the Interim

Report to Congress. Collaborative planning continued after the submittal of the Interim Report to Congress and that approach remains a key component of the preparation of the Final Report to Congress and LEIS. The MRGO Deep-Draft De-Authorization Final Report to Congress will become part of the LACPR Final Report to Congress. (For further description of the proposed stakeholder plans, see Section 4.)

## **S.8 PLAN FORMULATION**

In order to ensure that sound decisions are made, the USACE plan formulation process requires a systematic and repeatable approach. The Economic and Environmental Principles for Water and Related Land Resources Implementation Studies and The Economic and Environmental Guidelines for Water and Related Land Resources Implementation Studies (Planning Guidance Notebook or ER 1105-2-100) describe the USACE study process and requirements. Alternatives were formulated to minimize cost associated with the disposition of the de-authorized project. These alternatives were also evaluated against the following four criteria:

- *Completeness* - the extent to which a given alternative plan provides and accounts for all necessary investments or other actions to ensure the realization of the planned effects.
- *Effectiveness* - the extent to which an alternative plan alleviates the specified problems and achieves the specified opportunities.
- *Efficiency* - the extent to which an alternative plan is the most cost-effective means of alleviating specified problems and realizing the specified opportunities, consistent with protecting the Nation's environment.
- *Acceptability* - the workability and viability of the alternative plan with respect to acceptance by state and local entities and the public and compatibility with existing laws, regulations, and public policies.

## **S.9 ALTERNATIVES FROM INTERIM REPORT TO CONGRESS**

A broad suite of options were identified for development of the deep-draft de-authorization plan in the December 2006 Interim Report to Congress. This initial array of alternatives included:

- Interim Report Alternative 1 – Maintain a shallow-draft MRGO navigation channel with variations such as no structure, a salinity control weir at Bayou La Loutre, a salinity control gate at Bayou La Loutre (normally closed) and a storm protection gate at Bayou La Loutre (normally open).
- Interim Report Alternative 2 – Close the MRGO channel to deep-draft and shallow-draft vessels by: blocking the channel with a total closure structure across the MRGO at Bayou La Loutre; restoring both banks of Bayou La Loutre across the MRGO at Hopedale, Louisiana; or filling in the entire MRGO channel from the GIWW to the Gulf of Mexico.

- Interim Report Alternative 3 – Cease all MRGO operations and maintenance activities (dredging, beneficial use, jetty repairs, and navigation aids).

## **S.10 ALTERNATIVES ELIMINATED FROM FURTHER STUDY**

All of the alternatives identified in the Interim Report to Congress that included maintenance of the MRGO channel for shallow-draft navigation were eliminated from further consideration based on economic analysis. The plan to maintain shallow-draft navigation (and all stated variations) was eliminated because the projected economic return was not positive. The cost to maintain the channel on an annual basis would be much higher than the projected commerce it could generate. Restoring both banks of Bayou La Loutre was eliminated from further consideration because, while it achieves similar environmental and navigation results as putting a total closure structure across one bank, it would cost approximately twice as much to construct. There are also additional negative impacts to recreational and commercial vessel users caused by restricted access to Bayou La Loutre from the north. Filling the entire MRGO channel was eliminated from further consideration due to its high cost and the length of time required for full implementation. It is estimated that it would require approximately 250-350 million cubic yards of dredged material to fill the channel from mile 60 to mile 25 at a cost of about \$2.8 billion based on October 2006 price levels, and could take from 15 to 44 years to completely fill the channel.

Other alternatives were suggested after release of the Interim Report to Congress. These included multiple closure locations, limited channel filling, shoreline restoration and stabilization, and vegetative plantings. Alternatives dealing with ecosystem restoration were deemed to be beyond the authority of the MRGO de-authorization study; however, they will be considered under LACPR and other appropriate authorities. In addition to study authority, alternatives were eliminated from further consideration based upon costs, impacts to the environment, limited availability of construction materials, constructability issues, and effectiveness in meeting the study goals and objectives. Alternatives recommended after release of the Interim Report are discussed in greater detail in Section 4 and in Appendix P.

## **S.11 ALTERNATIVES EVALUATED IN DETAIL**

In order to prepare the Final Report to Congress and the Legislative Environmental Impact Statement, in addition to the future without de-authorization three Alternatives were carried into the final array of alternatives for detailed evaluation. The alternatives evaluated in detail are listed below:

- Future Without De-authorization - The channel would be dredged to the Congressionally authorized dimensions of 500-foot bottom width in the Inland and Sound Reaches and a 600-foot bottom width in the Bar Channel. The channel would be maintained at these widths. Dredged material would be used beneficially behind the jetties and on Breton Island.
- Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately;

- Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre (phased construction would begin with a weir and be completed with a total closure structure);
- Alternative 3 – Cease All MRGO Operations and Maintenance Dredging Activities Immediately.

The following features are common to Alternatives 1, 2, and 3:

- The MRGO channel would be de-authorized for navigation from mile 60 at the southern bank of the GIWW to the Gulf of Mexico.
- Aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard.
- Existing bank stabilization features and jetties would be de-authorized, but left in place.

## **S.12 ALTERNATIVE 2 ELIMINATED FROM FURTHER EVALUATION**

Alternative 2 was eliminated from further evaluation based on the comparison of alternatives based on the four criteria in principles and guidelines presented in Section 2.6 and the assessment of planning risk and uncertainty presented in Section 2.5.2. Therefore, Alternative 2 was not carried forward for the evaluation and comparison of environmental consequences presented in Section 3.

Alternative 2 was eliminated from further evaluation because it was deemed to be less complete, effective, and acceptable than Alternative 1 and less efficient than Alternative 3. Additionally, the benefits that may be derived from shallow-draft navigation usage before 2014 under Alternative 2 are speculative in nature because of the planning risk and uncertainty surrounding the potential rate of future MRGO channel shoaling. Given the risk and uncertainty and the performance of the alternative when evaluated against the four criteria in principles and guidelines, Alternative 2 was eliminated from further evaluation.

## **S.13 EXISTING CONDITIONS**

Shoaling in the MRGO channel caused by Hurricane Katrina limited the controlling depth to approximately 22 feet which has restricted deep-draft access. Many deep-draft businesses in the study area were severely impacted. Two companies chose to relocate to Mobile, Alabama. Others are trying to recover; some may plan to relocate. Deep-draft vessels are entering the MRGO light-loaded, calling on tidewater port facilities in New Orleans, and exiting through the IHNC Lock into the Mississippi River for outbound voyages. Some maritime interests have reported modifying operations by moving products over to Mississippi River docks for loading. Other companies have adopted

other modifications to continue commerce. Post-Katrina 230 jobs were lost from the MRGO-IHNC area due to relocation and downsizing. Shallow-draft facilities have essentially recovered. Orleans Parish shows a 34.6% reduction from pre-Katrina jobs and St. Bernard Parish shows a 54.1% reduction.

Traffic records from the Waterborne Commerce Statistics Center (WCSC) show MRGO utilization steadily increasing until reaching a peak in terms of tonnage carried in 1978 and in terms vessel trips in 1982. Both tonnage and total vessels have decreased since that time. Recent analysis of deep-draft navigation indicates that maintaining the authorized dimensions of the MRGO between the GIWW and the Gulf of Mexico is not cost-effective and thus not economically justified. Average annual operations and maintenance (O&M) costs to dredge a single shipping lane in the Inland Reach and authorized width in other reaches are \$12.5 million. However, maintaining a single shipping lane, which is half of the authorized dimensions, only produces approximately \$3.7 million per year in transportation efficiencies. Efforts to operate and maintain the fully authorized dimensions (i.e. a two-lane channel 500 feet wide by 36 feet deep) would be even more costly and would not produce greater navigation benefits. The economic information available also indicates that it is not cost effective to maintain shallow-draft navigation on the channel between the GIWW and the Gulf of Mexico in terms of National Economic Development (NED) criteria. The total average annual costs to maintain a 12 ft shallow-draft channel are approximately \$6 million whereas the estimated average annual benefits are approximately \$1.2 million.

Historically, the MRGO has also served as an alternate navigation route for shallow draft vessels during times of extreme congestion at the IHNC Lock or when the lock was inoperable. Before Hurricane Katrina some barge tows would travel downstream on the Mississippi River to Baptiste Collette Bayou, exit Baptiste Collette Bayou into Breton Sound, and then enter the MRGO. Eastbound tows would then travel back inland from Breton Sound on the MRGO to the GIWW Reach before continuing east to locations in Mississippi, Alabama, and Florida (westbound traffic would traverse the opposite route). The alternative route around the IHNC Lock is about 180 miles longer than a direct lock through from the GIWW to the Mississippi River. Vessel operators would weigh factors such as anticipated time of delay, added fuel consumption, weather, and insurance ratings when making a decision to proceed through the alternative route or to wait to pass through the lock. The bypass takes approximately 24 hours to navigate.

Alterations to the Mississippi River have increased salinity in the study area by reducing the flow of freshwater in the region (USACE 2004). Prior to construction of the MRGO, typical tidal flow within the Breton Sound area was reduced as it moved across the marshes and wetlands inward toward Lake Borgne (USACE 2004). The Bayou La Loutre ridge provided a basin boundary that limited the flow of saline water from the Breton Sound area into Lake Borgne (Rounsefell 1964). The MRGO now provides a more direct flow of higher salinity, stratified water inland toward areas of St. Bernard and Orleans Parishes (Wicker, et al. 1981). This stratified water sinks to the bottom of Lake Pontchartrain where it moves with the lake bottom currents and can cover at least 1/6 of the lake's bottom during the spring and summer. This heavy saline water inhibits both

mixing and oxygenation, generally leading to hypoxic (low oxygen) or anoxic (no oxygen) conditions near the lake bottom (Schurtz and St. Pe' 1984).

Between 1956 and 1990, 68,660 acres of wetlands were lost in the study area. Factors such as subsidence, navigation channels, oil and gas exploration and production, development and storms have contributed to these losses. Approximately 67 percent of the swamp in the study area was lost while saline marsh gained 8 percent. Marsh type is dependent on salinity which is generally determined by rainfall and man-induced changes such as channel and canal dredging. The exact locations and acreages of fresh and intermediate marshes in the study area have fluctuated over time, probably depending on rainfall during the year. Intermediate marsh has been present in the Central Wetlands three of the five years it has been mapped. Brackish marsh has decreased significantly in acreage and fluctuated slightly in location. From 1949-1978 saline marsh was only found south of the Bayou La Loutre ridge and in the outer Biloxi Marshes. In 1988 saline marsh had encroached up the MRGO to about Bayou Dupre and into the Biloxi Marshes near the MRGO. By 1997, it was found further north along the MRGO, past Bayou Dupre.

The study area is home to many species of importance to the state and nation. Wintering waterfowl and furbearers have declined in the study area since about 1970, however are still present. After about 1970, 22 species of freshwater fish were apparently no longer found in the Biloxi Marshes/Lake Borgne area. However six important sport fish seemed to be present in approximately the same numbers as prior to about 1970. The MRGO channel, adjacent waters and marshes and Lake Pontchartrain are essential fish habitat (EFH). The hypoxic-anoxic (H-A) zone in Lake Pontchartrain causes a reduction in the benthic community during H-A events. With regard to threatened and endangered (T&E) species, brown pelicans are found in the study area. Beneficial use of dredged material has nourished Breton Island and wintering piping plovers have utilized the island. Sea turtles in agreed-upon numbers have been taken in the Bar Channel. Detailed contract specifications to protect the Gulf sturgeon, manatee and various kinds of sea turtles have been used. Maintenance of the MRGO channel did not adversely affect T&E species.

#### **S.14 FUTURE WITHOUT DE-AUTHORIZATION**

The existing MRGO Project completed construction in 1968 at the authorized depth and width. Since construction, the project has been maintained at various depths and widths. For the past few years, the Inland Reach, the Sound Reach and Bar Channel have not been dredged to full dimensions. Rather, the channel has been maintained for one-way traffic only. Due to shoaling the current controlling depth is approximately 22 feet. However, to determine whether it is economically feasible to maintain the project and evaluate the environmental impacts for various levels of maintenance including closure, the future without de-authorization is assumed to be a project maintained at the authorized dimensions. The Future Without condition is equivalent to the no-action alternative. All alternatives will be compared to this future condition.

When the Inland Reach is dredged to its full, authorized dimensions, all material from the Inland Reach would be placed in upland disposal areas because of difficulties in finding

marsh creation sites unencumbered with oyster leases. Based upon previous practices, under the future without project scenario, material from the initial dredging of channel miles 27 to 23 would create approximately 157 acres of wetlands adjacent to and behind the north jetty. Material from the initial dredging of channel miles 23 to 14 would be placed behind the south jetty, creating approximately 1,297 acres of marsh. From channel miles 14 to 3.4, material would be placed at unprotected sites in the sound and it is unlikely that any marsh created would last more than a year because of exposure to open bay waves. Material from the initial dredging of channel miles 3.4 to -4 would be placed on Breton Island to create approximately 215 acres of marsh and barrier island habitat (see Appendix G).

Following the restoration of the channel to its full dimensions, it would be maintained at a 500-foot bottom width for the 50-year period of analysis. A 600-foot bottom width would be maintained within the Bar Channel. However, future maintenance operations would depend on funding availability. Material from the Inland Reach would again be placed in upland confined disposal areas. From 1985 to 2004, while maintaining miles 27 to 3.4 to a 500-foot width, an average of approximately 17 acres was created each year behind the jetties. From 1993 to 2005, material between miles 3.4 to -4 was placed either at the feeder berm or just off Breton Island, creating an average of approximately 21 acres per year. It is assumed that these acreages would continue to be created for 50 years in the future without de-authorization (see Appendix G).

Approximately 2,702 acres of marsh would be created in 50 years. At the same time 5,045 acres of marsh could be lost due to erosion. Thus, the estimated net loss is 2,343 acres over 50 years (see Appendix G).

## **S.15 EVALUATION AND COMPARISON OF REMAINING ALTERNATIVES**

The Future Without De-authorization, Alternative 1 and Alternative 3 were analyzed in Section 3 using comparable information to assess relative consequences to the environment. The impact of each alternative across a range of significant resources is presented in Table 3.10. The following text compares the Future Without De-authorization, Alternative 1, and Alternative 3 relative to this assessment of environmental impacts. A comparison of total project construction costs and average annual benefits and costs for each alternative are presented in Table 2.4.

Under the Future Without De-authorization, it is anticipated that navigation use would return to pre-Katrina levels; however, it has been determined that this level of navigation use does not economically justify a continued Federal interest in the authorized Project. The Future Without De-authorization also results in net environmental losses. Approximately 2,702 acres of marsh could be created by beneficial use in 50 years, but, about 5,045 acres of marsh could be lost to wake and wave erosion. Thus there could be an estimated net loss of about 2,343 acres of marsh during the 50 year period of analysis. There would be no salinity reduction in the Pontchartrain Basin under the Future Without De-authorization and habitat types would remain as they are today. The "H-A Zone" in Lake Pontchartrain would continue to occur nearly every year. The Future Without De-

authorization has little compatibility with other potential ecosystem restoration efforts, such as a freshwater diversion structure at Violet.

Alternative 1 provides a physical closure to eliminate attempted navigation on the channel after de-authorization and maximizes protection of the environment. In addition, compatible with the study authority (Section 1.2), Alternative 1 has the highest compatibility with other potential ecosystem restoration efforts being considered under LACPR, such as a freshwater diversion structure at Violet. Alternative 1 immediately closes the MRGO to all navigation, thereby eliminating potential through navigation which could occur prior to the channel shoaling in naturally. It yields the fewest average annual net economic benefits (\$7.8 million) because all navigation benefits are lost as soon as the total closure structure is installed. Shallow-draft tows that use the MRGO as an alternate route when the IHNC is congested or unexpectedly closed could no longer do so. (Note: this cost is included in calculation of net economic benefits). There is the potential for erosion to increase along the banks of Bayou La Loutre and other waterways if vessels currently using the MRGO channel utilize the other waterways as alternative routes; however, although this is not quantifiable the positive impacts of the alternative far outweigh any impacts to alternative routes. Alternative 1 could prevent a significant percentage of the 2,343 net acres of marsh estimated to be lost over 50 years under the future without condition. Greater salinity reduction and vegetation change to historic habitat types is anticipated to occur over a larger area. It is estimated that there could be a reduction in the size of the “H-A zone” in Lake Pontchartrain. If authorized and funded, Alternative 1 could be built in one construction effort lasting an estimated 170 days.

Alternative 2 was eliminated from further evaluation.

Alternative 3 is the least costly alternative and does not address negative environmental impacts associated with erosion and increased salinity associated with future without de-authorization. It does not provide a physical closure of the channel and therefore through navigation of the channel would be limited only by natural shoaling. Additionally, Alternative 3 is not as compatible with the ecosystem restoration goals of LACPR as Alternative 1. Alternative 3 yields the greatest average annual net economic benefits (\$9.1 million) because it requires minimal investment and because shallow-draft navigation benefits would only be limited by natural shoaling within the channel. Alternative 3 has no construction costs, except 1) aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard and 2) the USACE would dispose of some existing disposal and channel easements. This alternative could be implemented almost immediately after Congressional authorization and appropriation. Shallow-draft navigation would be prohibited over time because the channel would not be maintained; however shallow-draft navigation would not be impeded by a structure. Most shallow-draft navigation would be unable to use the Sound Reach of the channel after about 2014. Shallow-draft tows that use the MRGO as an alternative route when the IHNC is congested or unexpectedly closed could no longer do so after about 2014 (Note: this cost is included in the calculation of net economic benefits). It is estimated that slightly more marsh would be lost than under Alternative 1, but significantly less than under the future without condition. It is estimated that Alternative 3 is unlikely to

influence salinity or marsh vegetation types or reduce the “H-A zone” in Lake Pontchartrain. Additionally, potential future ecosystem restoration measures, such as a freshwater diversion structure at Violet, could be more difficult to implement than under Alternative 1. For example, without a structure in the MRGO channel, a much larger freshwater diversion would be required at Violet, which would increase cost significantly and decrease the ability to control desired environmental results within the greater Pontchartrain Basin. Assessment of this alternative also raised questions about whether or not the alternative could be classified as comprehensive and therefore responsive to the Congressional direction.

## **S.16 RATIONALE FOR SELECTING RECOMMENDED PLAN**

Alternative 1 has been selected as the Recommended Plan. The Recommended Plan is consistent with the study authority as described in Public Law 109-234 and explained in House Report 109-494 (see Section 1.2). The Recommended Plan also fulfills the study purpose and need (see Section 1.5) and the study goals and objectives (see Section 1.6) which are derived from the study authority. The Recommended Plan presents a comprehensive plan to de-authorize all navigation on the MRGO channel from the GIWW to the Gulf of Mexico; proposes that navigation function be maintained outside of the GIWW to Gulf of Mexico portion of the channel; proposes plan features; and proposes existing project features to be de-authorized or to remain authorized (see Section 6.1). The Recommended Plan minimized the costs associated with the disposition of the de-authorized project while best meeting the criteria of completeness, effectiveness, efficiency and acceptability. . The Recommended Plan results in \$7.8 million in net annual benefits, reduces negative environmental impacts in the study area through reductions in erosion and salinity, and may reduce the size of the “H-A zone” in Lake Pontchartrain. The Recommended Plan was developed in consultation with St. Bernard Parish, the State of Louisiana, and affected Federal Agencies, as well as other stakeholders and the general public (see Section 4). While the Recommended Plan does not propose hurricane or storm damage reduction features, the Recommended Plan was identified because it is more compatible with the goals of LACPR than Alternative 3. The Recommended Plan is acceptable, complete and effective as evaluated under the P&G criteria. Although the plan is not the least cost alternative, it is recommended because it fully meets three of the four P&G criteria while the cost alternative only fulfills the efficiency criteria. Additionally, the Recommended Plan is consistent with all of the alternatives being evaluated under LACPR and can be fully integrated into any of the LACPR plans under consideration. The Recommended Plan provides for reduced salinities in areas targeted for restoration under LACPR, LCA, CWPPRA, as well as, restoration efforts of other Federal and State agencies. Reduction in salinities will improve the effectiveness of, and likely reduce the cost of, ecosystem restoration measures planned for these areas. The MRGO Final Report and LEIS will be included in the LACPR Final Report. Specific features of the Recommended Plan are addressed in Section 6.

## **S.17 DESCRIPTION OF THE RECOMMENDED PLAN**

The project delivery team has developed detailed design and cost information for the recommended plan. Cost information presented for the Recommended Plan is based on

advanced design and therefore differs from the costs presented for Alternative 1 which were based on preliminary design information. Advanced design information has been generated through the analysis of field engineering data recently collected at the proposed closure structure location. Field data includes bathymetric surveys and subsurface geotechnical borings. Engineering analysis of the information was used to develop design and cost information to a feasibility level of detail. This level of information was developed only for the recommended plan not the entire array of alternatives. This section of the report provides the feasibility level design and cost information. The team has not updated information in earlier parts of the report because the added information does not change plan selection. This assessment is based upon the initial screening of navigation alternatives and subsequent assessment that remaining alternatives involving rock would change proportionally with the recommended plan.

Under the Recommended Plan, that portion of the MRGO channel from mile 60 at the southern bank of the GIWW to the Gulf of Mexico would be de-authorized for all navigation use. The MRGO channel (mile 66 – 60), the Michoud Canal Project, and the IHNC Lock Replacement Project would remain authorized. As part of the Plan, a total closure structure would be built of rock downstream of the south ridge of Bayou La Loutre in St. Bernard Parish, Louisiana (see Figure S.3). The structure would connect the two sides of the ridge, a distance of approximately 950 feet. The top width of the structure would be 12 feet and the elevation would be + 7 feet NAVD 88. Following completion of construction, the elevation of the structure will not be less than +4 feet NAVD 88. The side slopes of the structure would be 1 V to 2 H and the bottom width would be 450 feet. Quarry run “A” stone would be used to increase fines in the mix and minimize voids and water exchange. The structure would cover nearly 10 acres of water bottoms. Overbank extensions would be necessary on either side of the structure to constrict flow during high water events and prevent flanking of the channel closure. These overbank tie-ins would be approximately 50 feet wide and 7 feet high and extend inshore approximately 150 feet on the south bank and approximately 250 feet on the north bank. Construction of these overbank extensions will impact 0.5 acres of marsh on the north bank and 0.3 acres of scrub shrub on the south bank. Approximately 391,500 tons of stone would be used. A barge-mounted dragline would be used to place the rock. Every effort would be made to construct the total closure structure during the May through September window when Gulf sturgeon are in the rivers and not the estuaries.

The Federal government would construct the total closure structure. Navigation aids and channel markers would be considered for removal at the discretion of the United States Coast Guard. Existing bank stabilization features and jetties would be de-authorized but remain in place. Maintenance of the existing bank stabilization features and possible reapplication or realignment of the jetties could be investigated under LACPR or other appropriate authorities. Disposal easements and perpetual channel easements not required for continued operation and maintenance of authorized segments of the MRGO Project would be released. Other property not required for continued operation and maintenance of authorized segments of the MRGO Project would be disposed of in accordance with the Federal Property and Administrative Services Act of 1949, as amended, 40 U.S.C. § 471 et seq. A non-Federal sponsor would be required to acquire

any real estate necessary to implement the Recommended Plan and for operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) of the total closure structure. In addition, the non-Federal Sponsor would be required to hold and save the Government free from all damages arising from the construction, operation, maintenance, repair and replacement of the total closure structure, except for damages due to the fault or negligence of the Government or its contractors.

The construction costs of the total closure structure would be 100% Federal (except real estate) and the OMRR&R costs of the total closure structure would be 100% non-Federal. The estimated total project construction cost of the rock total closure structure is \$24,684,150 based on October 2006 price levels. Total average annual costs for the Recommended Plan (including OMRR&R costs and the costs to navigation) are estimated to be approximately \$5.1 million and total average annual benefits are estimated to be \$12.5 million (savings derived from not dredging the authorized channel). This results in an estimated total average annual net benefit of \$7.4 million. Estimated construction costs, annual costs and benefits, and Federal/non-Federal cost breakdown are presented in Tables S.1 through S.4. Costs presented in these tables are based on advanced design of the Recommended Plan.

Additionally, the Recommended Plan contemplates that measures undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234 will be implemented conditioned on the non-Federal sponsor for those measures assuming responsibility of OMRR&R of those measures at 100% non-Federal cost.

**Table S.1 Project First Costs**

**Project First Costs  
MRGO Deep-Draft De-authorization Study  
Closure Structure  
(October 2006 Price Levels;  
Based on Advanced Design of Recommended Plan)**

<u>Construction Items</u>	<u>Cost (\$)</u>
Mobilization and Demobilization	85,000
Stone Placement - Channel Proper	11,773,000
Stone Placement - Overbank Tie-Ins	403,650
Crushed Stone Blanket	3,400,000
Geotextile Separator Fabric	31,500
Clearing and Grubbing (Overbank)	11,000
Engineering and Design	863,700
Construction Management	1,256,300
Real Estate*	1,401,000
Removal of Aids to Navigation	700,000
Contingencies	4,759,000
<b>Total Project Construction Costs</b>	<b>24,684,150</b>

\*Of the total Real Estate costs, \$21,000 are associated with acquisition of real estate rights necessary for the construction of the closure structure. For an explanation of additional costs, see Appendix E.

**Table S.2 Equivalent Annual Benefits and Costs**

**Equivalent Annual Benefits And Costs  
MRGO Deep-Draft De-Authorization Study  
Closure Structure  
(October 2006 Price Level, 50-Year Period of Analysis, 4.875 Percent Discount Rate,  
Based on Advanced Design of Recommended Plan)**

<u>Investment Costs:</u>		
Total Project Construction Costs	\$24,684,150	
Interest During Construction	452,000	
Total Investment Cost	\$25,136,150	
 <u>Average Annual Costs:</u>		
Interest and Amortization of Initial Investment	\$ 1,264,000	
Deep-Draft Transportation Cost	2,500,000	
Shallow-Draft Transportation Cost	1,200,000	
OMRR&R	172,000	
Total Average Annual Costs	\$5,136,000	
 Average Annual Benefits	 \$12,500,000	
Net Annual Benefits	\$ 7,364,000	
Benefit-Cost Ratio		2.4 to 1
Benefit-Cost Ratio (computed at 7%)*		2.3 to 1

\*Per Executive Order 12893

**Table S.3 Economic Costs and Benefits of Recommended Plan**

**MRGO Deep-Draft De-Authorization Study  
Economic Costs And Benefits of Recommended Plan  
(October 2006 Price Level, 50-Year Period of Analysis, 4.875 Percent Discount Rate,  
Based on Advanced Design of Recommended Plan)**

<u>Item</u>	<u>Navigation</u>		<u>Total Costs</u>	
	<u>Allocated</u>	<u>Benefits</u>	<u>Allocated</u>	<u>Benefits</u>
	<u>Costs</u>		<u>Costs</u>	
<u>Investment Costs:</u>				
Total Project Construction Costs	\$24,684,150		\$24,684,150	
Interest During Construction	452,000		452,000	
Total Investment Cost	\$ 25,136,150		\$ 25,136,150	
<u>Average Annual Costs:</u>				
Interest and Amortization of Initial Investment Deep-Draft	\$1,264,000		\$1,264,000	
Transportation Cost Shallow-Draft	2,500,000		2,500,000	
Transportation Cost OMRR&R	1,200,000		1,200,000	
	172,000		172,000	
Total Average Annual Costs	\$ 5,136,000		\$ 5,136,000	
Average Annual Benefits		\$ 12,500,000		\$ 12,500,000
Net Annual Benefits		\$ 7,364,000		\$ 7,364,000
Benefit-Cost Ratio		2.4 to 1		2.4 to 1
Benefit-Cost Ratio (computed at 7%)*		2.3 to 1		2.3 to 1

\*Per Executive Order 12893

**S.18 ISSUES TO BE RESOLVED**

Implementing the Recommended Plan would result in the abandonment of channel features constructed for purposes of shoreline protection, levee protection, and channel protection. These features include jetties in the offshore segments of the channel in Breton and Chandeleur Sounds, and foreshore protection segments along the portion of the Chalmette Loop Levee fronting the MRGO, and foreshore protection in various locations on the north bank of the channel fronting wetlands areas. Due to geologic conditions and the elimination of maintenance authority, these features are predicted to subside below the water line resulting in diminished functional performance against wave energies.

**Table S.4 Federal and Non-Federal Cost Breakdown**

<b>MRGO Deep-Draft De-Authorization Study</b>				
<b>Federal and Non-Federal Cost Breakdown</b>				
<b>(October 2006 Price Level, 50-Year Period of Analysis, Based on Advanced Design of Recommended Plan)</b>				
	<b>Responsibility</b>	<b>Federal</b>	<b>Non-Federal</b>	<b>Total</b>
<b>Project First Costs (Construction)</b>				
Mobilization and Demobilization	100% Federal	\$85,000		\$85,000
Stone Placement - Channel Proper	100% Federal	\$11,773,000		\$11,773,000
Stone Placement - Overbank Tie-Ins	100% Federal	\$403,650		\$403,650
Crushed Stone Blanket	100% Federal	\$3,400,000	-	\$3,400,000
Geotextile Separator Fabric	100% Federal	\$31,500	-	\$31,500
Clearing and Grubbing (Overbank)	100% Federal	\$11,000		\$11,000
Engineering and Design	100% Federal	\$863,700		\$863,700
Construction Management	100% Federal	\$1,256,300		\$1,256,300
Real Estate*	100% Non-Federal	\$125,000	\$1,276,000	\$1,401,000
Removal of Aids to Navigation	100% Federal	\$700,000		\$700,000
Contingencies	100% Federal	\$4,759,000		\$4,759,000
<b>Total Project First Costs</b>		<b>\$23,408,150</b>	<b>\$1,276,000</b>	<b>\$24,684,150</b>
<b>OMRR&amp;R</b>	100% Non-Federal		<b>\$7,860,000</b>	<b>\$7,860,000</b>
<b>Total Cost Share</b>		<b>\$23,408,150</b>	<b>\$9,136,000</b>	<b>\$32,544,150</b>

\*Of the total Real Estate costs, \$21,000 are associated with acquisition of real estate rights necessary for the construction of the closure structure. For an explanation of additional costs, see Appendix E.

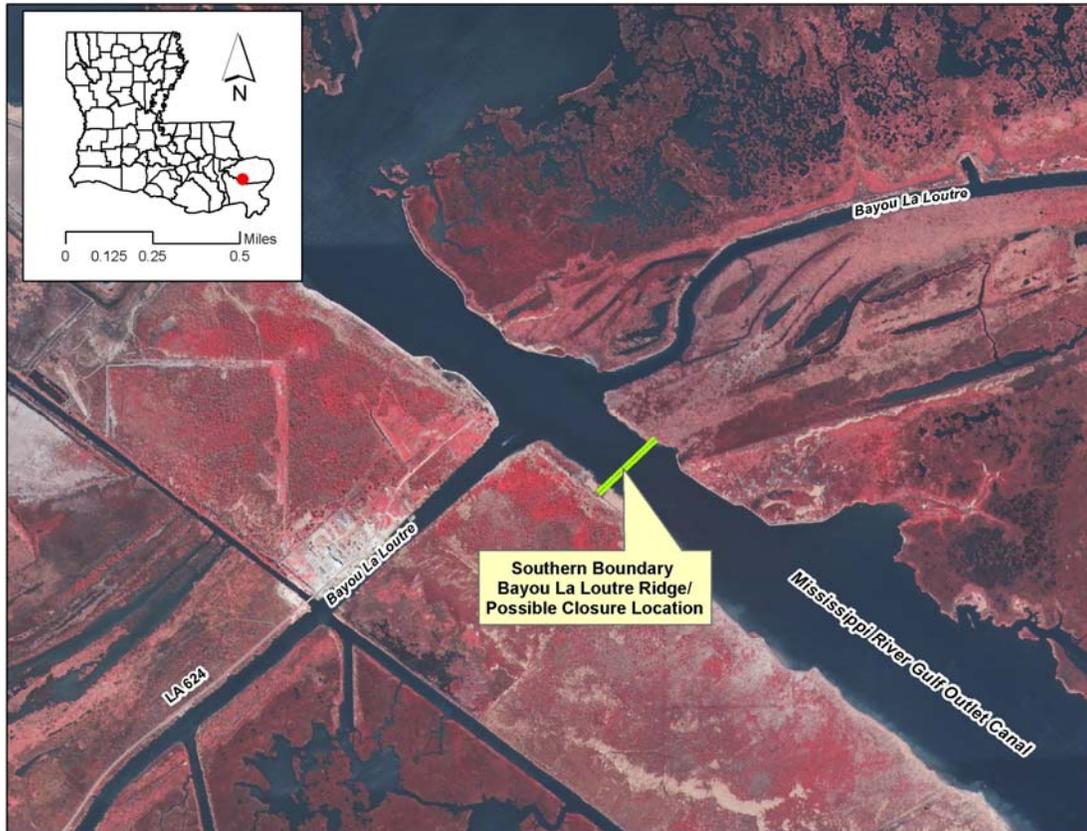
## **S.19 AREAS OF CONCERN AND CONTROVERSY**

Construction of the MRGO Project resulted in the conversion of marsh, wetland forest and shallow open water habitat (USACE 1999). Erosion causes additional acres to be lost each year along the MRGO channel (USACE 2004). Citizens are concerned about coastal erosion, populations of wildlife and fisheries, and increased salinity in area water bodies. Many members of the public also feel that the loss of wetlands exacerbated the flooding of St. Bernard Parish during Hurricane Katrina.

Many citizens of Orleans and St. Bernard Parishes firmly believe that the Inland Reach of the MRGO serves as a storm surge pathway during hurricanes. A number of reports concluded that the Inland Reach of the MRGO contributes very little to flooding when the surrounding marshes are inundated. Reports also indicate that to prevent storm surge in Lake Borgne from reaching the IHNC or GIWW Reach of the MRGO, flow through the GIWW Reach of the channel must be dramatically reduced or eliminated. The USACE is actively planning, designing and building numerous upgrades and new system components to increase the level of hurricane protection for the entire area. The connectivity between Lake Borgne and the GIWW Reach of the MRGO and IHNC is being addressed through efforts to provide comprehensive hurricane and storm protection through the Lake Pontchartrain and Vicinity Hurricane Protection project 100-year

protection effort. See Section 1.8 and Appendix D for further discussions on the MRGO and storm surge.

**Figure S.3 Bayou La Loutre Ridge, site of the Total Closure Structure**



Stakeholders in the navigation industry have expressed concerns that when the MRGO is de-authorized from the GIWW to the Gulf of Mexico, shallow-draft vessels would no longer be able to use the channel as an alternate route when the Inner Harbor Navigation Canal Lock is congested or inoperable. Industry members believe this could present a serious problem for fuel transport and movement of other vital commodities. In evaluating this concern the USACE determined that although this potential event would be very rare, it nonetheless warrants attention and efforts to avoid such a scenario. However, based upon the economics evaluation of this study, expenditures to construct and maintain a shallow-draft feature for MRGO traffic are not justified. As such, the USACE, navigation industry representatives, and leaders from St. Bernard Parish are willing to work together to identify suitable alternative routes to alleviate this potential issue.

Stakeholders in the shallow draft navigation industry have expressed concern that prolonged closure of the Inner Navigation Canal Association (IHNC) Lock with no alternate route available will cause significant income and employment impacts to businesses that rely on shipments traversing the IHNC Lock and that these impacts were

ignored in economic evaluations. However, as specified in USACE guidelines, effects on income levels and employment levels generally fall into the Regional Economic Development (RED) account. These effects are considered to be RED in nature because, 1) increases or decreases in income/employment levels in one region will tend to be offset by increases or decreases in income/employment levels in another region resulting in a minimal net effect to the nation, and, 2) losses in one region that are not captured by another region can often be made up at a later date in the initially impacted region. This is not to say that the income/employment impacts can not be National Economic Development (NED) in nature, or that the impacts are insignificant at a regional level, but that from a national perspective the net impacts are likely to be small. Given that this is the case and that NED impacts take priority over RED impacts, the economic evaluation performed for the MRGO De-Authorization Study chose not to quantify the income/employment implications of the various plans.

Some groups are concerned that the replacement of the IHNC Lock is somehow directly connected to the de-authorization of MRGO to deep-draft navigation. Although these projects are related, the Recommended Plan is in no way dependent on the replacement of the lock or vice versa.

Some vessels may choose to utilize Bayou La Loutre, a federally-authorized channel, to access Chandeleur Sound and numerous waterways in the Biloxi Marshes following installation of a total closure structure on the MRGO channel. Bayou La Loutre has a controlling depth of six feet limiting vessels to recreational and commercial fishing boats, small tugs and barges, and oil field service boats. Although the potential number of vessels that would use Bayou La Loutre and the potential impacts of diverted vessel traffic along the waterway cannot be quantified at this time, the overall environmental benefits of the Recommended Plan will far outweigh any potential impacts to Bayou La Loutre. Vessel traffic and shoreline erosion rates are monitored along Bayou La Loutre and other Louisiana waterways under private, state, and Federal efforts to implement coastal restoration plans.

This investigation was conducted using a collaborative approach that included multiple stakeholder groups and the general public. A number of plan options, issues, and concerns were raised during study meetings with stakeholders. In addition, during preparation of the final study report the Corps of Engineers opened a 45-day public comment period as part of its compliance with the National Environmental Policy Act. All of the comments received during that period have been addressed. However, an issue of regional significance, the interconnection of the MRGO with other vital waterways in southeast Louisiana, remained unresolved in the Tentatively Selected Plan.

The waterways of southeast Louisiana form a maritime transportation network facilitating the efficient shipment of goods and materials and linking interdependent industries. The Inner Harbor Navigation Canal is a key transition point within this system allowing east-west traffic on the GIWW to cross the Mississippi River and allowing maritime access to points north along the Industrial Canal and into Lake Pontchartrain and points east and southeast on the MRGO. The IHNC Lock was constructed in the 1920's and has been

authorized for replacement to better accommodate modern maritime traffic. Options to implement the lock replacement are currently being developed in a Supplemental Environmental Impact Statement. Occasionally the lock experiences multi-day delays associated with high use and more rarely the lock is closed to vessel traffic for prolonged maintenance. In the event of delay or closure, the MRGO currently serves as an important link in an alternative route enabling traffic to by-pass the IHNC Lock and continue to points along the GIWW in Louisiana and neighboring states across the Gulf coast. The route is especially important for the movement of fuel, energy, and chemical products. In the days following Hurricane Katrina, the MRGO alternative route played an important role in enabling GIWW traffic to by-pass the closed IHNC Lock and the MRGO provided emergency access to severely damaged areas in and around New Orleans on the east bank of the Mississippi River. However, the economic evaluation of deep draft and shallow draft commerce found no National Economic justification for continued Federal investment in an MRGO navigation channel.

Working with stakeholders the study team identified four alternative by-pass routes around the IHNC Lock that would not involve a fully open MRGO channel. In addition, the team identified an emergency plan that would allow temporary removal of the MRGO rock closure to allow vessel passage. However, none of the identified routes or options has been endorsed by navigation industry users. Varying reasons have been identified such as added travel time and expense and concerns about navigation safety raised by the U.S. Coast Guard. The routes deemed unsafe for navigation and those requiring new authority for construction dredging are not being pursued. Still, a long distance by-pass using the Mississippi-Ohio-Tennessee-Tombigbee route remains viable although obviously much less efficient. We recognize these concerns and have identified another option to reduce some of the risks associated with the recommended MRGO channel closure plan. This approach could entail sequencing a series of IHNC Lock maintenance works to be completed prior to implementing the MRGO closure project. Addressing these maintenance needs could improve the reliability of the IHNC Lock reducing the risks to the efficient operation of the waterborne transportation network.

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# **SECTION 1 INTRODUCTION**

## **1.1. FINAL REPORT TO CONGRESS AND LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT**

This Final Report to Congress and Legislative Environmental Impact Statement (LEIS) present the findings of a congressionally requested study on the de-authorization of deep-draft navigation on the Mississippi River-Gulf Outlet (MRGO) between the Gulf Intracoastal Waterway (GIWW) and the Gulf of Mexico. This document provides comprehensive documentation of the MRGO Deep-Draft De-authorization Study. Traditionally, a Report to Congress and LEIS would be produced as two separately bound documents. However, a single integrated document meets the requirements of the National Environmental Policy Act (NEPA) and the USACE decision-making process without duplication. The main table of contents includes asterisks for traditional NEPA required chapters and sections to allow ready access for those specifically interested in the NEPA compliance review.

The report organization and contents are intended to allow the reader to become familiar with the history of the MRGO Deep-Draft De-authorization Study. The information provided includes study purpose, background, and decision process. The document also describes the direct, indirect, and cumulative environmental effects attributable to alternative plans. Public involvement and agency coordination efforts are documented, as well as technical analyses. The document concludes with a detailed description of the Recommended Plan, which is to construct a total closure structure across the MRGO near Bayou La Loutre in one construction effort.

A Legislative Environmental Impact Statement (LEIS) is the detailed statement required by Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), to be included in a recommendation or report on a legislative proposal to the Congress. Preparation of a LEIS must conform to the requirements of the NEPA implementing regulations, codified at 40 CFR pts. 1500-1508, except that (1) there need not be a scoping process; and (2) the LEIS shall be prepared in the same manner as a draft statement, but shall be considered the “detailed statement” required by statute, 40 CFR § 1506.8(b).

## **1.2 STUDY AUTHORITY**

The U.S. Congress has directed the Secretary of the Army, acting through the Chief of Engineers, to develop a plan for de-authorization of deep-draft navigation for the Mississippi River-Gulf Outlet (MRGO) from the Gulf of Mexico to the Gulf Intracoastal Waterway (GIWW). The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234), reads in part:

*“...the Secretary of the Army, acting through the Chief of Engineers, utilizing \$3,300,000 of the funds provided herein shall develop a comprehensive plan, at full Federal expense, to de-authorize deep-draft*

*navigation on the Mississippi River-Gulf Outlet, Louisiana, extending from the Gulf of Mexico to the Gulf Intracoastal Waterway: Provided further, That, not later than 6 months after the date of enactment of this Act, the Secretary shall submit an interim report to Congress comprising the plan: Provided further, That the Secretary shall refine the plan, if necessary, to be fully consistent, integrated, and included in the final report to be issued in December 2007 for the Louisiana Coastal Protection and Restoration Plan.”*

House Report 109-494 provides a Congressional conference committee manager’s statement accompanying the legislative language further directing that:

*“The plan shall include recommended modifications to the existing authorized current use of the Outlet, including what navigation functions, if any, should be maintained and any measures for hurricane and storm protection. The plan shall be developed in consultation with St. Bernard Parish, the State of Louisiana, and affected Federal Agencies.”*

Congressional direction to prepare a deep-draft de-authorization plan for the MRGO also requires that the plan be fully consistent and integrated with the Louisiana Coastal Protection and Restoration (LACPR) plan. Development of the LACPR plan focuses on identifying a comprehensive plan for flood control, coastal restoration, and hurricane protection in south Louisiana. The future of the MRGO navigation channel is a key decision that affects directions on related projects in the area such as hurricane protection, ecosystem restoration, and navigation. Resolving questions about the future depth and use of the MRGO channel could provide a baseline for developing plans and designs for other related projects. The MRGO de-authorization plan is being integrated into ongoing work to develop and evaluate measures for the LACPR plan. Specific work to integrate the components of the MRGO plan with the LACPR plan includes storm surge modeling, environmental planning, and prioritization. Every effort has been made to accelerate completion of the MRGO Final Report and LEIS in accordance with the Congressional direction found in Title IV, Chapter 3, Section 4304 of the "U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007" (Public Law 110-28). The MRGO Final Report and LEIS will be transmitted to the Congress as soon as is practicable. The MRGO Final Report and LEIS will also be included in the LACPR Final Report.

At the time this report was being released for State and Agency review, the Water Resources Development Act of 2007 (WRDA 2007) became law expanding the scope of the study authority provided by Public Law 109-234 to include ecosystem restoration. In addition, pursuant to WRDA 2007 Section 7013, upon submission of the final report to Congress, the MRGO from the Gulf of Mexico to Mile 60 at the southern bank of the GIWW is no longer authorized. Section 7013 also authorizes the Secretary of the Army to carry out a plan to close the MRGO and to restore and protect the ecosystem substantially in accordance with the final report subject to the Secretary’s determination that the plan is cost-effective, environmentally acceptable, and technically feasible. This

report preliminarily addresses the ecosystem restoration requirements of WRDA 2007; however, a supplemental report to completely address the ecosystem restoration requirements of WRDA 2007 will be submitted at a later date.

WRDA 2007 Section 7013 is provided below in its entirety:

*SEC. 7013. MISSISSIPPI RIVER-GULF OUTLET.*

*(a) DEAUTHORIZATION.—*

*(1) IN GENERAL.—Effective beginning on the date of submission of the plan required under paragraph (3), the navigation channel portion of the Mississippi River-Gulf Outlet element of the project for navigation, Mississippi River, Baton Rouge to the Gulf of Mexico, authorized by the Act entitled “An Act to authorize construction of the Mississippi River-Gulf outlet”, approved March 29, 1956 (70 Stat. 65) and modified by section 844 of the Water Resources Development Act of 1986 (100 Stat. 4177) and section 326 of the Water Resources Development Act of 1996 (110 Stat. 3717), which extends from the Gulf of Mexico to Mile 60 at the southern bank of the Gulf Intracoastal Waterway, is not authorized.*

*(2) SCOPE.—Nothing in this paragraph modifies or deauthorizes the Inner Harbor navigation canal replacement project authorized by that Act of March 29, 1956.*

*(3) CLOSURE AND RESTORATION PLAN.—*

*(A) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a final report on the deauthorization of the Mississippi River-Gulf outlet, as described under the heading “INVESTIGATIONS” under chapter 3 of title II of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (120 Stat. 453).*

*(B) INCLUSIONS.—At a minimum, the report under subparagraph (A) shall include—*

*(i) a plan to physically modify the Mississippi River-Gulf Outlet and restore the areas affected by the navigation channel;*

*(ii) a plan to restore natural features of the ecosystem that will reduce or prevent damage from storm surge;*

*(iii) a plan to prevent the intrusion of saltwater into the waterway;*

*(iv) efforts to integrate the recommendations of the report with the program authorized under section 7003 and the analysis and design authorized by title I of the Energy and Water Development Appropriations Act, 2006 (119 Stat. 2247); and*

*(v) consideration of—*

*(I) use of native vegetation; and*

*(II) diversions of fresh water to restore the Lake Borgne ecosystem.*

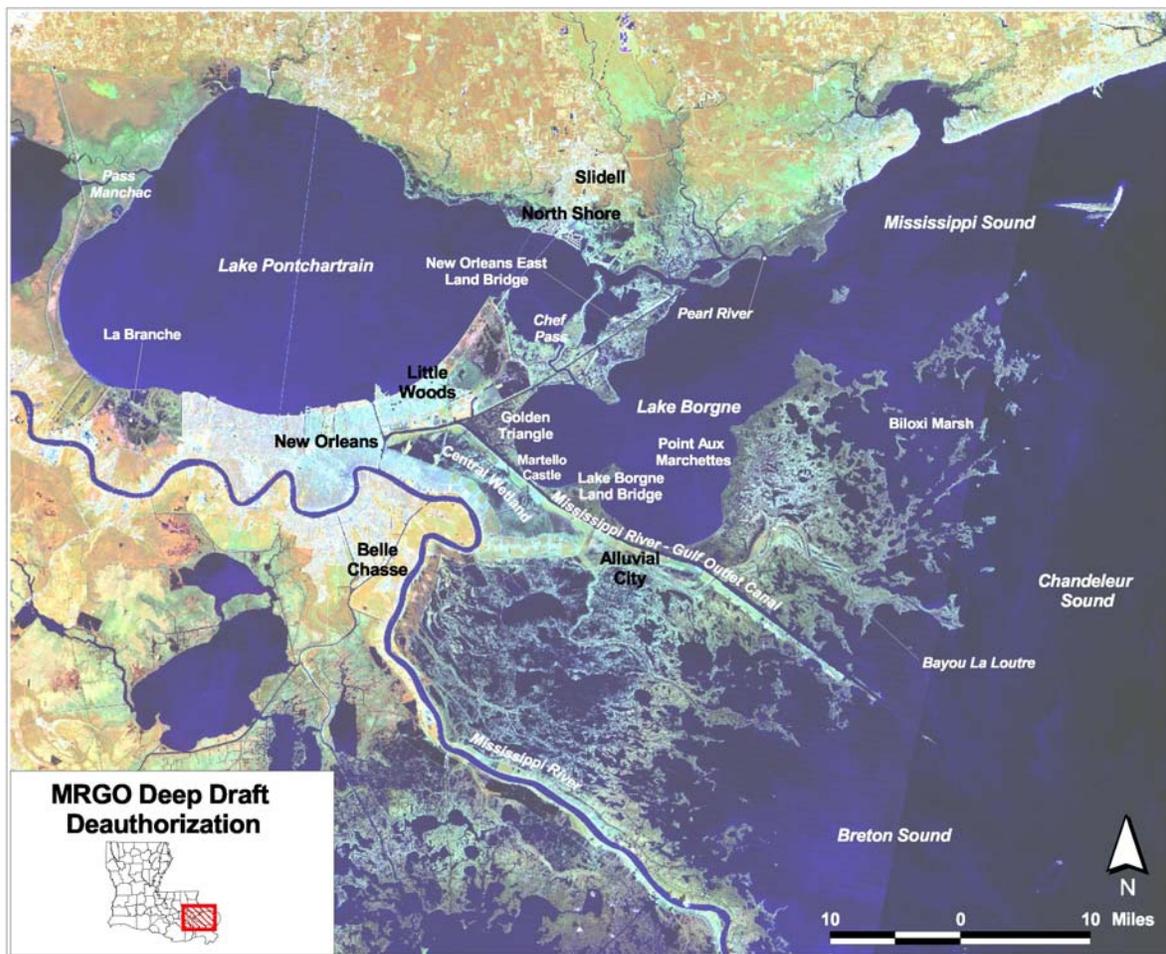
*(4) CONSTRUCTION.—The Secretary shall carry out a plan to close the Mississippi River-Gulf Outlet and restore and protect the ecosystem substantially*

*in accordance with the plan required under paragraph (3), if the Secretary determines that the project is cost-effective, environmentally acceptable, and technically feasible.*

### 1.3 PROJECT AREA DESCRIPTION

The project area is located in southeastern Louisiana in St. Bernard, Orleans, Jefferson, St. Tammany, St. Charles, St. John the Baptist and Tangipahoa Parishes. It covers the Middle and Lower Pontchartrain Basin. The Middle Basin consists of Lake Pontchartrain with its adjacent cities and towns and surrounding wetlands. The Lower Basin consists of Lake Borgne, MRGO, Chandeleur and Breton Sounds and the surrounding wetlands. (Figure 1.1)

**Figure 1.1 Project Area**



Southeast Louisiana contains numerous waterways that are important for domestic and international commerce. The Mississippi River is the dominant route in a complex interconnected system. Five ports are located on the Mississippi River between New Orleans and Baton Rouge. These facilities handle inland traffic bringing products from interior states for export. International vessels pick up and deliver goods, materials, and

passengers. The Mississippi River is connected to other waterways through locks at Harvey Canal, Algiers, and the Industrial Canal. These locks provide transit points for traffic movements on the GIWW. In addition, the lock at the Industrial Canal connects to the MRGO deep-draft channel, the shallow-draft GIWW, and into Lake Pontchartrain. Another connection is available near the mouth of the Mississippi River at Baptiste Collette Bayou which provides a link to the MRGO across Breton Sound (see Figure 1.2).

#### **1.4 BACKGROUND ON THE MRGO**

The MRGO provides a shorter navigation route from the Gulf of Mexico to the Port of New Orleans tidewater facilities compared to using the Mississippi River to access the port. Construction of the MRGO channel began in 1958 and was completed in 1968. The channel extends from the Inner Harbor Navigation Canal (IHNC) in New Orleans to the 38-foot depth contour in the Gulf of Mexico (see Figure 1.2). The stretch contiguous with the GIWW is called the GIWW Reach (mile 66-60). Where the channel diverts from the GIWW and runs through wetlands for 37 miles is known as the Inland Reach (mile 60-23). The 23 miles through Breton and Chandeleur Sounds is called the Sound Reach (mile 23-0). The portion in the Gulf of Mexico is the Bar Channel (mile 0 to -9.4). All reaches of the MRGO navigation channel are authorized as a 36-foot deep, 500-foot bottom width waterway with the exception of the Bar Channel which is authorized as a 38-foot deep, 600-foot bottom width waterway.

MRGO channel construction was authorized by a March 29, 1956 Act of Congress (Public Law 84-455) as a modification to the existing project for Mississippi River, Baton Rouge to the Gulf of Mexico. The Act authorized construction of the MRGO Project substantially in accordance with the recommendation of the Chief of Engineers contained in House Document No. 245, 82<sup>nd</sup> Congress. In addition to recommending construction of the channel, the Chief of Engineers recommended the construction of (1) protective jetties at the entrance to the channel from the Gulf of Mexico; (2) a permanent retention dike through Chandeleur Sound and a wing dike along the islands as required; (3) a turning basin with a project depth of 36 feet Mean Low Gulf (MLG), a width of 1,000-feet and a length of 2,000 feet at the junction of the new channel and the Inner Harbor Navigation Canal; and (4) a highway bridge with approaches to carry Louisiana State Highway 61 over the channel. All of these features were constructed, with the exception of the permanent retention dike through Chandeleur Sound and the wing dike along the islands.

Public Law 84-455 also authorized replacement of the existing IHNC Lock when economically justified. In 1968, the River and Harbor Act (Public Law 90-483) authorized the Michoud Canal Project as a modification of the MRGO Project. The Michoud Canal Project authorized a deep-draft navigation channel in the GIWW and Michoud Canal by enlargement to a depth of 36 feet over a bottom width of 250 feet from the MRGO channel to and including a turning basin 800 feet square at the north end of the Michoud Canal. The Michoud Canal Project was constructed; however, the IHNC Lock has not yet been replaced.

The Federal government is responsible for constructing, operating, and maintaining all features of the MRGO Project, including the Michoud Canal Project, with the exception of the highway bridge and its approaches, which is owned, operated, and maintained by non-Federal entities. The Port of New Orleans, the non-Federal project sponsor, is responsible for furnishing free of cost to the Federal government all lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) required for construction and maintenance of the MRGO Project.

When the MRGO Project was built approximately 3,150 acres of marsh, 100 acres of wetland forest and 830 acres of shallow open water were converted to the deep water navigation channel between the GIWW and the Gulf of Mexico. The dredge material from channel construction was placed in a disposal area that was about 4,000 feet wide in most places and immediately southwest of the channel. The material in this disposal area was piled about 10 feet high and covered about 12,440 acres of marsh, 1,410 acres of wetland forest and 3,920 acres of shallow open water (USACE 1999).

It is estimated that habitat shifts caused by saline waters brought in by the MRGO might have caused the following in areas adjacent to the MRGO: 3,350 acres of fresh/intermediate marsh and 8,000 acres of cypress swamp converted to brackish marsh and 19,170 acres of brackish marsh and swamp became saline marsh (USACE 1999). Bank erosion along the MRGO has been estimated to occur at rates of between 27 and 38 feet per year on the Inland Reach (USACE 2004). Between 1964 and 1996, 5,324 acres of marsh have been lost adjacent to the MRGO channel (mile 66 to 21).

Operation and maintenance of the MRGO channel has required the construction of additional project features. Bank stabilization measures, also called foreshore protection, have been constructed along several reaches of both the north and south banks of the GIWW and Inland Reaches to prevent sloughing of the bank into the channel and to protect adjacent wetlands and levees. Bank stabilization measures exist in the following locations: 1) MRGO north bank (Miles 66-60, Miles 56 - 50.5, Miles 43 – 41, Miles 37.2 - 36.5, Miles 36.1 - 35.6, Miles 33.8 - 32.6), and 2) MRGO south bank (Miles 66-60, Miles 60 - 47, Articulated Concrete Mattress (ACM) Miles 38.9 - 38.5 and 37.3 to 36.5). In addition, Miles 23.2 to 20.8 of the north and south jetties provide foreshore protection for adjacent wetlands.

Figure 1.2 Mississippi River-Gulf Outlet Area.



Many disposal sites have been designated for maintenance of the MRGO Project. These include numerous upland disposal sites and beneficial use sites for wetlands restoration and nourishment. Dredged material was used beneficially from 1985 to 2003. An average of about 16 acres per year was created in the Inland Reach. Shallow open water areas on the north and south side of the jetties have been used for the placement of dredged material in a manner conducive to wetland creation. An average of about 17 acres per year was created behind the jetties. Dredged material has also been placed at an offshore feeder berm to nourish Breton Island and in shallow open water immediately adjacent to Breton Island to restore barrier island habitat destroyed by erosion and storms. About 21 acres per year was created on Breton Island. In the area behind the south jetty, LDNR has required disposal to be placed as point sources in an effort to create marsh. LDNR has also requested that point disposal areas be used at two-mile intervals across Breton Sound to attempt to create islands. These areas have been used, but no islands have been created. There is also an approximately 5,000 acre EPA-designated Ocean Dredged Material Disposal Site (ODMDS) located parallel to and south of the channel from mile 4 to mile -10. Only the portion from mile -4 to mile -10 has been recently used for disposal.

The MRGO Project features which have been discussed in the paragraphs above are illustrated on Figures 1.3, 1.4, 1.5 and 1.6.

Direct costs of construction, operation, and maintenance of the MRGO have been funded by the Federal government. These direct costs have totaled over \$580 million since 1958.

The average annual operations and maintenance expenditures for the MRGO were \$12.5 million (in 2000 dollars). However, following tropical storms and hurricanes, supplemental expenditures have often been required to return the MRGO to the authorized dimensions. Since 1998, the \$12.5 million has not allowed for dredging of the channel to its full-authorized dimensions. The GIWW Reach has not been dredged since 1998. From 1998 to 2005, the Inland Reach was maintained to a minimum 300-foot bottom width; the Sound Reach to a minimum 450-foot bottom width; and the Bar Channel to a minimum 500-foot bottom width. There has been no channel maintenance dredging in any reach of the MRGO since Hurricane Katrina in 2005.

Sections of the MRGO experienced severe shoaling during Hurricane Katrina, leading to a current controlling channel depth of approximately 22 feet. The estimated cost to return the channel to authorized dimensions (36 feet deep by 500 foot bottom width; 38 feet deep by 600 foot bottom width in Bar Channel) is \$130,444,870 based on October 2006 price levels.

However, as discussed previously, for the past several years prior to Hurricane Katrina the channel has been maintained to reduced dimensions in some reaches. The estimated cost to return the channel to 36 feet deep by 300 foot bottom width in all reaches is \$62,380,000 based on October 2006 price levels. For this de-authorization study, although no current plans exist to dredge the MRGO, it is important to estimate these costs for comparison purposes in evaluating future alternatives for modifying the channel.

After Hurricane Katrina, the U.S. Congress passed two laws providing funds for emergency repairs or authorizing other actions related to the MRGO navigation channel. Chapter 3, under Division B of Title I of the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (Public Law 109-148) provided \$75,000,000 for operation and maintenance (O&M) activities along the MRGO. Section 2304 of Chapter 3 in Title II of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234) clarified that these funds were to be used for "the repair, construction or provision of measures or structures necessary to protect, restore or increase wetlands, to prevent saltwater intrusion or storm surge." The USACE currently plans to use these funds for the following project features (see Figure 1.7):

- Shoreline protection along Lake Borgne from Doullut's Canal to Jahncke's Ditch (under construction, utilizes some funds from Public Law 109-62)
- 
- Shoreline protection along MRGO north bank Miles 44.4 – 39.9 (proposed, NEPA compliance complete)
- 
- Shoreline protection along Lake Borgne flanking the opening of Bayou Bienvenue (proposed, NEPA compliance incomplete)

- Shoreline protection along Lake Borgne flanking the opening of Bayou Dupre (proposed, NEPA compliance incomplete)
- Shoreline protection along Lake Borgne west of Shell Beach (proposed, NEPA compliance incomplete)
- Marsh creation through dedicated dredging within the Golden Triangle (proposed, NEPA compliance incomplete)
- Marsh creation through dedicated dredging at Shell Beach (proposed, NEPA compliance incomplete)

In addition to providing funds to develop a comprehensive plan to de-authorize deep-draft navigation on the MRGO, Public Law 109-234 authorized and provided \$350 million for construction of enhanced hurricane protection for the IHNC, and \$170 million to armor critical areas of the levee system. Efforts to plan and design these items are underway.

Figure 1.3 – MRGO Navigation Project

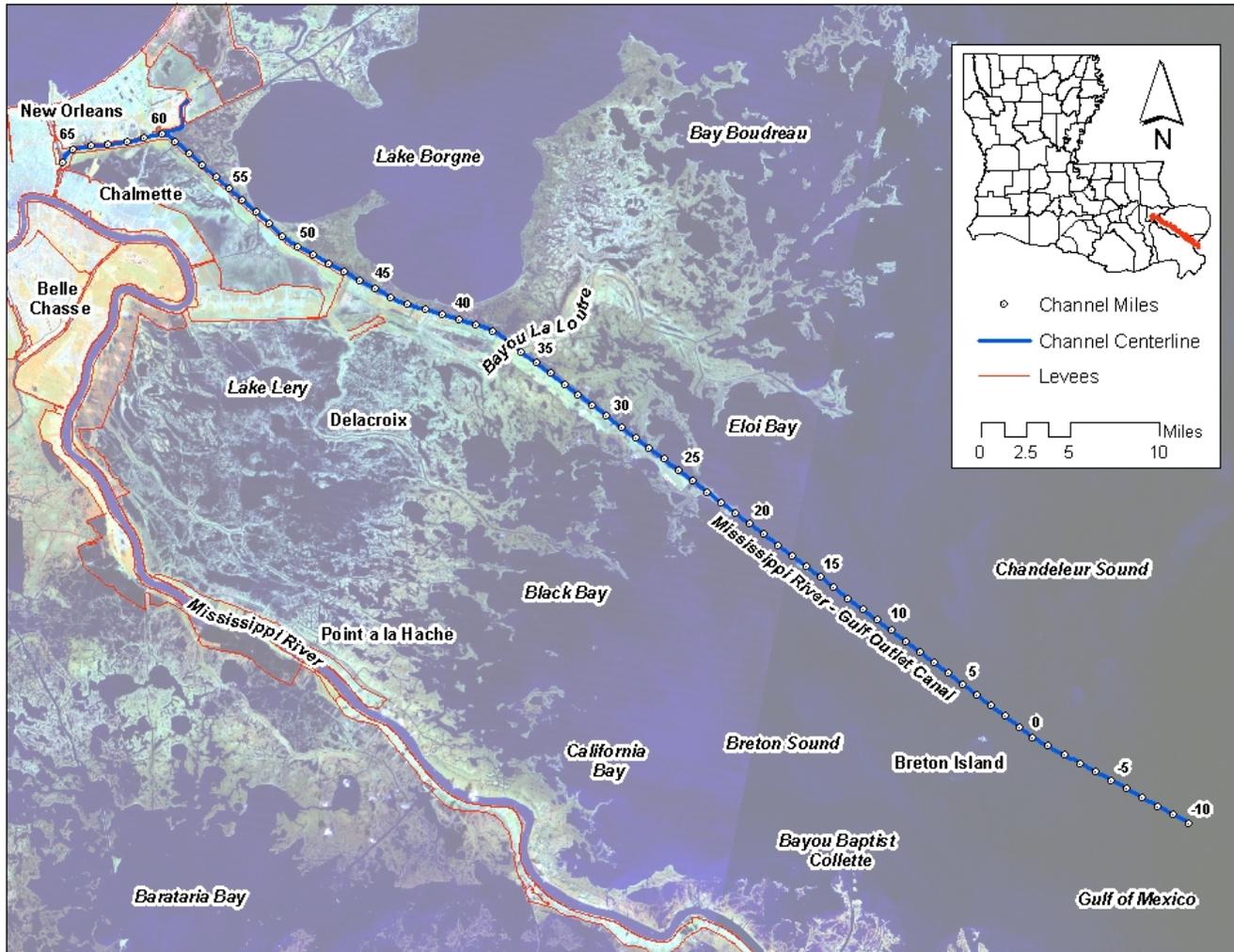


Figure 1.4 - MRGO Navigation Project – Mile 32 to Mile 66

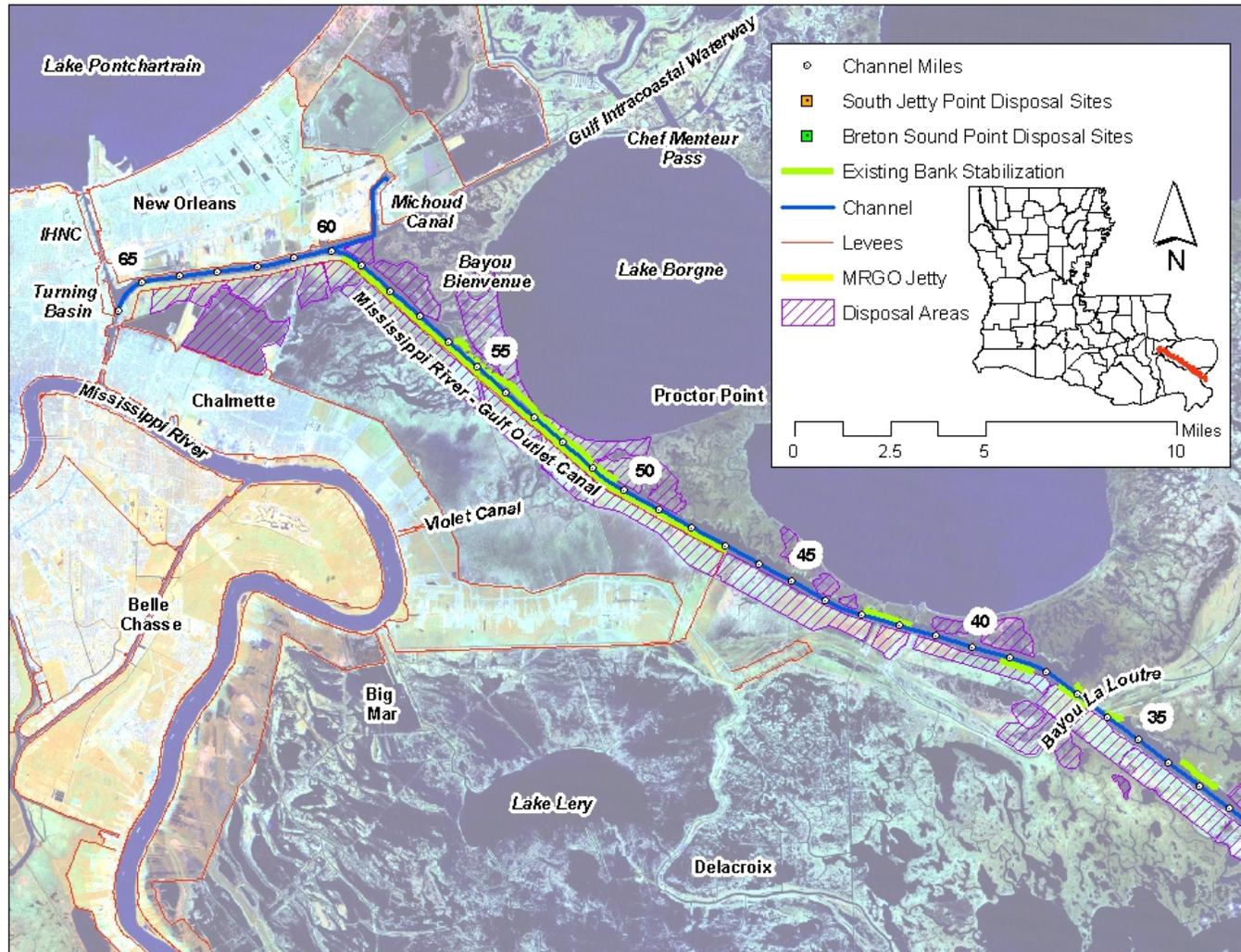


Figure 1.5 – MRGO Navigation Project – Mile 15 to Mile 50

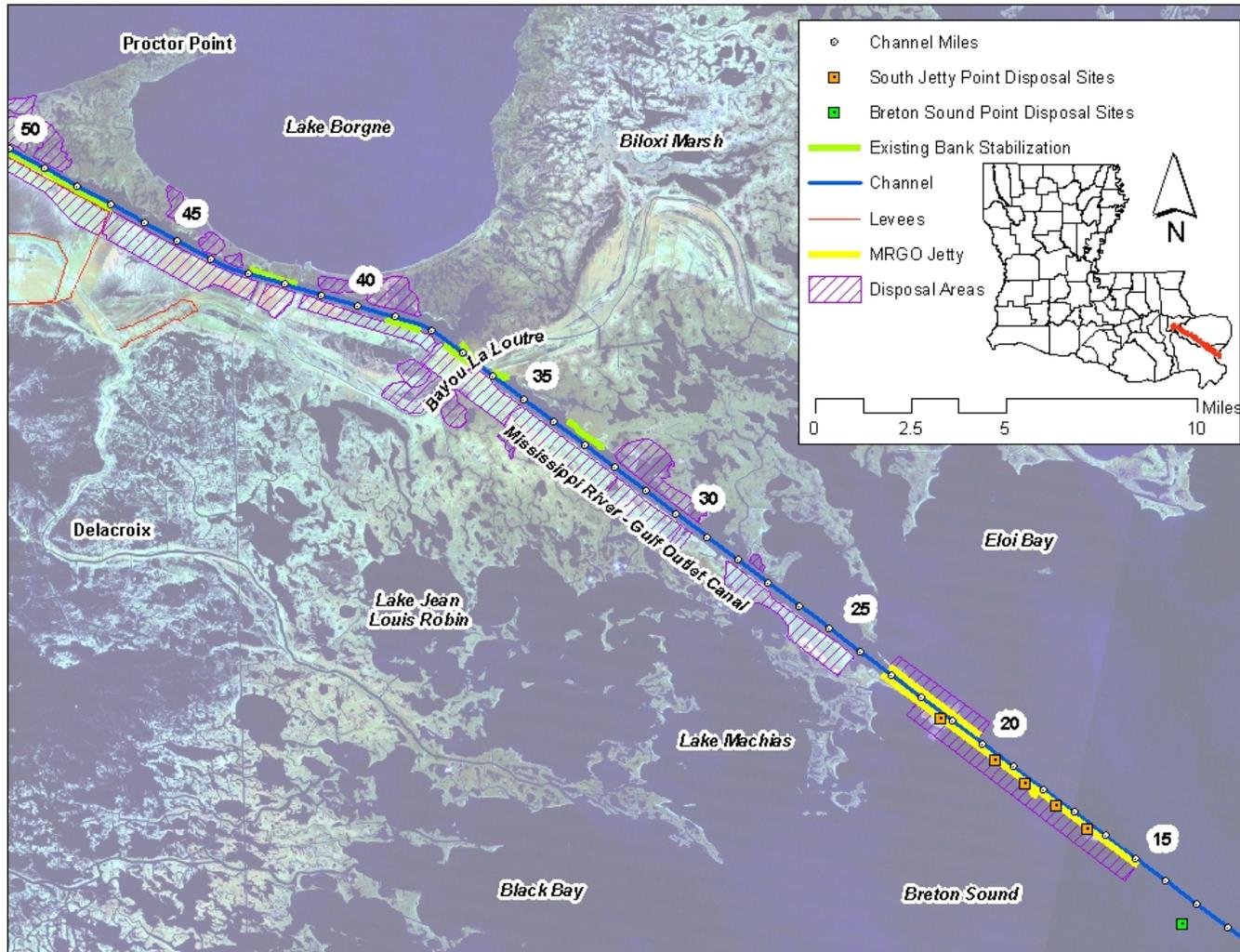


Figure 1.6 – MRGO Navigation Project – Mile -10 to Mile 15

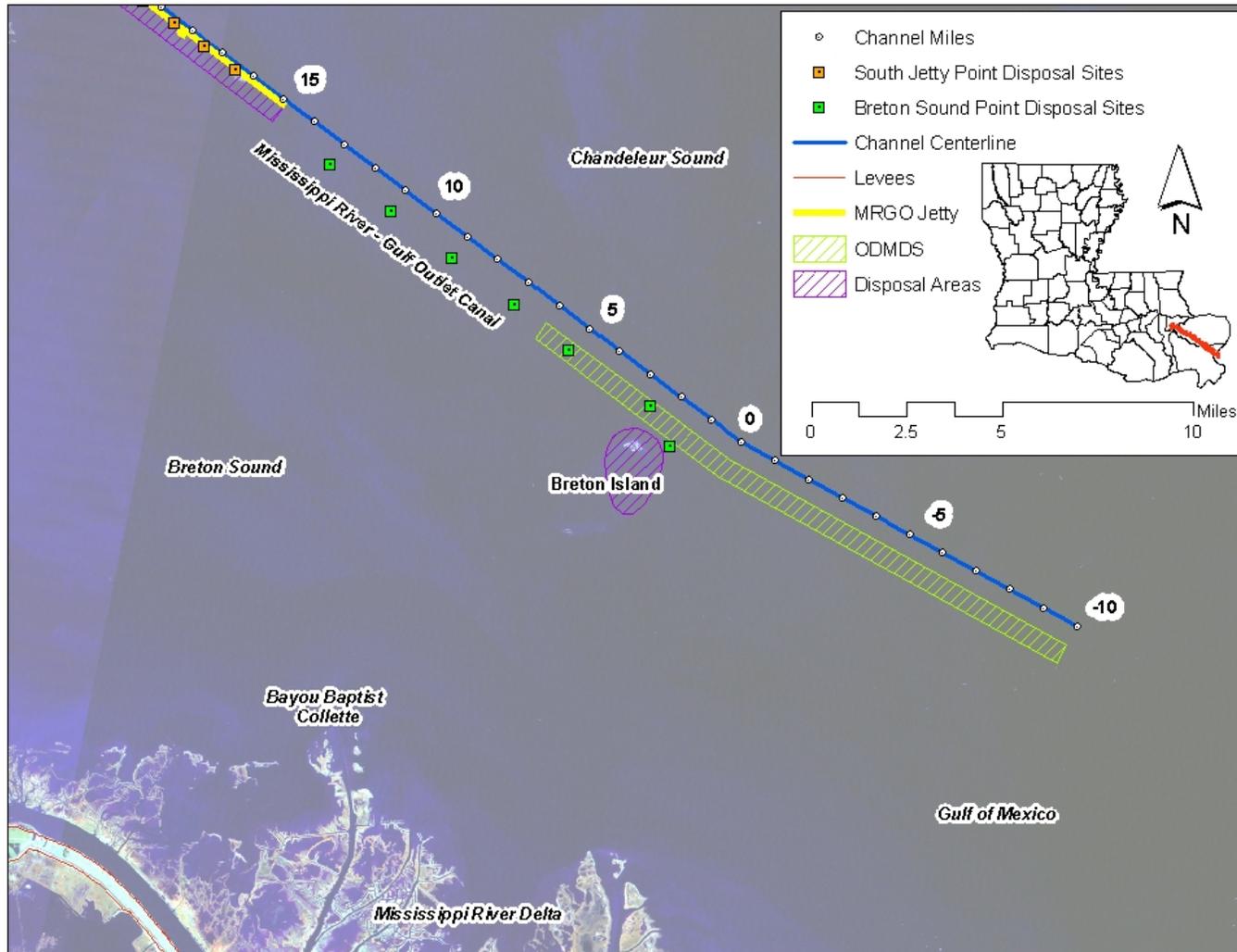
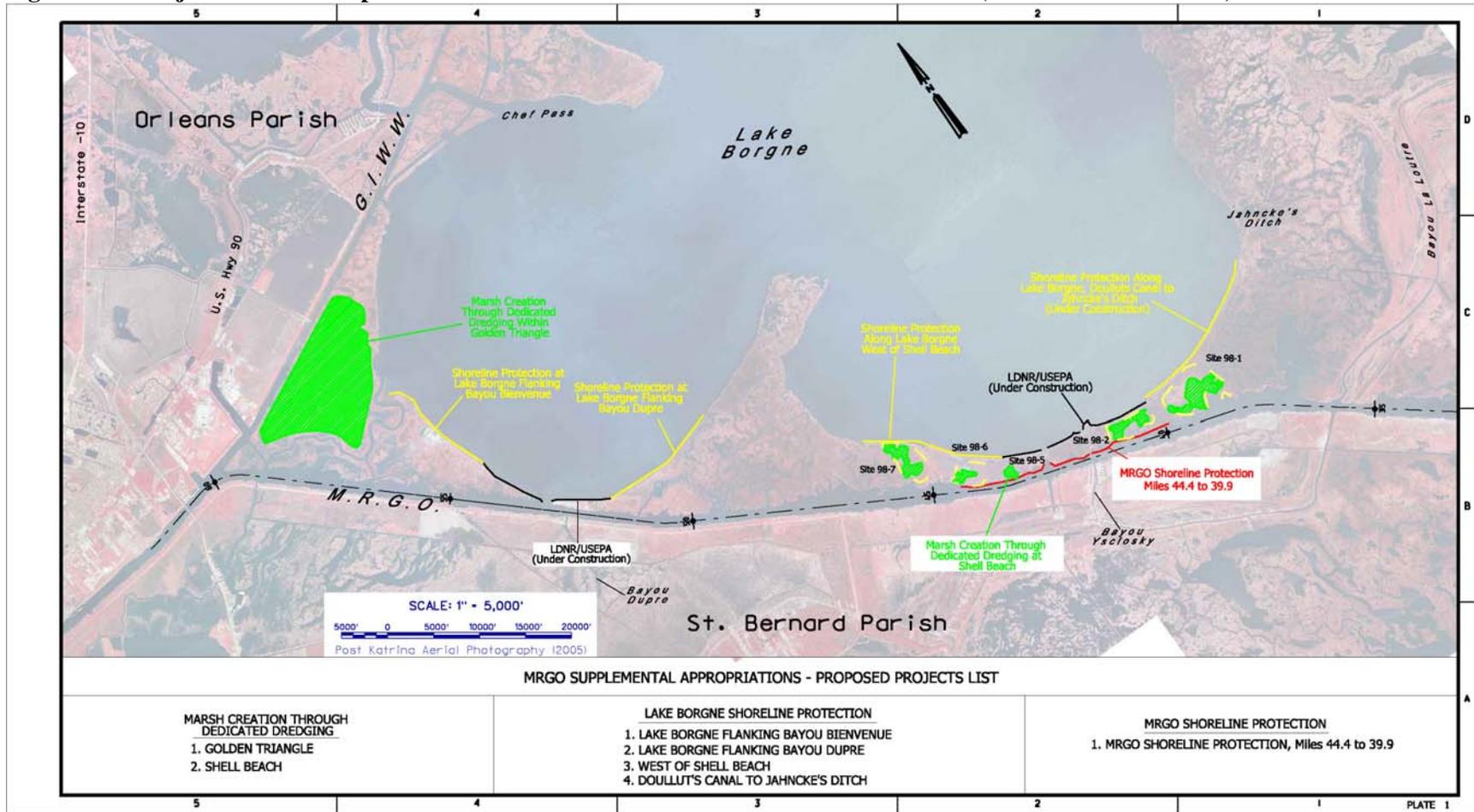


Figure 1.7 – Project Features Proposed under Public Law 109-148 and Public Law 109-234 (\$75M O&M Provision)



## **1.5 STUDY PURPOSE AND NEED**

The purpose of the study is to provide to Congress a comprehensive plan to de-authorize deep-draft navigation on the MRGO from the GIWW to the Gulf of Mexico. As requested in the authorizing legislation, an Interim Report to Congress was submitted in December 2006. The Interim Report to Congress stated that preliminary analysis indicated that the best plan was to close the MRGO from the GIWW to the Gulf of Mexico to both deep- and shallow-draft navigation. The MRGO comprehensive de-authorization plan must be consistent with ongoing design and planning efforts related to storm protection and coastal restoration and long-term planning related to the LACPR. In terms of design and planning, this MRGO de-authorization study and subsequent Congressional action defines the navigation future of the MRGO and thus enables other related projects to move forward with more certainty. The study also comports with the Chief of Engineer's "12 Actions for Change" calling for effectively implementing comprehensive systems approaches to water resources problems.

In a letter dated June 2, 2006 (see Appendix A), Governor Blanco of the State of Louisiana made a request for a "plan for closure, restoration of the extensive wetlands lost as a direct result of the MRGO, and the integration of this closure into the comprehensive hurricane protection plan." The USACE and State of Louisiana are partners on efforts to develop LACPR and the state is also a key stakeholder in the development of the MRGO de-authorization study.

## **1.6 STUDY GOALS AND OBJECTIVES**

The goals and objectives for the MRGO deep-draft de-authorization study are derived entirely from the Congressional authorizing language and accompanying committee report. Those goals and objectives are:

- Develop a comprehensive plan to de-authorize deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico
- Evaluate any navigation functions that should be maintained on the MRGO channel
- Identify measures for hurricane and storm damage reduction
- Refine the plan to be fully integrated and consistent with the Louisiana Coastal Protection and Restoration (LACPR) Final Report to Congress

## **1.7 PRIOR STUDIES, REPORTS AND PROJECTS**

Numerous studies, reports and projects have been conducted in the MRGO area. These studies represent the allocation of significant resources towards research provided by the Federal and state government and by private, non-profit foundations. Many of the recommendations have been enacted, such as bank stabilization projects. In this section, these studies are briefly summarized, as well as some of the Federal legislative actions that have made Federal funding possible.

### **1.7.1 Mississippi River and Tributaries (MR&T)**

This is a comprehensive project for flood control on the lower Mississippi River below Cape Girardeau, Missouri. The project was authorized as a result of the 1927 flood of the lower Mississippi River. The MR&T has four major elements: levees, floodways, channel improvement and stabilization, and tributary based improvements. The MR&T system controls and confines the river system before it reaches the coastal area. Several major outlets to the main stem of the river exist for the purposes of flood control during flood stages. The IHNC lock connects the Mississippi River to the IHNC, the MRGO, and Lake Pontchartrain.

### **1.7.2 Gulf Intracoastal Waterway (GIWW)**

The GIWW was authorized and construction was begun in the 1920's. The GIWW traces the U.S. coast along the Gulf of Mexico from Apalachicola Bay near Carrabelle, Florida to the Mexican border at Brownsville, Texas. From its intersection with the Mississippi River, the waterway extends eastward for approximately 376 miles and westward for approximately 690 miles. The GIWW and MRGO intersect and run contiguously from the Michoud area to the IHNC.

### **1.7.3 Bayous La Loutre, St. Malo and Yscloskey, 1945**

The River and Harbor Act of 26 August 1937, modified 2 March 1945 provides for a channel 5- by 40-feet deep from deep water in Lake Borgne to the shore line at the mouth of Bayou Yscloskey; a channel 6- by 40-feet deep from deep water in Lake Borgne through Bayous St. Malo, La Loutre and Eloi to deep water in Lake Eloi; a channel 5- by 30-feet in Bayou La Loutre between Hopedale and Bayou St. Malo. The length of improvements is 30 miles. The MRGO crosses Bayou La Loutre near Hopedale, Louisiana.

### **1.7.4 MRGO, Michoud Canal, Louisiana Project, 1968**

This project was authorized by the River and Harbor Act of 1968 (Public Law 90-483), substantially in accordance with the recommendations of the Chief of Engineers in Senate Document No. 97, 90<sup>th</sup> Congress. The Chief of Engineers recommended the modification of the existing MRGO Project to provide a deep-draft navigation channel in the GIWW and Michoud Canal by enlargement to a depth of 36 feet over a bottom width of 250 feet from the MRGO channel to and including a turning basin 800 feet square at the north end of the Michoud Canal.

### **1.7.5 Inner Harbor Navigation Canal Lock Replacement Project, 1956**

The IHNC and the IHNC lock were built by the Board of Commissioners for the Port of New Orleans during the late 1910s and early 1920s and placed into service in May 1923. The dimensions of the canal were 200 feet wide x 20 feet deep. Subsequent to the construction of the MRGO, sections of the IHNC were deepened to handle deep-draft ships and the Port of New Orleans constructed a container terminal on the IHNC. Because of the size of the existing IHNC lock, deep-draft shipping can use only the MRGO to access these facilities. The IHNC lock has dimensions of 31.5 feet deep x 75 feet wide x 640 feet long. During World War II, the Federal government leased the IHNC lock and assumed its maintenance and operation. The Federal government acquired the existing lock in 1986. Public Law 84-455 originally authorized construction of a new

lock and connecting channels or replacement of the existing IHNC lock when economically justified. The Water Resources Development Act (WRDA) of 1986 (Public Law 99-662) reauthorized replacement of the lock and established cost share requirements for the project. The WRDA of 1996 (Public Law 104-303) authorized implementation of a Community Impact Mitigation Plan for the project. An Evaluation Report and final EIS were prepared in 1997. The replacement lock will be 110 feet wide x 36 feet deep x 1,200 feet long. The construction period is estimated at 12 years. The cost (in October 2004 price levels) is \$764 million. The new lock has not been funded to capability levels since 1998. The project is presently on hold while a supplemental EIS is prepared.

#### **1.7.6 Lake Pontchartrain and Vicinity, Louisiana, Hurricane Protection Project, 1965**

This project was authorized by Section 204 of the Flood Control Act of 1965 (Public Law 89-298, as amended), substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 231, 89<sup>th</sup> Congress. The project currently provides for enlargement of hurricane protection levees along Lake Pontchartrain in Orleans, Jefferson, and St. Charles Parishes and in portions of Orleans and St. Bernard Parishes between the Mississippi River and the MRGO. The Chalmette Loop Levee and Citrus Back Levee segments of this project run parallel to the MRGO. The Act also authorized construction of the Seabrook Lock where the IHNC enters Lake Pontchartrain. Operation and maintenance of the Lock was to occur under the MRGO Project, but the Lock was never constructed.

#### **1.7.7 Mississippi River Outlets, Venice, Louisiana, 1968**

“Mississippi River - Additional Navigation Outlets in the Vicinity of Venice, Louisiana” was authorized by the River and Harbor and Flood Control Act of 1968 (Public Law 90-483) to enlarge the existing channels of Baptiste Collette Bayou and Grand-Tigre Passes to provide a 14 feet depth over a bottom width of 150 feet, with entrance channels in open water 16 feet deep over a bottom width of 250 feet. Jetties were authorized to the -6 foot contour. Channel construction was completed in 1978 and jetty construction completed in 1979. Baptiste Collette Bayou, in conjunction with the Mississippi River and MRGO, is an alternate route for shallow-draft traffic when the IHNC lock is closed.

#### **1.7.8 MRGO St. Bernard Parish, Louisiana, Reconnaissance Report, February 1988**

The USACE conducted a reconnaissance study of bank erosion and erosion-related problems. Economically justified and environmentally acceptable plans were identified and recommended for further detailed studies. No further action occurred.

#### **1.7.9 Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), 1990**

The Coastal Wetlands Planning, Protection and Restoration Act (Public Law 101-646) Program provides funding for projects that restore the coastal ecosystem. One such project, the MRGO Disposal Area Marsh Protection was approved in 1993 to repair damage to the back dike of the disposal area to preserve approximately 755 acres of wetland. The project was completed in 1999 and at a cost of \$342,611. Another project, the Lake Borgne and MRGO Shoreline Protection was approved in 2003 to construct an 18,500-linear-foot rock dike along the Lake Borgne shoreline, and a 14,250-linear-foot rock dike along the north

bank of the MRGO between Doullut's Canal and Lena Lagoon to preserve approximately 266 acres of wetland. Funding of \$1.4 million was approved, and the total estimated cost of the project is \$25,100,000. Construction for that project has not been approved to date. Additional coastal restoration projects involving shoreline protection and hydrologic restoration have been approved and constructed in the area.

#### **1.7.10 MRGO North Bank Foreshore Protection Evaluation, 1996**

This study concluded that providing hardened bank protection along portions of the north bank of the MRGO reduces shoaling rates, thereby decreasing the overall maintenance costs of the channel. The recommended plan was to construct, under authority of the O&M program, hardened bank protection in those reaches identified as being critical because of their high shoaling rates and the imminent loss of the buffering marsh between the MRGO and Lake Borgne.

#### **1.7.11 Coast 2050: Toward a Sustainable Coastal Louisiana, 1998**

The Louisiana Coastal Wetlands Conservation Task Force and the Wetlands Conservation & Restoration Authority prepared this plan for the Louisiana Department of Natural Resources. It addressed the problem of depletion of coastal land across Louisiana, including the particular problems of increases in salinity and erosion attributed to the MRGO, and recommended ecosystem management strategies designed to restore wetlands and prevent continued deterioration.

Ecosystem management strategies recommended in the plan in the vicinity of the MRGO are:

- Closure of the MRGO when alternative container port facilities on the Mississippi River are prepared;
- Stabilization of the entire north bank of the MRGO using dredged material behind rock dikes along a 37-mile reach;
- Constriction of breaches in the marshes between the MRGO and Lake Borgne, to reduce salinity in Lake Borgne and the Biloxi Marshes;
- Construction of a sill at Seabrook, to improve salinity in Lake Pontchartrain
- Further study of the 2,000-5,000 cfs freshwater diversion project at the Violet Canal;
- Use of dredged material from the MRGO to create marshes in South Lake Borgne, the Biloxi Marshes, and Eloi Bay.

#### **1.7.12 MRGO Reevaluation Study 2002**

In June 1999, pursuant to authority of Section 216 of Public Law 91-611, the USACE-MVN requested and received reprogrammed funds to initiate a reevaluation study of the MRGO based on three factors:

1. The possibility that the Port of New Orleans might move some of its facilities from the IHNC area to the Mississippi River (Millennium Port Plan);

2. The environmental community and local interests characterized the MRGO as an environmental disaster; and
3. Efforts to ameliorate some of the environmental effects of the MRGO using O&M funds were inadequate. In June 2000, the House Committee on Appropriations (House Report 106-693, PL 106-377) provided funds for investigating the future of the MRGO.

The study was not completed due to additional Congressional guidance and authority provided after Hurricane Katrina.

#### **1.7.13 Environmental Assessment for the Lake Borgne Shoreline Protection Project**

This USEPA document for CWPPRA project number PO-30 provided an overview of the impacts and/or benefits resulting from the installation of shoreline protection features in Lake Borgne. The goal of this project was to help preserve the existing wetland land bridge between Lake Borgne and the MRGO and thus prevent the coalescence of the two water bodies by constructing shoreline protection features along a total of 5.3 miles of the southern Lake Borgne shoreline near Bayou Dupre and near Shell Beach.

#### **1.7.14 Ecological Review, Lake Borgne and MRGO Shoreline Protection**

This USACE/LDNR ecological review for CWPPRA project number PO-32 evaluated project biotic benefits, goals and strategies prior to construction authorization. This evaluation utilized monitoring and engineering information, as well as applicable scientific literature to assess whether or not, and to what degree, the proposed project features would cause the desired ecological response. The goal of this project was to preserve the existing marsh land bridge between Lake Borgne and the MRGO and thus prevent the coalescence of the two water bodies.

#### **1.7.15 Continuing Authorities Program**

Section 204 of the Water Resources Development Act (WRDA) 1992, is a "continuing authority" that authorizes the Secretary of the Army to plan, design, and implement certain ecosystem restoration measures, subject to specified cost sharing, without additional project specific Congressional authorization. Section 204 authorizes the beneficial use of dredged material in connection with construction or maintenance dredging of an authorized navigation project. Projects performed under Section 204 on the MRGO include the placement of dredged material from miles 14 to 12 adjacent to the south jetty for wetland creation and the placement of dredged material from mile -2 to -4 on Breton Island for barrier island restoration.

#### **1.7.16 Louisiana Coastal Area Ecosystem Restoration Study (LCA 2004)**

The USACE and the State of Louisiana prepared this study to identify the most critical ecological needs of the coastal area and to describe alternative restoration strategies. The MRGO was identified as one of the five specific areas with significant needs, and environmental restoration costs for an MRGO near-term plan were estimated at \$121,736,000 (2004 dollars). The LCA Plan recommended construction of rock breakwaters along 23 miles of the north bank of the MRGO, and 15 miles of the southern

shore of Lake Borgne. This construction would address the anticipated loss of 6,350 acres of marsh over a 50-year period of analysis. The Chief of Engineers and the Assistant Secretary of the Army for Civil Works approved and transmitted the LCA Plan to the Administration and Congress. The plan is awaiting congressional action on a Water Resources Development Act bill for authorization.

**1.7.17 Second Emergency Supplemental Appropriations Act to Meet the Immediate Needs Arising from the Consequences of Hurricane Katrina, 2005 (Public Law 109-062)**

Adopted by Congress on September 2, 2005, following Hurricane Katrina, this law provided emergency supplemental funding to repair damage to flood control and hurricane shore protection projects. A portion of this funding was allocated to rebuilding the hurricane protection levee located on a portion of the MRGO dredged material disposal area between Bayou Bienvenue and Verret, Louisiana.

**1.7.18 Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (Public Law 109-148) and Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234)**

The Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (Public Law 109-148) provided \$75,000,000 for operation and maintenance activities along the MRGO. The Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (Public Law 109-234) clarified that the funds were to be used for "the repair, construction or provision of measures or structures necessary to protect, restore or increase wetlands, to prevent saltwater intrusion or storm surge." An EIS for this work is being prepared. This operation and maintenance activity is called Mississippi River - Gulf Outlet, Louisiana, and Lake Borgne Wetland Creation and Shoreline Protection.

In addition to providing funding to develop a comprehensive plan to de-authorize deep-draft navigation on the MRGO, Public Law 109-234 provided nearly \$4 billion for levee improvements and flood control projects in the New Orleans area. This appropriation included \$1,584 million to reinforce or replace floodwalls, \$495.3 million for levee projects, \$350 million for construction of enhanced hurricane protection on the IHNC, and \$170 million to armor critical areas of the levees.

**1.7.19 Coastal Impact Assistance Program, 2006**

The Coastal Impact Assistance Program (CIAP) was authorized by Section 384 of the Energy Policy Act of 2005. This federally funded program assists oil and gas producing coastal states and their political subdivisions in mitigating the impacts from Outer Continental Shelf (OCS) oil and gas production. There are two Tier One CIAP projects in the project area: Central Wetlands Assimilation (treated sewerage pumped into wetlands) and Orleans Land Bridge Shoreline Protection and Marsh Creation. The Lake Borgne Shoreline Protection is a Tier Two project.

### **1.7.20 Louisiana Coastal Protection and Restoration (LACPR), 2006**

This study by the USACE for the U.S. Congress includes the analysis and design of hurricane risk reduction, coastal restoration, and flood control measures. A Preliminary Technical Report was submitted to Congress in July 2006. The final study will evaluate different alignments of structural measures, such as floodgates, floodwalls, and levees, to compare relative reduction of risk of flooding and storm surge, including the possibility of structural measures affecting the MRGO. The final study will also evaluate nonstructural measures, such as elevating homes. In addition, it will propose various wetland restoration projects and highlight the role of wetlands in coastal risk reduction.

### **1.7.21 Integrated Ecosystem Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Coast, 2007**

The State of Louisiana's Master Plan calls for "construction of a closure structure at Bayou La Loutre that will restore the integrity of the Bayou La Loutre ridge. This will affect both the shallow-draft and deep-draft navigation industries, and it may have unintended consequences for adjacent landowners."

### **1.7.22 Environmental Assessments and Environmental Impact Statements**

The USACE-MVN has prepared many Environmental Assessments (EAs) and Environmental Impact Statements (EISs) to evaluate potential impacts of project specific proposed actions in and around the MRGO. These EAs and EISs were prepared in accordance with the NEPA of 1969 and the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508), as reflected in the USACE Engineering Regulation, ER 200-2-2. These documents, as listed in Appendix L, are hereby incorporated into this LEIS by reference.

## **1.8 THE MRGO AND STORM SURGE**

Numerous people believe that the Inland Reach of the MRGO exacerbates storm surges in the region and that the MRGO was responsible for flooding of both St. Bernard and Orleans Parishes during Hurricanes Betsy and Katrina. However, several studies described below indicate that this was not the case (see Appendix D).

A 1966 study (Bretschneider and Collins, 1966) examined six different storm scenarios using one-dimensional numerical modeling, and concluded that Hurricane Betsy, which occurred in 1965 during the construction of the MRGO, would have produced the same storm surge elevations with or without the MRGO.

In 2003, a study was completed using two-dimensional Advanced Circulation (ADCIRC) modeling for storm surge (USACE 2003). Nine different scenarios were modeled, both with and without the MRGO (shallow marsh in place of the channel). The model runs demonstrated that the maximum difference in storm surge with and without the MRGO was just over 6 inches.

Following Hurricane Katrina, the Interagency Performance Evaluation Task Force (IPET) studied the New Orleans hurricane protection systems, storm surge, performance of flood protection measures, and the consequences of the hurricane (USACE 2007a and USACE

2007b). The IPET found that the MRGO Inland Reach had little influence on flooding in St. Bernard Parish during Hurricane Katrina, because when the marshes surrounding the MRGO are inundated, the water conveyed through the channel is a relatively small part of the total. The IPET Report states “during Katrina, the MRGO was far from the ‘hurricane highway’ moniker with which it has been branded.” The report found that high surge and high, long-period waves overtopped the MRGO levees well before the hurricane made landfall, and that the high velocities of water moving over the levees caused scouring and breaching of levees along the MRGO (USACE 2007b).

The IPET does state that “While the simulations clearly show that Reach 2 [Inland Reach] of the MRGO does not significantly influence the development of storm surge in the region for large storm events, Reach 1 (the combined GIWW/MRGO section) and the IHNC, together, provide a hydraulic connection between Lake Borgne and Lake Pontchartrain. As a result of this connection, the storm surge experienced within the IHNC and Reach 1 (GIWW/MRGO) is a function of storm surge in both Lakes; a water level gradient is established within the IHNC and Reach 1 [GIWW Reach] that is dictated by the surge levels in the two lakes. This is true for both low and high storm surge conditions. To prevent storm surge in Lake Borgne from reaching the IHNC or GIWW/MRGO sections of [the] waterway, flow through the Reach 1 [GIWW Reach] channel must be dramatically reduced or eliminated, either by a permanent closure or some type of structure that temporarily serves to eliminate this hydraulic connectivity. The presence of an open channel is the key factor” (USACE 2007b). Flow through the GIWW Reach of the MRGO is being addressed through efforts to provide comprehensive hurricane and storm protection through the Lake Pontchartrain and Vicinity Hurricane Protection project 100-year protection effort.

In 2006, the USACE analyzed the Southeast Louisiana Hurricane Protection System and found that “[t]he southeast trending leg of the Mississippi River-Gulf Outlet (MRGO) had little influence on the water levels in the IHNC during Katrina” (USACE 2007a). This conclusion was reached after comparing the results of ADCIRC models runs, assuming the MRGO channel existed in its pre-Katrina conditions, and then assuming that the MRGO did not exist.

A 2006 study by the Louisiana Department of Natural Resources also evaluated the impact of the MRGO on storm surge using ADCIRC modeling. This study considered seven different scenarios. The conclusions were that the MRGO does not contribute significantly to peak storm surge during severe storms where the surrounding wetland system is overwhelmed with water, and that closure would not provide significant, direct mitigation of severe hurricane storm surge. However, closure of the MRGO may, according to the LDNR study, modestly delay the onset of surge in a few locations and “would significantly reduce storm surge scour velocities at some locations” (LDNR 2006).

Studies also demonstrated that the most noticeable effect of the MRGO occurs for small surge events, where the marsh areas are not completely inundated (USACE 2007b; LDNR 2006). As part of LACPR, further storm surge modeling analyses are underway to consider scenarios with new structural flood protection features, such as levees and

floodgates. Solutions to concerns regarding the impact of storm surge that the public has posed include barrier construction, such as floodgates at some points along the MRGO, and partially or completely filling in the channel.

## SECTION 2 FORMULATION OF ALTERNATIVE PLANS

This chapter includes a discussion of the collaborative planning process, development of alternatives in the Interim Report to Congress, the future without de-authorization, alternatives eliminated from further study, alternatives evaluated in detail, a comparison of these alternatives, rationale for choosing the Recommended Plan, a brief description of that plan, and how it will be integrated into the LACPR process.

In order to ensure that sound decisions are made, the USACE plan formulation process requires a systematic and repeatable approach. The Economic and Environmental Principles for Water and Related Land Resources Implementation Studies and The Economic and Environmental Guidelines for Water and Related Land Resources Implementation Studies (Planning Guidance Notebook, ER 1105-2-100) describe the USACE study process and requirements. Alternatives were formulated to minimize cost associated with the disposition of the de-authorized project. These alternatives were also evaluated against the following four criteria:

- *Completeness* - the extent to which a given alternative plan provides and accounts for all necessary investments or other actions to ensure the realization of the planned effects.
- *Effectiveness* - the extent to which an alternative plan alleviates the specified problems and achieves the specified opportunities.
- *Efficiency* - the extent to which an alternative plan is the most cost-effective means of alleviating specified problems and realizing the specified opportunities, consistent with protecting the Nation's environment.
- *Acceptability* - the workability and viability of the alternative plan with respect to acceptance by state and local entities and the public and compatibility with existing laws, regulations, and public policies.

Plan formulation did not consider stand alone ecosystem restoration measures as this was not included in the study authority. However, to provide a comprehensive plan, formulation incorporated consideration of the ecosystem restoration advantages that might be provided by measures that limit channel access.

### 2.1 COLLABORATIVE PLANNING

In response to Congressional direction to develop a comprehensive MRGO deep-draft de-authorization plan, the USACE established a strategy for developing the Interim and Final Reports. Federal, state and local government parties, environmental groups, landowners, navigation interests, other organizations, and individuals were invited to assist in preparation of the reports. This approach is a sound business process for problem solving and is consistent with USACE guidance in EC 1105-2-409 (Planning in a Collaborative Environment) and ER 1105-2-100 (Planning Guidance Notebook).

A series of public stakeholder forums were held which included technical presentations and open discussions on topics including wetlands, navigation, storm protection, and the local economy. Each stakeholder group was asked to identify their own plans for deauthorization of the MRGO, environmental restoration measures in the vicinity of the MRGO, and hurricane protection plans. Several stakeholder groups prepared such plans.

A public meeting was held on October 28, 2006 at the University of New Orleans and involved an open house where stakeholder groups were offered display space to present their plans. More than 150 people attended the public meeting, which included a formal presentation of the study process and scope from the USACE and an open comment period for public statements from citizens, organizations, and elected officials. Public comments made in this meeting were evaluated in plan formulation for the Interim Report to Congress.

Through the collaborative process several consensus measures emerged that were supported by many stakeholders. However, the different stakeholders could not agree on a single measure, plan, or sequence of measures to close the channel. Their recommendations varied from total closure to a sector gate with a draft of 28 feet. Many of the measures from the stakeholder plans were incorporated into the Interim Report to Congress. Collaborative planning continued after the submittal of the Interim Report to Congress and that approach remains a key component of the preparation of the Final Report to Congress and LEIS. For further description of the proposed stakeholder plans, see Section 4.

A public information meeting was held on May 19, 2007 at Nunez Community College in Chalmette, Louisiana. The meeting offered attendees an opportunity to view a series of posters presented by the USACE on the elements of the study. In addition, various stakeholders displayed information and interacted with the meeting attendees. More than 100 attendees listened to a formal presentation regarding the alternatives evaluated in detail and the Recommended Plan. Following the presentation, attendees had the opportunity to ask questions. All attendees were made aware of the study schedule and process and invited to continue to participate.

Input from the public, stakeholders, and agencies received through the collaborative planning process provided significant information which was used by the USACE to assess the acceptability of alternatives.

Agencies were not approached to assume responsibility for implementing components of the Recommended Plan other than to coordinate required environmental compliance actions and the removal of aids to navigation. Interagency support of the Recommended Plan has been expressed (see Appendix P). Given the nature of the Recommended Plan, few if any opportunities exist for other agencies to implement plan components. The LACPR effort, of which the MRGO Final Report and LEIS is a part, will likely result in recommendations for sharing implementation responsibilities across agencies.

## **2.2 DEVELOPMENT OF ALTERNATIVES FOR INTERIM REPORT TO CONGRESS**

For the Interim Report to Congress, a USACE technical team evaluated potential modifications to the current uses of the navigation channel with the intent of determining if any uses should be maintained. The evaluation included information presented in the stakeholder meetings, data gathered through a survey of maritime businesses, and government records of annual channel utilization. A broad suite of initial alternatives was identified for development of the deep-draft de-authorization plan. The alternatives presented in the Interim Report to Congress include:

### **Interim Report Alternative 1 – Maintain a shallow-draft MRGO navigation channel.**

Alternative 1a – Maintain a shallow-draft navigation channel without a structure;  
Alternative 1b – Construct a salinity control weir at Bayou La Loutre;  
Alternative 1c – Construct a salinity control gate at Bayou La Loutre (normally closed);  
Alternative 1d – Construct a storm protection gate at Bayou La Loutre (normally open).  
All of the shallow-draft MRGO navigation alternatives would require maintenance dredging of a 12-foot deep by 125-foot wide channel to match the authorized dimensions of the GIWW.

### **Interim Report Alternative 2 - Close the MRGO channel to deep-draft and shallow-draft vessels. Closure of the MRGO to all vessel traffic could be realized by blocking the channel via any of the following variations:**

Alternative 2a – Construct a total closure structure across the MRGO at Bayou La Loutre;  
Alternative 2b – Restore both banks of Bayou La Loutre across the MRGO at Hopedale, Louisiana; or  
Alternative 2c – Fill in the entire MRGO channel from the GIWW to the Gulf of Mexico.

**Interim Report Alternative 3 - Cease all MRGO operations and maintenance activities (dredging, jetty repairs, and navigation aids).** If Congress chooses to discontinue all activities related to maintaining the MRGO, several relic project features would need to be addressed. These features include navigation aids such as buoys and lights and the offshore jetties located in Breton and Chandeleur Sounds. Development of a comprehensive de-authorization plan should include disposal of these relic features. There would be no more beneficial use of dredged material.

**The alternatives developed for the Interim Report to Congress are explained in detail below:**

### **Interim Report Alternative 1a - Maintain a Shallow-Draft MRGO Navigation Channel Without a Structure**

Under Alternative 1a, the MRGO would be maintained for commercial and recreational shallow-draft navigation only with a depth and width of 12 feet by 125 feet for the Inland and Sound Reaches. This alternative was developed to allow continued shallow-draft navigation. It is likely to have only a very minimal effect on reducing salinity or storm

surge in a tropical storm event. The only environmental benefit could be removal of deep-draft vessels from the channel which could significantly reduce bank erosion.

**Interim Report Alternative 1b – Construct a Salinity Control Weir at Bayou La Loutre**

Under Alternative 1b, a weir would be constructed just south of Bayou La Loutre to allow passage of shallow-draft vessels. The MRGO would be constricted at the weir to 125-feet wide by 14 feet deep. This alternative was developed to allow continued shallow-draft navigation and to reduce salinity above the structure which could provide environmental benefits. Removal of deep-draft vessels could significantly reduce bank erosion.

**Interim Report Alternative 1c – Construct a Salinity Control Gate at Bayou La Loutre (Normally Closed)**

Under Alternative 1c, a gated structure would be constructed just downstream of Bayou La Loutre that would allow passage of shallow-draft vessels. The gated structure would have a sill depth of 14 feet and a 125-foot wide opening. The gate would normally be closed to reduce saltwater intrusion, but would be opened for passage of commercial and recreational shallow-draft vessels. This alternative was developed to allow continued shallow-draft navigation and to significantly reduce salinity above the structure. The gate could also close the channel for any tropical storm event and associated storm surge. By keeping the gate closed except when vessels are present, it could have the greatest salinity reduction of all the shallow-draft Alternatives. Removal of deep-draft vessels could significantly reduce bank erosion.

**Interim Report Alternative 1d – Construct a Storm Protection Gate at Bayou La Loutre (Normally Open)**

This Alternative comprises similar structural components and earthwork as Alternative 1c: a sector gate with tie-in T-wall and earthen dam. This alternative was developed to allow continued shallow-draft navigation, to reduce storm surge from tropical storm events and to reduce salinity above the structure. The gate would be operated to close the channel only for a tropical storm event and associated storm surge. Reduction of salinity could be similar to Alternative 1b above. Removal of deep-draft vessels could significantly reduce bank erosion.

**Interim Report Alternative 2a – Construct an Armored Earthen Dam Across the MRGO at Bayou La Loutre**

This plan was developed to remove both shallow and deep-draft vessels from the MRGO, reduce salinity and tropical storm surge and allow the most compatibility with a freshwater diversion. It could reduce salinity more than any of the Alternative 1 options. Removal of deep-draft vessels could significantly reduce bank erosion.

**Interim Report Alternative 2b – Restore Both Banks of Bayou La Loutre Across the MRGO at Hopedale, Louisiana**

Under Alternative 2b, two earthen dams would be constructed to restore the banks of Bayou La Loutre. One dam would connect the ridge on the north side of Bayou La

Loutre on the Hopedale side with the north ridge on the Biloxi Marsh side. The second dam would connect the south ridges across the MRGO. This would totally block the MRGO channel with two structures. This plan was developed to allow shallow-draft navigation, reduce salinity and tropical storm surge and to totally block access to Bayou La Loutre from the MRGO. Removal of deep-draft vessels could significantly reduce bank erosion.

### **Interim Report Alternative 2c –Fill in the Entire MRGO Channel from the GIWW to the Gulf of Mexico**

Under Alternative 2c, the entire MRGO would be filled from the intersection of the GIWW to Breton Sound. This Alternative has been requested by several stakeholders and was frequently noted in public comments. Recreational craft would not be able to use any portion of the Inland Reach of the MRGO.

### **Interim Report Alternative 3 - Cease All MRGO Operations and Maintenance Activities**

Under Alternative 3, no additional Federal funds would be used to maintain a minimum channel depth on of the MRGO between the GIWW and the Gulf of Mexico. There would be neither construction nor operation and maintenance costs for this Alternative. This was developed as the least cost plan. It would have no impact on storm surge in tropical storm events or salinity reduction. Removal of deep-draft vessels could significantly reduce bank erosion.

## **2.3 EVALUATION OF NAVIGATION FUNCTIONS THAT SHOULD BE MAINTAINED**

The USACE evaluated what navigation functions, if any, should be maintained on the MRGO between the GIWW and the Gulf of Mexico. Analysis of deep-draft navigation indicates that maintaining the authorized dimensions of the MRGO between the GIWW and the Gulf of Mexico is not cost-effective. Average annual operations and maintenance (O&M) costs to dredge a single shipping lane in the MRGO Inland Reach are \$12.5 million. However, maintaining a single shipping lane, which is half of the authorized dimensions, only produces approximately \$3.7 million per year in transportation efficiencies, based on NED criteria. Efforts to operate and maintain the fully authorized dimensions (i.e. a two-lane channel, 500-feet wide by 36-feet deep) would be even more costly and would not produce greater navigation benefits. The analysis indicates that the maintenance of a deep-draft navigation channel of any dimension on the MRGO between the GIWW and the Gulf of Mexico is not economically justified.

The \$3.7 million per year in transportation inefficiencies that navigation would incur if the MRGO channel were not available are comprised of two sources. The first source is the increased travel time (approximately 4 hours) that both deep-draft vessels and shallow-draft vessels would have to incur by having to use the Mississippi River to reach their ultimate destinations. The second source is from the shallow-draft traffic that uses the MRGO as an alternate route when the IHNC Lock is not operable.

Historically, the MRGO has also served as an alternate navigation route for shallow draft vessels during times of extreme congestion at the IHNC Lock or when the lock was inoperable. Before Hurricane Katrina some barge tows would travel downstream on the Mississippi River to Baptiste Collette Bayou, exit Baptiste Collette Bayou into Breton Sound, and then enter the MRGO. Eastbound tows would then travel back inland from Breton Sound on the MRGO to the GIWW Reach before continuing east to locations in Mississippi, Alabama, and Florida (westbound traffic would traverse the opposite route). The alternative route around the IHNC Lock is about 180 miles longer than a direct lock through from the GIWW to the Mississippi River. Vessel operators would weigh factors such as anticipated time of delay, added fuel consumption, weather, and insurance ratings when making a decision to proceed through the alternative route or to wait to pass through the lock. The bypass takes approximately 24 hours to navigate.

Approximately 100 vessels use the MRGO as an alternate route per year when the IHNC Lock is not operable. Vessels can save time if the lock is down for a period of greater than 24 hours and/or there is a long queue. The additional time lost from not having access to the MRGO as an alternate route when the IHNC Lock is inoperable has been estimated to be approximately 48 hours. The portion of the \$3.7 million per year in transportation inefficiencies that is attributed to the loss of the MRGO as an alternative route when the IHNC Lock is not operable is \$400,000 per year.

The economic information available also indicates that it is not cost-effective to maintain a shallow-draft channel between the GIWW and the Gulf of Mexico in terms of NED criteria. The benefits of authorizing the MRGO to 12 feet are the reduction in the transportation inefficiencies compared to the total closure option for the channel. If the MRGO were to be closed between the GIWW and the Gulf of Mexico, shallow-draft vessels would have to take a longer alternate route along the Mississippi River. In addition the MRGO would no longer be available as an alternate route to the GIWW for shallow-draft traffic when the IHNC Lock is not functioning or is congested. Taking these two issues into account, it is estimated that the average annual benefits of authorizing the MRGO to 12 feet is \$1.2 million (of which \$400,000 results from the use of the MRGO as an alternate route when the IHNC Lock is inoperable). The total average annual costs to maintain a 12 foot shallow-draft channel is approximately \$6 million.

Based on the above analysis, the USACE concluded that no navigation function on the MRGO between the GIWW and the Gulf of Mexico is economically justified. Therefore continued authorization of the MRGO between the GIWW and the Gulf of Mexico for any form of navigation is not economically justified based on the comparison of navigation costs and benefits according to NED criteria. Based on this conclusion, the USACE proceeded to eliminate some alternatives from further study and to carry forward a final array of alternatives for detailed evaluation that would implement de-authorization of the MRGO from the GIWW to the Gulf of Mexico.

For this report, the USACE used the definition of deep-draft vessels contained in ER 1105-2-100 (Planning Guidance Notebook), which are those vessels requiring drafts greater than 14 feet.

## **2.4 ALTERNATIVES ELIMINATED FROM FURTHER STUDY**

### **Interim Report Alternatives 1a – 1d**

All of the alternatives identified in the Interim Report to Congress that included maintenance of the MRGO channel for shallow-draft navigation between the GIWW and the Gulf of Mexico were eliminated from further consideration based on economic analysis. Economic information indicates that shallow-draft traffic on the MRGO between the GIWW and the Gulf of Mexico is not cost-effective in terms of National Economic Development (NED) benefits. The total average annual costs to maintain a 12-foot shallow-draft channel between the GIWW and the Gulf of Mexico is approximately \$6 million, whereas the estimated annual benefits are approximately \$1.2 million.

### **Interim Report Alternative 2b**

This Alternative was eliminated from further consideration because it achieves similar environmental and navigation results as Alternative 2a, but at approximately twice the cost. Also, when compared with Alternative 2a, there are additional negative impacts to recreational and commercial vessel users because access to Bayou La Loutre from the north is blocked.

### **Interim Report Alternative 2c**

This Alternative was eliminated from further consideration due to its high cost and the length of time required for full implementation. It is estimated that it would require approximately 250-350 million cubic yards of dredged material to fill the channel from mile 60 to mile 25 at a cost of about \$2.8 billion based on October 2006 price levels. The material could be mined from the ODMDS by a hydraulic dredge, loaded into large scow barges, transported to the Inland Reach and off loaded. Depending on how many scow barges could be employed at once, it could take from 15 to 44 years to completely fill the channel.

### **Other Alternatives**

Other alternatives were suggested after release of the Interim Report to Congress. These included multiple closure locations, limited channel filling, shoreline restoration and stabilization, and vegetative plantings. Alternatives dealing with ecosystem restoration were deemed to be beyond the authority of the MRGO de-authorization study; however, they will be considered under LACPR and other appropriate authorities. In addition to study authority, alternatives were eliminated from further consideration based upon costs, impacts to the environment, limited availability of construction materials, constructability issues, and effectiveness in meeting the study goals and objectives. Alternatives recommended after release of the Interim Report are discussed in greater detail in Section 4 and in Appendix P.

## **2.5 ALTERNATIVES EVALUATED IN DETAIL**

In order to prepare the Final Report to Congress and the Legislative Environmental Impact Statement, in addition to the Future Without De-authorization three Alternatives were carried into the final array of alternatives for detailed evaluation. The alternatives evaluated in detail are listed below:

- Future Without De-authorization - The channel would be dredged to the Congressionally authorized dimensions of 500-foot bottom width in the Inland and Sound Reaches and a 600-foot bottom width in the Bar Channel. The channel would be maintained at these widths. Dredged material would be used beneficially behind the jetties and on Breton Island.
- Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately;
- Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre (phased construction would begin with a weir and be completed with a total closure structure);
- Alternative 3 – Cease All MRGO Operations and Maintenance Dredging Activities Immediately.

The following features are common to Alternatives 1, 2, and 3:

- The MRGO channel would be de-authorized for navigation from mile 60 at the southern bank of the GIWW to the Gulf of Mexico.
- Aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard.
- Existing bank stabilization features and jetties would be de-authorized, but left in place.

### **2.5.1 Preliminary Engineering on Alternatives Evaluated in Detail**

Preliminary engineering was conducted on all alternatives carried into the final array for detailed evaluation. The preliminary engineering is presented in Appendix C. The following paragraphs present a summary of the relevant preliminary engineering analyses that influenced plan formulation, particularly pertaining to the location and design of the total closure structure proposed under Alternatives 1 and 2.

Determining the location of the proposed total closure structure evaluated in Alternatives 1 and 2 was based on two principle considerations: 1) an appropriate physical location to prevent deep-draft navigation, and 2) engineering and design criteria relevant to site selection for construction. For purposes of preventing deep-draft navigation, closure could occur at many points along the MRGO channel. However, based upon available

engineering information and design criteria, a site located just south of Bayou La Loutre is most favorable.

A number of locations along the MRGO were identified as potential closure structure locations. These included the lower channel at the jetties, and several sites in the vicinity of Bayou La Loutre, Shell Beach, Bayou Dupre, and Bayou Bienvenue. Most of these sites were eliminated because of multiple engineering factors, especially channel width and subsurface soil conditions. The most favorable site for a total closure structure is immediately south of the Bayou La Loutre crossing. This site represents the narrowest section of the channel and offers the best area soil conditions because of proximity to the historic Bayou La Loutre ridge.

Based on existing data and historic knowledge of the project site, a preliminary closure design and quantification was prepared to address the closure structure proposed under Alternatives 1 and 2. Designs analyzed included plans for a total channel closure as follows:

1. Dredged-In earthen closure. This approach assumes borrow from the MRGO below the depth of the authorized navigation channel. Assuming that (1) suitable borrow material is found between elevations -50 feet and -70 feet, (2) a 300-foot corridor centered on the MRGO centerline is made available, and (3) a bulking factor of 2.0; an approximate 3 mile reach of borrow corridor would be needed. Due to the potential of less than desirable characterization of the borrow source, this option includes rock toe dikes on both ends of the dike section, perpendicular to the MRGO to assist in retention of materials and to better manage the ultimate side slopes of the closure section. Construction would entail pumping a 300-foot-wide crown structure and maintaining 1V on 30H side slopes. The requirements for consolidation of the dredged material mandate the assumption that at least two construction lifts would be required to complete this effort. Seeding and fertilizing of the resulting berm was included in the cost estimate (see Appendix C).
2. Barged in earthen closure. This option assures a better source of construction materials, and being mechanically placed, allows for steeper side slopes and a smaller crown width. However, the transportation costs associated with barged in material greatly increases cost of the closure structure. Again, only fertilizing and seeding was included in this original estimate; stone paving was assumed for any required repairs. The section was reduced to a 200-foot crown and 1V on 10H side slopes. Consolidation of placed material is a concern, but only one lift was included in this preliminary estimate (see Appendix C).
3. Total Rock Closure. This design assures better control of placed material. It eliminates the concern of consolidation of earthen construction materials. The dimensions of the rock closure assumed 25-foot to 30-foot crown width, with 1V on 2.5H side slopes. This design would result in less maintenance due to reduced structure erosion. Quarry run stone would be specified to increase fines in the mix, minimizing voids and reducing salt water intrusion. Based on assumptions made, this was the least costly design alternative (see Appendix C).

4. Cellular Sheet Pile Closure. This option consisted of cellular sheet pile structures, sand filled, with stone berm on either side. This design provided a less permeable solution than the total rock closure, but was as much as twice as expensive based on preliminary cost estimates and professional judgment (see Appendix C).

### **2.5.2 Assessment of Planning Risk and Uncertainty**

Evaluating risk and uncertainty is an important element in realistic forecasting and planning to solve water resources problems. The U.S. Army Corps of Engineers recognizes the need to evaluate risk and uncertainty and has developed several regulatory guidelines for use in project studies and design work. The majority of USACE guidelines for risk assessments are related to flood damage reduction studies (see ER 1105-2-101 and EM 1110-2-1619). However, a primary reference relevant to the MRGO de-authorization study is the “Guidelines for Risk and Uncertainty Planning in Water Resources Planning” developed through the Institute for Water Resources. An overview of the approach outlined in the document is summarized as:

*“The risk analysis framework involves the well recognized four basic steps in dealing with any risk: characterization, quantification, evaluation, and management. The purpose of conducting these analyses is to provide additional information to Federal and non-Federal partner decision makers on the engineering and economic performance of alternative investments that address water resources problems. The aim is to produce better decisions and to foster the development of the notion of informed consent by all parties to an investment decision.”*

The risks involved with planning for the MRGO de-authorization are primarily associated with uncertainties in forecasting future conditions for economic development, navigation utilization, and environmental quality factors. The project delivery team has assessed various data needs and drawn from existing information sources to support project planning. Where feasible the team endeavored to collect new data to characterize conditions in the study area and to aid in system analysis. This information has been quantified in standard metrics for comparison between alternative plans and reporting in the evaluations supporting the recommended plan. Specifically the team identified the rate of channel shoaling and use of the MRGO as an alternative by-pass route as two significant risk and uncertainty factors in the study.

Shoaling rates are a critical factor in predicting changes in channel depth and dimensions over time. This information is critical to the assessment of the available use period of the channel as a shallow draft transportation route into the future – a key component in the evaluation of alternative 2. The team utilized historic maintenance dredging data collected over the life of the channel to estimate the rate of infilling and the duration that the channel would be available for use by vessels drafting less than 12 feet. According to the data, the sound reach of the channel is estimated to shoal to less than 12 feet in about 2014. Uncertainty associated with the estimate centers on the frequency of tropical storms and hurricanes passing through the project area. Storms generate waves and shift bottom sediments resulting in channel shoaling. The team assessment includes

documenting the assumptions associated with the data and confidence is gained because the data used reflects a full project life period of record keeping. Nonetheless the variability in tropical storm activity raises some uncertainty in the estimate on both the upper and lower ends. Stated more directly a tropical storm or storms could impact the project area in any year rendering the channel inaccessible to shallow draft vessels. The team also noted that the project area might not be impacted by a storm event for a period beyond 2014 resulting in a longer period of shallow draft access.

Under certain conditions the MRGO channel is occasionally used as an alternative by-pass route around the IHNC Lock. This use is generally limited to periods of heavy congestion, unexpected maintenance closures or scheduled prolonged maintenance work on the IHNC Lock. Information about the frequency of shallow draft utilization under these scenarios is critical to assessing alternatives that would allow for continued shallow draft access on the MRGO. Information on the use of the MRGO in these events was culled from the waterborne commerce statistics. The data was analyzed and usage estimates were developed (including assumptions) and documented in the stakeholder engagements and in the report. The basic assumption is that vessel operators would wait at moorings to pass through the lock rather than opt to use the MRGO-Mississippi River by-pass route as long as the wait time was less than or equal to the added time needed to complete the alternative route. Based upon the trip duration for the by-pass route the trigger period is approximately three days. At the three day point some operators may choose to precede to by-pass the congested or closed lock. The team presented the information to navigation industry trade groups in several venues and the assumption was not challenged.

The MRGO project delivery team managed risk by collecting the best available data for use in the study and clearly documenting the assumptions and shortfalls of the information. In addition, the team worked to communicate the data utilized to stakeholders so that interested parties clearly understood the limitations of the analysis. Further parties were offered the opportunity to provide additional data to support the alternatives analysis conducted. The team also worked with Operations Managers for the IHNC Lock to identify maintenance and repair actions that could further minimize the likelihood of prolonged closures of the structure. These actions could be sequenced prior to implementation of the recommended plan in order to bring the lock to the most reliable operations status before the loss of the MRGO as a by-pass route based on funding availability.

### **2.5.3 Description of Alternatives Evaluated in Detail**

#### **2.5.3.1 Future Without De-authorization**

The existing MRGO Project completed construction in 1968 at the authorized depth and width. Since construction, the project has been maintained at various depths and widths. For the past few years, the Inland Reach, the Sound Reach and Bar Channel have not been dredged to full dimensions. Rather, the channel has been maintained for one-way traffic only. Due to shoaling the current controlling depth is approximately 22 feet. However, to determine whether it is economically feasible to maintain the project and

evaluate the environmental impacts for various levels of maintenance including closure, the future without de-authorization is assumed to be a project maintained at the authorized dimensions. The Future Without condition is equivalent to the no-action alternative. All alternatives will be compared to this future condition.

When the Inland Reach is dredged to its full, authorized dimensions, all material from the Inland Reach would be placed in upland disposal areas because of difficulties in finding marsh creation sites unencumbered with oyster leases. Based upon previous practices, under the future without project scenario, material from the initial dredging of channel miles 27 to 23 would create approximately 157 acres of wetlands adjacent to and behind the north jetty. Material from the initial dredging of channel miles 23 to 14 would be placed behind the south jetty, creating approximately 1,297 acres of marsh. From channel miles 14 to 3.4, material would be placed at unprotected sites in the sound and it is unlikely that any marsh created would last more than a year because of exposure to open bay waves. Material from the initial dredging of channel miles 3.4 to -4 would be placed on Breton Island to create approximately 215 acres of marsh and barrier island habitat (see Appendix G).

Following the restoration of the channel to its full dimensions, it would be maintained at a 500-foot bottom width for the 50-year period of analysis. A 600-foot bottom width would be maintained within the Bar Channel. However, future maintenance operations would depend on funding availability. Material from the Inland Reach would again be placed in upland confined disposal areas. From 1985 to 2004, while maintaining miles 27 to 3.4 to a 500-foot width, an average of approximately 17 acres was created each year behind the jetties. From 1993 to 2005, material between miles 3.4 to -4 was placed either at the feeder berm or just off Breton Island, creating an average of approximately 21 acres per year. It is assumed that these acreages would continue to be created for 50 years in the future without de-authorization (see Appendix G).

Approximately 2,702 acres of marsh would be created in 50 years. At the same time 5,045 acres of marsh could be lost due to erosion. Thus, the estimated net loss is 2,343 acres over 50 years (see Appendix G).

#### 2.5.3.2 Alternative 1 – Construct a Total Closure Structure across the MRGO Near Bayou La Loutre Immediately

This alternative was developed to de-authorize the MRGO channel from Mile 60 at the southern bank of the GIWW to the Gulf of Mexico, by eliminating deep-draft and shallow-draft navigation while protecting the environment from further negative impacts associated with erosion and increased salinity. It achieves positive closure of the MRGO channel, thereby eliminating the possibility of attempted through navigation upon de-authorization.

Under this alternative the MRGO channel would be de-authorized for navigation from mile 60 at the southern bank of the GIWW to the Gulf of Mexico. No additional funds would be used to maintain any channel on the MRGO between the GIWW and the Gulf of Mexico. A total closure structure would be constructed just south of Bayou La Loutre

and would tie in with the southern Bayou La Loutre Ridge to totally block the MRGO channel (see Figure 2.1). The structure would not allow passage of vessels traveling the length of the MRGO. Aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard. Existing bank stabilization features and jetties would be de-authorized, but left in place.

The total closure structure would be made of rock and built in one construction effort of 170 days. The structure would be 25-30 feet wide on the top and its elevation would be + 5 feet MLG. Side slopes of the structure would be 1 V on 2.5 H and the bottom would be 250-275 feet wide. The estimated total project construction cost of the total closure structure is \$17,451,000 based on October 2006 price levels (see Table 2.1). Estimated average OMRR&R cost for the total closure structure is \$136,000 per year. Average annual net economic benefits are \$7.8 million. Total project costs would be shared as follows: construction costs at 100% Federal; LERRDs at 100% non-Federal; and OMRR&R at 100% non-Federal.

**Table 2.1 Alternative 1 Project Construction Costs**

<b>Alternative 1 Project Construction Costs (October 2006 Price Levels)</b>	
<u>Construction Items</u>	<b>Alternative 1 Cost (\$)</b>
Mobilization and Demobilization	66,100
Stone Placement - Channel Proper	10,494,000
Stone Placement - Overbank Tie-Ins	243,000
Clearing and Grubbing (Overbank)	16,200
Engineering and Design	743,850
Construction Management	1,082,000
Real Estate	1,401,000
Removal of Aids to Navigation	700,000
Contingencies (25%)	2,704,850
<b>Total Project Construction Costs</b>	<b>17,451,000</b>

2.5.3.3 Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre (phased construction would begin with a weir and be completed with a total closure structure)

This alternative was developed to de-authorize the MRGO channel from Mile 60 at the southern bank of the GIWW to the Gulf of Mexico, as a variation of Alternative 1 that would allow a period of “free” shallow-draft navigation benefits while ultimately achieving the goal of positive closure of the MRGO channel. The “free” shallow-draft benefits are derived from a period ending around 2014 during which the channel could accommodate shallow-draft without expenditures on maintenance dredging; however, during this period, the channel would not be Federally authorized, operated, or maintained. Additionally, under this alternative, while erosion and saltwater intrusion are reduced, these impacts continue on a limited basis until the total closure structure is completed.

Under this alternative, the MRGO channel would be de-authorized for navigation from mile 60 at the southern bank of the GIWW to the Gulf of Mexico. No additional funds would be used to maintain any channel on the MRGO between the GIWW and the Gulf of Mexico. A total closure structure would be constructed just south of Bayou La Loutre using sequenced construction and would tie in with the southern Bayou La Loutre Ridge to totally block the MRGO channel. The total closure structure would be constructed in two phases. Aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard. Existing bank stabilization features and jetties would be de-authorized, but left in place.

The first phase would construct a rock closure containing a weir 125-feet wide by 14 feet deep. (Note: The weir would be set at 14 feet depth to allow safe passage of 12-foot draft vessels—providing a 2-foot keel/hull clearance over the structure). It is possible that guide walls and dolphin cells would be needed on both sides of the weir to funnel marine traffic through the weir. Design optimization, including possible physical modeling, would be required to assess hydraulic performance and ensure safe navigability through such a structure. The estimated total project construction cost of phase I is \$16,608,145 based on October 2006 price levels. Construction of the first phase, the rock weir, would take an estimated 150 days.

Once complete, the first phase of construction would allow the passage of vessels with a draft of 12 feet or less. Under this phase, commercial and recreational vessels with a draft less than 12-feet could still use the MRGO until the channel filled in to a depth of 12 feet. The depth of the channel would be monitored. Once any reach filled in to a depth of less than 12 feet, Phase II construction would begin. It is estimated that some reaches of the MRGO would become impassible to vessels with greater than 12-foot draft in approximately 2014. The date of 2014 is the best engineering estimate of when any portion of the channel would shoal to a depth less than 12 feet. This shoaling could occur at any time if a tropical storm or hurricane passes over the sound area. If there are no such disturbances, it could be sometime after 2014 that the channel depth would be reduced to 12 feet or less.

The second phase of construction would complete the total rock closure by filling the weir opening with rock. The completed structure would not allow passage of any vessels traveling the length of the MRGO. The elevation of the closure would be + 5 feet MLG. The estimated total project construction cost for the second phase is \$1,107,485 based on October 2006 price levels.

The estimated total project construction cost for Alternative 2 is \$17,715,630 (see Table 2.2). Estimated average OMRR&R cost for Alternative 2 is \$133,800 per year. The average annual net economic benefits for this phased total closure structure are \$8.1 million. Total project costs would be shared as follows: construction costs at 100% Federal; LERRDs at 100% non-Federal; and OMRR&R at 100% non-Federal.

#### 2.5.3.4 Alternative 3 – Cease All MRGO Operations and Maintenance Dredging Activities Immediately

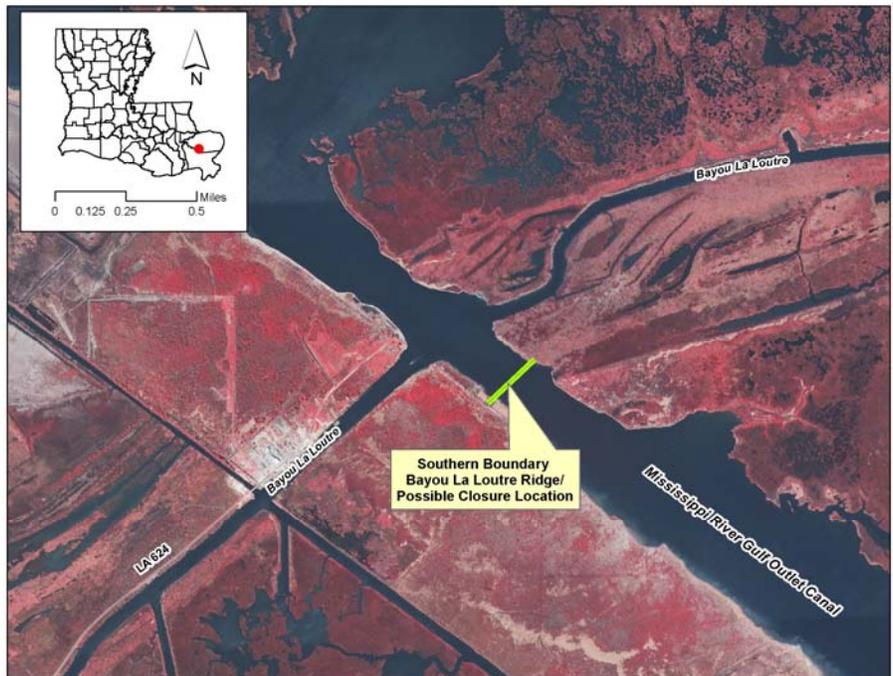
This alternative was developed to de-authorize the MRGO channel from Mile 60 at the southern bank of the GIWW to the Gulf of Mexico, in the least costly and most expedient manner; however, it does not protect against continued erosion and saltwater intrusion. In addition, it does not achieve positive closure of the MRGO channel, therefore, the possibility of attempted through navigation is not eliminated upon de-authorization under this alternative. Because the channel would remain open, potential issues surrounding vessel damage, insurability, and safety exist; however, because the Federal government is not recommending the continued use of the channel following de-authorization, these potential issues were not quantified. It is anticipated that some vessels will continue to use the channel under this alternative despite deteriorated channel conditions because under current conditions both deep- and shallow-draft vessels utilize the channel which has not been maintained since Hurricane Katrina. For example, the controlling depth of the channel is 22-feet and many aids to navigation were damaged or destroyed by Hurricane Katrina and have not been replaced due to the uncertainty of the future of the channel (see Section 3.2.12). Discussions with stakeholders in the navigation industry (such as pilots, shipping companies, the Port of New Orleans, dock operators, industry trade groups) and with the USCG indicate that vessels are likely to continue to navigate the MRGO channel until depth conditions become inadequate. This applies to both deep- and shallow-draft vessels. After de-authorization, relic aids to navigation would be removed through coordination with the USCG, but navigation is likely to continue under this alternative subject to future channel shoaling.

Under this alternative, the MRGO channel would be de-authorized for navigation from mile 60 at the southern bank of the GIWW to the Gulf of Mexico. No additional funds would be used to maintain any channel on the MRGO between the GIWW and the Gulf of Mexico. There would be no construction costs, except 1) aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard and 2) the USACE would dispose of some existing disposal and channel easements. Existing bank stabilization features and jetties would be de-authorized, but left in place. Under this alternative, commercial and recreational shallow-draft vessels could still use the MRGO until the channel filled in to a depth that prohibited their navigation. It is estimated that some reaches of the MRGO would become impassible to vessels greater than 12-foot draft in approximately 2014. This year has been used for analyses under this alternative although, a tropical storm or hurricane could cause portions of the channel to shoal much sooner. Total project construction costs are estimated to be \$825,000 based on October 2006 price levels (see Table 2.3). Average annual net economic benefits are estimated to be \$9.1 million. Total project costs would be shared as follows: construction costs at 100% Federal; LERRDs at 100% non-Federal; and OMRR&R at 100% non-Federal.

**Table 2.2 Alternative 2 Project Construction Costs**

<b>Alternative 2 Project Construction Costs (October 2006 Price Levels)</b>		<b>Alternative 1 Cost (\$)</b>
<b><u>Construction Items</u></b>		
<b><u>Phase I</u></b>		
Mobilization and Demobilization		66,100
Stone Placement		10,143,000
Clearing and Grubbing		16,200
Engineering and Design		702,990
Construction Management		1,022,530
Real Estate		1,401,000
Removal of Aids to Navigation		700,000
Contingencies (25%)		2,556,325
<b>Phase I Subtotal</b>		<b>16,608,145</b>
Mobilization and Demobilization		66,100
Stone Placement		661,320
Engineering and Design		114,555
Construction Management		83,655
Contingencies (25%)		181,855
<b>Phase II Subtotal</b>		<b>1,107,485</b>
<b>Total Project Construction Costs</b>		<b>17,715,630</b>

**Figure 2.1 – Bayou La Loutre Ridge, site of the Total Closure Structure**



**Table 2.3 Alternative 3 Project Construction Costs**

<b>Alternative 3 Project Construction Costs (October 2006 Price Levels)</b>	
<b><u>Construction Items</u></b>	<b>Alternative 1 Cost (\$)</b>
Real Estate	125,000
Removal of Aids to Navigation	700,000
<b>Total Project Construction Costs</b>	<b>825,000</b>

## **2.6 COMPARISON OF ALTERNATIVES BASED ON FOUR CRITERIA IN PRINCIPLES AND GUIDELINES**

In accordance with ER 1105-2-100, alternatives evaluated in detail were also evaluated and compared based on the following four criteria: 1) completeness, 2) effectiveness, 3) efficiency, and 4) acceptability, which are described at the beginning of Section 2. The following paragraphs describe the alternatives in terms of these criteria. This comparison is summarized in Table 2.5.

### **2.6.1 Completeness**

#### **2.6.1.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)**

This plan is not complete. It assumes that the channel would be dredged to its authorized width and depth. However, neither deep-draft nor shallow-draft is economically justified. It requires significant investment to protect the environment and does not account for any other social effects.

#### **2.6.1.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately**

Alternative 1 is the most complete plan because it provides for all the necessary investments to physically close the MRGO to navigation from the GIWW to the Gulf of Mexico as part of de-authorization. Present channel conditions accommodate navigation up to a 22 foot draft. This plan eliminates any possibility of through navigation after de-authorization. The closure structure is not part of a hurricane protection project. The plan reasonably maximizes economic benefits, is the most effective in protecting the environment, and considers other social effects.

#### **2.6.1.3 Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre**

Alternative 2 is a slightly less complete plan than Alternative 1 because it is less compatible with LACPR alternatives aimed at the distribution of diverted Mississippi River water throughout the Biloxi Marsh. It eventually provides for all the necessary investments to physically close the MRGO to navigation from the GIWW to the Gulf of Mexico as part of de-authorization. However, it allows shallow-draft navigation until about 2014 without expenditures on maintenance dredging. There will be no navigation

aids on the de-authorized channel. After about 2014, this alternative eliminates the possibility of through navigation. The phased closure structure is not part of a hurricane protection project. This plan reasonably maximizes economic benefits, is less effective in protecting the environment up to 2014, and is not fully responsive to other social effects.

#### 2.6.1.4 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

Alternative 3 is not a complete plan. It provides none of the necessary investments to physically close the MRGO to navigation from the GIWW to the Gulf of Mexico. The plan allows possibility of through navigation after de-authorization. There will be no navigation aids on the de-authorized channel. Present channel conditions accommodate navigation up to a 22 foot draft. Vessels may attempt to navigate the channel after it is de-authorized. This plan provides the maximum economic benefits, but does not address environmental or social effects.

### **2.6.2 Effectiveness**

#### 2.6.2.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

This is the least effective alternative because it does not de-authorize deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico as directed by Public Law 109-234.

#### 2.6.2.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

This alternative is effective because it de-authorizes deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico as directed by Public Law 109-234.

#### 2.6.2.3 Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre

This alternative is effective because it de-authorizes deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico as directed by Public Law 109-234.

#### 2.6.2.4 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

This alternative is effective because it de-authorizes deep-draft navigation on the MRGO channel from the GIWW to the Gulf of Mexico as directed by Public Law 109-234.

### **2.6.3 Efficiency**

Cost and benefit information used to evaluate the efficiency of each alternative is displayed in Table 2.4.

#### 2.6.3.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

The future without de-authorization is the least efficient alternative. It is estimated that this plan produces a net economic loss to the nation. With the average annual cost to maintain the authorized channel to be approximately \$12.5 million and the average

annual benefit to navigation (both deep-draft and shallow-draft traffic) to be approximately \$3.7 million, plus the cost to return the channel to authorized dimensions of \$130 million, the corresponding B/C ratio is 0.17 to 1. The annual maintenance cost used in this assessment is based upon appropriations received in the past. As noted earlier, since about 1998 this funding level has only been adequate for the maintenance of a one-way channel not the fully authorized dimensions of the MRGO. Maintenance dredging to provide the full authorized dimensions would require higher levels of annual O&M funding. More significantly, a major dredging event to restore the post-Katrina channel to authorized dimensions has been estimated to exceed \$130 million. In addition, future annual O&M costs do not reflect the periodic need for emergency supplemental funds required for dredging after tropical storms and hurricanes.

#### 2.6.3.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

This plan will produce a net economic benefit, however when compared to alternative 2 and alternative 3, it produces the fewest average annual net economic benefits (\$7.8 million) and the smallest B/C ratio of 2.6 to 1, because of the cost of constructing the closure structure and the loss of all navigation benefits once the closure structure is installed.

#### 2.6.3.3 Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre

When compared to alternative 1, this plan will produce a slightly better net economic benefit. This is due to the fact that shallow draft traffic may still be able to use the channel for a period of time (until the channel is closed due to shoaling in about 2014) once the channel is de-authorized and construction of a full closure structure can be delayed. However, when compared to alternative 3, it is less efficient because of the cost of constructing a closure structure. The average annual net economic benefit for this alternative is estimated to be \$8.1 million producing a B/C ratio of 2.8 to 1. Uncertainties regarding the rate of future channel shoaling greatly effect the confidence in this B/C ratio.

#### 2.6.4.4 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

When compared to alternative 1 and 2, this plan produces the highest average annual net economic benefit (\$9.1 million) and the highest B/C ratio (3.7 to 1). This is due to the fact that shallow draft traffic may still be able to use the channel for a period of time (until the channel is closed due to shoaling in about 2014, as is the case with alternative 2), and because it requires minimal investment. Uncertainties regarding the rate of future channel shoaling greatly effect the confidence in this B/C ratio.

### **2.6.4 Acceptability**

ER 1105-2-100 discusses acceptability as the workability and viability of the alternative plan with respect to acceptance by Federal and non-Federal entities and the public and compatibility with existing laws, regulations, and public policies. Two primary dimensions on acceptability are implementability and satisfaction.

1) Implementability means that the alternative is feasible from technical, environmental, economic, financial, political, legal, institutional, and social perspectives. If an alternative is not feasible due to any of these factors, then it can not be implemented, and therefore is not acceptable. An infeasible plan should not be carried forward for further consideration.

2) The second dimension to acceptability is the satisfaction that a particular plan brings to government entities and the public. The extent to which a plan is welcome or satisfactory is a qualitative judgment. Discussions as to the degree of support (or lack thereof) enjoyed by particular alternatives from a community, state Department of Natural Resources, Ducks Unlimited, or other national or regional organizations, for example, are additional pieces of information that can help planners evaluate whether to carry forward or screen out alternative plans.

**Table 2.4 Average Annual Benefits and Costs by Alternative**

<b>Average Annual Benefits and Costs by Alternative</b>				
<b>(October 2006 Price Level, 50-Year Period of Analysis, 4.875 Percent Discount Rate)</b>				
	<b>Future Without De-authorization</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
	<b>Cost (\$)</b>	<b>Cost (\$)</b>	<b>Cost (\$)</b>	<b>Cost (\$)</b>
<b><u>Investment Costs</u></b>				
Total Project Construction Costs	130,445,000	17,451,000	17,715,630	825,000
Interest During Construction	6,360,000	307,000	290,000	18,700
<b>Total Investment Cost</b>	<b>136,805,000</b>	<b>17,758,000</b>	<b>18,005,600</b>	<b>843,700</b>
<b><u>Average Annual Costs</u></b>				
Interest and Amortization of Initial Investment	6,682,000	894,200	893,900	42,300
Deep-Draft Transportation Cost		2,500,000	2,500,000	2,500,000
Shallow-Draft Transportation Cost		1,200,000	871,500	871,400
OMRR&R	12,500,000	136,000	133,800	
<b>Total Average Annual Costs</b>	<b>19,182,000</b>	<b>4,730,200</b>	<b>4,399,200</b>	<b>3,413,700</b>
<b>Average Annual Benefits</b>	<b>3,700,000</b>	<b>\$12,500,000</b>	<b>\$12,500,000</b>	<b>\$12,500,000</b>
<b>Net Annual Benefits</b>	<b>-15,482,000</b>	<b>\$7,769,800</b>	<b>\$8,100,800</b>	<b>\$9,086,300</b>
<b>Benefit-Cost Ratio</b>	<b>0.19 to 1</b>	<b>2.6 to 1</b>	<b>2.8 to 1</b>	<b>3.7 to 1</b>
<b>Benefit-Cost Ratio (computed at 7%)*</b>	<b>0.17 to 1</b>	<b>2.5 to 1</b>	<b>2.7 to 1</b>	<b>3.7 to 1</b>

\*Per Executive Order 12893

**2.6.4.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)**

Maintaining the MRGO to the authorized depth and width would clearly fail the test of implementability. An overview and comparison of the final alternatives against the four P&G criteria is provided in Table 2.5.

The Future Without De-authorization is not acceptable because it is not feasible in terms of economic, financial, political, or social factors. In addition, it has the highest

environmental impacts. This plan is least compatible with comprehensive ecosystem restoration strategies. It does not restore the Bayou La Loutre Ridge which was a hydrologic barrier and a natural line of storm defense. The ridge protected marshes to north from rapid tidal exchanges. The ridge may remain open for 50 years. This plan would not reduce salinity in the Pontchartrain Basin north of Bayou La Loutre. Salinity might remain steady in the Middle Basin and could increase in the Lower Basin (Tate et al. 2002). With the future without de-authorization, beneficial use of dredged material would create 2,702 acres of marsh behind the jetties and on Breton Island. However, shoreline erosion would destroy 4,565 acres of marsh for a net loss of 2,343 acres of marsh. It is unlikely that sea turtles would be found in the Inland Reach. Turtles would continue to be taken in the Bar Channel during maintenance dredging and ship impacts. The size and cost of any potential freshwater diversion projects would be the highest of any alternative. There would be greater marsh loss on the MRGO/Lake Borgne Landbridge and thus more resources would be required to protect and restore this landbridge. This scenario is also not acceptable to the State of Louisiana, area parish governments, adjacent landowners or several local and national environmental Non-Governmental Organizations. This alternative is not included in the local government, state government, and environmental organization plans for coastal Louisiana. For the above mentioned reasons, it is unacceptable and should not be implemented.

#### 2.6.4.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Alternative 1 is the most politically feasible plan. The Louisiana Congressional delegation and local politicians strongly support a total closure. This plan is less economically feasible than alternative 3, but it has many other positive attributes. Alternative 1 is the most socially feasible plan. Citizens of St. Bernard, Orleans, Jefferson and St. Tammany Parishes, all affected by Katrina, generally believe that the MRGO is a “hurricane highway”, despite strong scientific data that demonstrates otherwise. Thus, the general citizenry of southeastern Louisiana is highly supportive of a positive closure. Numerous comments on the LEIS also favored at least one closure in the MRGO.

Alternative 1 is the most satisfactory to the State of Louisiana. The State of Louisiana has taken a number of significant actions related to the future of the MRGO and clearly identified its position on the de-authorization of the channel. Key pieces of information highlighting the state's position include:

1. A letter from the Governor calling for immediate closure of the MRGO. In a June 2006 letter Governor Blanco wrote General Riley regarding the MRGO stating "I write to unequivocally express the policy of this State regarding the future of the Mississippi River Gulf Outlet (MRGO) ... my Advisory Commission on Coastal Protection, Restoration and Conservation has recommended the immediate closure of this channel." (see Appendix A).
2. The completion of a Master Plan for Coastal Protection and Restoration highlighting total closure of the MRGO. The State Master Plan calls for the

immediate closure of the MRGO. To quote, “Immediately construct a closure dam at Bayou LaLoutre ...” The Master Plan was developed with intensive public input and was unanimously adopted by the Louisiana Legislature.

3. Passage of state appropriations in the current fiscal year dedicated to co-sponsoring MRGO closure. The Fiscal Year 08 State Annual Plan includes funds for the LERRDs associated with the proposed total closure structure.
4. Provision of a letter of interest in serving as the non-Federal sponsor. The State of Louisiana has expressed an understanding of the current law and administration policy regarding implementation of Federal water resources projects. In a letter of intent dated September 25, 2007, the Chair of the Coastal Protection and Restoration Authority of Louisiana (CPRA) expressed the State of Louisiana’s interest in sharing the costs of implementing the recommendations of this report “. . . dependent upon the nature of the local cooperation requirements and their specific costs” (see Appendix O).
5. Self-certification of the non-Federal sponsor's financial capability. The state certified its financial capability to serve as the local cost share sponsor for the MRGO closure plan. (see Attachment 1).
6. Participation in the project Civil Works Review Board and expression of strong commitment and support for the recommended plan.
7. The State of Louisiana has committed to provide a revised letter of assurance that clearly articulates their desire to serve as the non-Federal sponsor. A letter meeting this requirement is anticipated from the state in November 2007.

The closure is also highly satisfactory to local citizens and citizens of other parts of the country as evidenced by public meeting comments and comments on the Draft Report/LEIS. Many non-governmental organizations (local and national) find the closure highly satisfactory when compared to the other alternatives. Alternative 1 appears to be highly satisfactory to adjacent landowners when compared to the other alternatives.

Alternative 1 is highly unsatisfactory to navigation interests because they lose deep-draft access to infrastructure on the IHNC and the GIWW until the IHNC Lock is replaced. They have also expressed desire for an alternative route around the IHNC Lock. The team has recognized these comments and worked diligently to seek resolution. However, in the end, no reasonable alternatives were identified to satisfy concerns regarding the low probability of impacts to the shallow draft industry. No cost effective shallow draft alternatives are likely to exist based on the low level of benefits and the rare occurrence of using the MRGO as a by-pass around the IHNC Lock.

Thus, it can be concluded that Alternative 1 is clearly the most acceptable plan for MRGO de-authorization based on both feasibility and satisfaction.

Construction of a rock closure structure at Bayou La Loutre is the most acceptable plan across a range of additional goals and objectives. These include de-authorizing the Federal navigation channel, the highest level of environmental benefits, and compatibility with LACPR alternatives. This plan would immediately restore the portion of ridge cut by MRGO. Restoration could allow wildlife to cross the ridge and return tidal flow to pre-MRGO conditions. This plan is likely to immediately reduce salinity north of the closure structure. The MRGO/Lake Borgne Landbridge could change from the saline marsh it is now to a brackish marsh type. More intermediate marsh and cypress could occur in Central Wetlands. Once in place, the closure structure might quickly reduce size of H/A Zone in Lake Pontchartrain. These could then also reduce H-A Zone. The plan is estimated to prevent the potential loss of a significant percent of the 2,343 net acres of marsh estimated to be lost under the future without de-authorization. The closure structure would remove deep-draft navigation and could allow sea turtles to reoccupy Inland Reach.

#### 2.6.4.3 Alternative 2 – Phased Construction of a Total Closure Structure Across the MRGO Near Bayou La Loutre

Alternative 2 is less politically feasible than Alternative 1 – the Louisiana political delegation and local politicians favor an immediate closure. Alternative 2 is more economically feasible than Alternative 1. It is less socially feasible than Alternative 1 because citizens have expressed a desire for immediate closure. Alternative 2 is less satisfactory than Alternative 1 to the State of Louisiana, local parishes, adjacent landowners and various NGOs. Alternative 2 is slightly more satisfactory to navigation interests than alternative 1 because it allows shallow-draft navigation until about 2014. In conclusion, Alternative 2 is less feasible and satisfactory than Alternative 1. This plan is not advisable by the USCG, and it is unacceptable to the shallow-draft navigation industry because of uncertainties surrounding future channel shoaling. This alternative is not consistent with the State of Louisiana's Master Plan for Coastal Protection and Restoration and it does not satisfy the expressed goals and interests of local governments and several local and national environmental Non-Governmental Organizations. This alternative is not included in the local governments, state government, and environmental organization plans for coastal Louisiana.

This alternative is less acceptable than Alternative 1 for additional reasons. The Bayou La Loutre Ridge would not be restored until about 2014. There would be no ridge restoration benefits during this period, then benefits for a ridge would be the same as Alternative 1. This plan would provide some immediate salinity reduction north of the notched structure, but not as much as Alternative 1. The return of marsh to a less saline habitat type on the MRGO/Lake Borgne Landbridge and in the Central Wetlands is unlikely to occur until about 2014. Then when the closure structure is completed, Alternative 2 would have same benefits as Alternative 1. Benefits of reducing the H/A Zone in Lake Pontchartrain would be same as those for Alternative 1. There would be slightly less marsh loss prevented than with Alternative 1 due to possibility of shallow-draft navigation until about 2014. The phased closure structure would remove deep-draft navigation and could allow sea turtles to reoccupy Inland Reach. This alternative would be less compatible than Alternative 1 until about 2014 in relation to ecosystem

restoration, the freshwater diversion at Violet would have to be larger and restoration of the landbridge would be more costly.

#### 2.6.4.4 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

Alternative 3 may maximize economic benefits better than Alternative 1, but as indicated above, it clearly fails the test of implementability from political and social perspectives. Thus, it is unacceptable and should not be implemented. This plan is not advisable by the USCG, and it is unacceptable to the shallow-draft navigation industry because of uncertainties surrounding future channel shoaling. Table 2.5 provides an overview and comparison of alternatives against each of the four P&G criteria. This alternative is not acceptable because it is not feasible in terms of political or social considerations. This alternative has higher environmental impacts to area wetlands and estuarine salinity than Alternatives 1&2. This plan does not meet the expressed goals of local government, landowners, or environmental NGOs. In addition, the alternative is not consistent with the State of Louisiana's Master Plan for Coastal Protection and Restoration. The state has indicated that this alternative (along with the Future Without De-authorization and Alternative 2) is deemed inconsistent with the Louisiana Coastal Zone Management Plan as approved by the National Oceanic and Atmospheric Administration (U.S. Department of Commerce). This alternative is not included in the local governments, state government, and environmental organization plans for coastal Louisiana.

This plan is less acceptable than Alternative 1 or 2 for additional reasons. Under this alternative the Bayou La Loutre Ridge would never be restored and would remain open for the 50 year period of analysis and beyond. There would be essentially no salinity reduction for many years. Salinity might increase in Lower Basin as per Tate et al. Marsh types would probably remain as at present and not become less saline. Changes in H-A Zone are unlikely until USACE constructs measures to reduce storm surge into IHNC. It is possible that deep-draft vessels might use the channel longer than with Alternative 2. Thus, there could be a higher percentage of the estimated 2,343-acre marsh loss than Alternative 2. Once deep-draft vessels ceased to use the de-authorized channel, sea turtles could reoccupy Inland Reach. This Alternative would be less compatible for comprehensive ecosystem restoration than Alternative 2 but more compatible than the future without de-authorization. Cost of a potential Violet Canal freshwater diversion and restoration of the landbridge would fall between Alternative 2 and the future without de-authorization.

## **2.7 ALTERNATIVE 2 ELIMINATED FROM FURTHER EVALUATION**

Alternative 2 was eliminated from further evaluation based on the comparison of alternatives based on the four criteria in principles and guidelines presented in Section 2.6 and the assessment of planning risk and uncertainty presented in Section 2.5.2. Therefore, Alternative 2 was not carried forward for the evaluation and comparison of environmental consequences presented in Section 3.

Alternative 2 was eliminated from further evaluation because it was deemed to be less complete, effective, and acceptable than Alternative 1 and less efficient than Alternative 3. Additionally, the benefits that may be derived from shallow-draft navigation usage before 2014 under Alternative 2 are speculative in nature because of the planning risk and uncertainty surrounding the potential rate of future MRGO channel shoaling. Given the risk and uncertainty and the performance of the alternative when evaluated against the four criteria in principles and guidelines, Alternative 2 was eliminated from further evaluation.

**Table 2.5 Comparison of Alternatives Based on Four Criteria in Principles and Guidelines**

<b>CRITERIA</b>	<b>FUTURE WITHOUT DE-AUTHORIZATION</b>	<b>ALTERNATIVE 1</b>	<b>ALTERNATIVE 2</b>	<b>ALTERNATIVE 3</b>
<b>Completeness</b>	Not a complete plan. It does not meet the study objective of de-authorizing the channel. Assumes channel is dredged to authorized dimensions (recognizing appropriations limits). However, neither deep-draft nor shallow-draft is economically justified.	Most complete plan; it provides positive closure of de-authorized channel immediately. Plan eliminates possibility of through navigation after de-authorization.	Second most complete plan; it de-authorizes the channel but allows shallow-draft navigation until about 2014, when closure structure is completed.	Marginally complete plan; it de-authorizes the channel but does not physically close the de-authorized channel. Plan allows possibility of through navigation after de-authorization <sup>7</sup> . Will be no navigation aids on de-authorized channel.
<b>Effectiveness</b>	Least effective because does not de-authorize the channel.	Effective at meeting the requirement of de-authorizing the project.	Effective at meeting the requirement of de-authorizing the project.	Effective at meeting the requirement of de-authorizing the project.
<b>Efficiency</b>	Most costly and least benefits. B/C is 0.17 to 1	Third most costly. B/C is 2.5 to 1	Second most costly. B/C is 2.7 to 1	Least Costly. B/C is 3.7 to 1
<b>Acceptability</b>	<b>Not acceptable</b> (see details below).	Most acceptable (see details below).	Partially acceptable (see details below)	<b>Not acceptable</b> (see details below).
Technically feasible	Yes	Yes	Yes	Yes
Environmental Acceptability	Not environmentally acceptable	Highly environmentally acceptable	Less environmentally acceptable than Alt. 1	Not environmentally acceptable

<i>Salinity reduction</i>	Salinity in the Pontchartrain Basin would remain changed from historic conditions (Salinity should stay stable in Mid-Basin and might increase in Lower Basin as land loss from various causes continues). (see Section 3 and Appendix D). Habitat types are expected to generally remain as they are at present.	Slightly reduced salinity is expected throughout the project area soon after completion of closure structure (modeling indicates greatest reduction could be at Alluvial City – 6.0-6.6 ppt; salinity stratification north of the structure would be reduced; it is expected that the size of the H-A zone in Lake Pontchartrain could shrink). (see Section 3 and Appendix D). MRGO/Lake Borgne Landbridge could return to brackish marsh. More intermediate marsh and cypress could occur in Central Wetlands.	Fewer salinity improvements prior to completion of closure structure in about 2014. (see Section 3 and Appendix D). Marsh change on Landbridge and in Central Wetlands unlikely to occur until about 2014. Then when closure completed, Alt. 2 would have same benefits as Alt. 1. H-A Zone same as Alt. 1.	Salinity is unlikely to become lower for several years until much of the channel shoals. (see Section 3 and Appendix D). Salinity might increase in Lower Basin. Marsh types should remain as at present. Change in H-A Zone unlikely until USACE constructs measures to reduce storm surge into IHNC.
<i>Marsh loss</i>	Beneficial use could create 2,702 acres of marsh; erosion would likely destroy 4,565 acres of marsh for a net loss over 50 years that could be of 2,343 acres. (see Section 3 and	Marsh loss could be decreased by a significant percentage of the 2,343 acre net loss of the future without. (see Section 3 and Appendix G).	Slightly less marsh loss prevented than under Alt.1 because shallow-draft navigation could use the channel until about 2014. (see Section 3 and Appendix G).	More marsh loss than Alternative 1, but probably significantly less than future without. (see Section 3 and Appendix G).

	Appendix G).			
<i>Endangered species (sea turtles)</i>	Unlikely that sea turtles would be found in Inland Reach. Turtles would continue be taken in the Bar Channel.	Could allow sea turtles to reoccupy Inland Reach. <sup>1</sup>	Could allow sea turtles to reoccupy Inland Reach. <sup>1</sup>	Sea turtles could reoccupy Inland Reach once deep/large shallow-draft vessels ceased using channel
<i>Restores Bayou La Loutre Ridge</i>	Ridge was a hydrologic barrier and a natural Line of Defense that protected marshes to north. Ridge may remain open for 50 years.	Immediately restores ridge function cut by MRGO. Restoration could allow wildlife to cross the MRGO, reduce salinity (see below) and return tidal flow to pre-MRGO conditions.	Ridge function not fully restored until about 2014. No restoration benefits during that period, then same as Alt. 1.	Ridge function never restored, MRGO would remain an open connection from the Gulf to Lake Borgne for 50 years.
Economically feasible	No	Yes, see efficiency	Yes, see efficiency	Yes, see efficiency
Financially feasible	<b>No</b>	Yes	Yes	Yes
Politically feasible	<b>No</b>	Yes, highly	Less politically feasible than Alt. 1.	<b>No</b> <sup>5</sup>
<i>Compatibility with non-Federal plans for Coastal Louisiana</i>	This alternative is not included in the local government, state government, and environmental organization plans for coastal Louisiana mentioned under Alt. 1.	The channel closure is included in a number of local government, state government, and environmental organization plans for coastal Louisiana (see Section 2.6.2.2).	This alternative is not included in the local government, state government, and environmental organization plans for coastal Louisiana mentioned under Alt. 1.	This alternative is not included in the local government, state government, and environmental organization plans for coastal Louisiana mentioned under Alt. 1.
<i>Compatibility with USACE initiatives (LACPR, LCA,</i>	Least compatible with comprehensive ecosystem restoration.	Most compatible with comprehensive ecosystem restoration.	This alternative would be less compatible than Alternative 1 until about	Less compatible for comprehensive ecosystem restoration

<i>CWPPRA Restoration Plan)</i>	Specifically, the size and cost of any potential freshwater diversion projects would be the highest of any alternative and there would be greater marsh loss on the MRGO/Lake Borgne Landbridge and thus more resources would be required to protect and restore this landbridge.	Specifically, consistent and supportive of many previous assessments of MRGO environmental solutions including the Louisiana Coastal Area Ecosystem Restoration Plan, CWPPRA Restoration Plan, and the elements under consideration for the LACPR study; the size and cost of a freshwater diversion at the Violet Canal could be the smallest compared to other alternatives; and restoration of the MRGO/Lake Borgne Landbridge would be the least costly.	2014 in relation to ecosystem restoration. Specifically, a freshwater diversion at Violet Canal would have to be larger and restoration of the landbridge would be more costly.	than Alt. 2 but more compatible than future without de-authorization. Cost of potential Violet Canal freshwater diversion and restoration of the landbridge would fall between Alternative 2 and the future without de-authorization.
<i>Satisfactory to State</i>	Highly unsatisfactory and inconsistent with State Master Plan.	Highly satisfactory and consistent with the State Master Plan.	Marginally satisfactory and inconsistent with State Master Plan until 2014.	Highly unsatisfactory and inconsistent with State Master Plan.
Legally feasible	Yes	Yes	Yes	Yes
Institutionally feasible	Yes	Yes	Yes	Yes
Socially feasible <sup>6</sup>	<b>No</b>	Yes, highly	Yes, but less feasible than Alt. 1.	<b>No</b> <sup>5</sup>
<i>Satisfactory to local parishes</i> <sup>2</sup>	Highly unsatisfactory	Highly satisfactory compared to other	Less satisfactory than Alt. 1.	Highly unsatisfactory

		alternatives and future without.		
<i>Satisfactory to adjacent landowners</i>	Highly unsatisfactory	Highly satisfactory compared to other alternatives and future without.	Less satisfactory than Alt. 1.	Does not satisfy expressed concerns.
<i>Satisfactory to various non-governmental organizations's</i> <sup>3</sup>	Highly unsatisfactory	Highly satisfactory compared to other alternatives and future without.	Less satisfactory than Alt. 1.	Highly unsatisfactory
<i>Satisfactory to navigation interests</i> <sup>4</sup>	Satisfies some interests in the industry that expressed support for restoring coastal Louisiana while maintaining shallow draft alternative route.	Highly unsatisfactory because feasible shallow draft alternate route not available.	Unsatisfactory because feasible shallow draft alternate route only available until 2014.	Unsatisfactory because alternate route not available after about 2014.

<sup>1</sup> National Marine Fisheries Service letter dated September 14, 2007

<sup>2</sup> St. Bernard, Orleans, Jefferson, St. Tammany

<sup>3</sup> Coalition to Restore Coastal Louisiana, Lake Pontchartrain Basin Foundation, Environmental Defense, National Audubon Society, National Wildlife Federation, Louisiana Wildlife Federation, American Rivers, Gulf Restoration Network, levees.org

<sup>4</sup> Port of New Orleans, Shell, CITGO, Soluta, U.S. Coast Guard, Rhodia, Lonestar, Gulf States Maritime, Gulf Intracoastal Canal Assn., American Waterway Operators, Kirby Corp, Ed Peterson

<sup>5</sup> "Implementability means that the alternative is feasible from technical, environmental, economic, financial, political, legal, institutional, and social perspectives. If it is not feasible due to any of these factors, then it can not be implemented, and therefore is not acceptable. However, just because a plan is not the preferred plan of a non-Federal sponsor does not make it infeasible or unacceptable *ipso facto* " (ER 1105-2-100 E3. a(4)(a)(1).

<sup>6</sup> Information on social feasibility was gathered from a number of public meetings and feedback from stakeholders (see Section 4).

<sup>7</sup> Discussions with stakeholders in the navigation industry (such as pilots, shipping companies, the Port of New Orleans, dock operators, industry trade groups) and with the USCG indicate that vessels are likely to continue to navigate the MRGO channel until depth conditions become inadequate for ocean vessel transits. Shallow draft vessels are also likely to continue to use the channel as long as adequate depth remains for their navigation purposes. Many aids to navigation were damaged or destroyed by hurricane Katrina and have not been replaced due to the uncertainty of the future of the channel. After de-authorization, relic aids to navigation would be removed through coordination with the USCG, but navigation is likely to continue unless the channel is physically blocked.

## 2.8 EVALUATION AND COMPARISON OF REMAINING ALTERNATIVES

The Future Without De-authorization, Alternative 1 and Alternative 3 were analyzed in Section 3 using comparable information to assess relative consequences to the environment. The impact of each alternative across a range of significant resources is presented in Table 3.10. The following text compares the Future Without De-authorization, Alternative 1, and Alternative 3 relative to this assessment of environmental impacts. A comparison of total project construction costs and average annual benefits and costs for each alternative are presented in Table 2.4.

Under the Future Without De-authorization, it is anticipated that navigation use would return to pre-Katrina levels; however, it has been determined that this level of navigation use does not economically justify a continued Federal interest in the authorized Project. The Future Without De-authorization also results in net environmental losses. Approximately 2,702 acres of marsh could be created by beneficial use in 50 years, but, about 5,045 acres of marsh could be lost to wake and wave erosion. Thus there could be an estimated net loss of about 2,343 acres of marsh during the 50 year period of analysis. There would be no salinity reduction in the Pontchartrain Basin under the Future Without De-authorization and habitat types would remain as they are today. The "H-A Zone" in Lake Pontchartrain would continue to occur nearly every year. The Future Without De-authorization has little compatibility with other potential ecosystem restoration efforts, such as a freshwater diversion structure at Violet.

Alternative 1 provides a physical closure to eliminate attempted navigation on the channel after de-authorization and maximizes protection of the environment. In addition, compatible with the study authority (Section 1.2), Alternative 1 has the highest compatibility with other potential ecosystem restoration efforts being considered under LACPR, such as a freshwater diversion structure at Violet. Alternative 1 immediately closes the MRGO to all navigation, thereby eliminating potential through navigation which could occur prior to the channel shoaling in naturally. It yields the fewest average annual net economic benefits (\$7.8 million) because all navigation benefits are lost as soon as the total closure structure is installed. Shallow-draft tows that use the MRGO as an alternate route when the IHNC is congested or unexpectedly closed could no longer do so. (Note: this cost is included in calculation of net economic benefits). There is the potential for erosion to increase along the banks of Bayou La Loutre and other waterways if vessels currently using the MRGO channel utilize the other waterways as alternative routes; however, although this is not quantifiable the positive impacts of the alternative far outweigh any impacts to alternative routes. Alternative 1 could prevent a significant percentage of the 2,343 net acres of marsh estimated to be lost over 50 years under the future without condition. Greater salinity reduction and vegetation change to historic habitat types is anticipated to occur over a larger area. It is estimated that there could be a reduction in the size of the "H-A zone" in Lake Pontchartrain. If authorized and funded, Alternative 1 could be built in one construction effort lasting an estimated 170 days.

Alternative 2 was eliminated from further evaluation.

Alternative 3 maximizes net economic benefits; however, it fails to reduce the negative environmental impacts associated with erosion and increased salinity since it does not provide a physical closure of the channel and therefore through navigation of the channel would be limited only by natural shoaling. Additionally, Alternative 3 is not as compatible with the ecosystem restoration goals of LACPR as Alternative 1. Alternative 3 yields the greatest average annual net economic benefits (\$9.1 million) because it requires minimal investment and because shallow-draft navigation benefits would only be limited by natural shoaling within the channel. Alternative 3 has no construction costs, except 1) aids to navigation and channel markers would be removed at the discretion of the United States Coast Guard and 2) the USACE would dispose of some existing disposal and channel easements. This alternative could be implemented almost immediately after Congressional authorization and appropriation. Shallow-draft navigation would be prohibited over time because the channel would not be maintained; however shallow-draft navigation would not be impeded by a structure. Most shallow-draft navigation would be unable to use the Sound Reach of the channel after about 2014. Shallow-draft tows that use the MRGO as an alternative route when the IHNC is congested or unexpectedly closed could no longer do so after about 2014 (Note: this cost is included in the calculation of net economic benefits). It is estimated that slightly more marsh would be lost than under Alternative 1, but significantly less than under the future without condition. It is estimated that Alternative 3 is unlikely to influence salinity or marsh vegetation types or reduce the “H-A zone” in Lake Pontchartrain. Additionally, potential future ecosystem restoration measures, such as a freshwater diversion structure at Violet, could be more difficult to implement than under Alternative 1. For example, without a structure in the MRGO channel, a much larger freshwater diversion would be required at Violet, which would increase cost significantly and decrease the ability to control desired environmental results within the greater Pontchartrain Basin. Assessment of this alternative also raised questions about whether or not the alternative could be classified as comprehensive and therefore responsive to the Congressional direction.

## **2.9 RATIONALE FOR SELECTING RECOMMENDED PLAN**

Alternative 1 has been selected as the Recommended Plan. The Recommended Plan is consistent with the study authority as described in Public Law 109-234 and explained in House Report 109-494 (see Section 1.2). The Recommended Plan also fulfills the study purpose and need (see Section 1.5) and the study goals and objectives (see Section 1.6) which are derived from the study authority. The Recommended Plan presents a comprehensive plan to de-authorize all navigation on the MRGO channel from the GIWW to the Gulf of Mexico; proposes that navigation function be maintained outside of the GIWW to Gulf of Mexico portion of the channel; proposes plan features; and proposes existing project features to be de-authorized or to remain authorized (see Section 6.1). The Recommended Plan minimized cost associated with the disposition of the de-authorized project while meeting the criteria of completeness, effectiveness, efficiency and acceptability. The Recommended Plan results in \$7.8 million in net annual benefits, reduces negative environmental impacts in the study area through reductions in erosion and salinity, and may reduce the size of the “H-A zone” in Lake Pontchartrain. The Recommended Plan was developed in consultation with St. Bernard Parish, the State of Louisiana, and affected Federal Agencies, as well as other stakeholders and the general

public (see Section 4). While the Recommended Plan does not propose hurricane or storm damage reduction features, the Recommended Plan was identified because it is more compatible with the goals of LACPR than Alternative 3. The Recommended Plan is acceptable, complete and effective as evaluated under the P&G criteria. Although the plan is not the least cost alternative, it is recommended because it fully meets three of the four P&G criteria while Alternative 3, the least cost alternative, only fulfills the efficiency criteria. Additionally, the Recommended Plan is consistent with all of the alternatives being evaluated under LACPR and can be fully integrated into any of the LACPR plans under consideration. The Recommended Plan provides for reduced salinities in areas targeted for restoration under LACPR, LCA, CWPPRA, as well as, restoration efforts of other Federal and State agencies. Reduction in salinities will improve the effectiveness of, and likely reduce the cost of, ecosystem restoration measures planned for these areas. The MRGO Final Report and LEIS will be included in the LACPR Final Report. Specific features of the Recommended Plan are addressed in Section 6.

## **SECTION 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

This section first generally describes the project area. The remainder of the chapter presents conditions for each significant resource, future without de-authorization conditions and then the direct and indirect impacts of the two alternatives on these significant resources. Significant resources presented include: water quality (with an emphasis on salinity); vegetation; wildlife; fisheries; essential fish habitat; threatened and endangered species; recreation; cultural resources; aesthetics; air quality; navigation; business; employment and community cohesion. Comparative and cumulative impacts of the alternatives are analyzed at the end of the chapter.

### **3.1 PROJECT AREA DESCRIPTION**

#### **3.1.1 Land Characteristics**

The project area is located in southeastern Louisiana in St. Bernard, Orleans, Jefferson, St. Charles, St. John the Baptist, Tangipahoa and St. Tammany Parishes (see Figure 1.1). It covers the Lower Pontchartrain Basin, which consists of Lake Borgne, the MRGO, a portion of the Gulf of Mexico, Chandeleur and Breton Sounds, surrounding wetlands, and small towns near the Mississippi River. The Middle Pontchartrain Basin is also in the project area. It consists of Lake Pontchartrain with its adjacent cities and towns and surrounding wetlands. New Orleans and Metairie lie on the south bank of the lake. The remainder of the lakeshore is mainly wetlands.

The MRGO channel, located southeast and east of New Orleans, is in the Lower Pontchartrain Basin. The channel begins in the Gulf of Mexico and extends through the shallow waters of Breton Sound. There are three- and eight-mile long rock jetties extending from the mainland into the sound on the north and south sides of the channel. Then for 37 miles, the MRGO passes through coastal wetlands. About 10 miles inland, the channel cuts through a relic distributary of the Mississippi River, Bayou La Loutre, and its natural ridge. Bayou La Loutre continues westward from the MRGO to Bayou Terre aux Boeufs and meanders eastward of the MRGO through the Biloxi Marshes. A 4,000-foot wide disposal area built with dredged material from the MRGO lies immediately southwest of the MRGO channel. The marshes of Breton Sound lie directly west of the southern portion of the disposal area. Although there is a small hydrologic connection, the MRGO has very little influence in the Breton Sound wetlands. About 10 miles up the MRGO from Bayou La Loutre, there is a hurricane protection levee constructed on a portion of the disposal area adjacent to the MRGO channel. There are shoreline protection features all along this portion of the disposal area. The levee runs atop the disposal area northwestward along the MRGO to the GIWW. A local levee, known as the Forty Arpent Levee, is found immediately west of the Central Wetlands. Open water and wetlands exist northeast of the MRGO. North of Bayou La Loutre, Lake Borgne lies northeast of the channel. There is a landbridge of marsh and ponds between MRGO and the lake, the landbridge is very narrow in two places. The larger towns of St. Bernard Parish (Chalmette, Mereaux, Violet, and Poydras) are found between the Forty

Arpent Levee and the Mississippi River. Some small fishing towns lie outside the hurricane protection levee, such as Yscloskey, Shell Beach, and Hopedale.

The MRGO connects with the GIWW at the northwest end of the Inland Reach at which point the MRGO and the GIWW run contiguously westward for 6 miles to the IHNC (also called the Industrial Canal) in New Orleans. Hurricane protection levees are located on portions of the north and south disposal areas of the GIWW Reach. The IHNC runs between the Mississippi River and Lake Pontchartrain. The nearly 90-year old IHNC Lock lies at the southern end of the IHNC and provides access to the Mississippi River. The city of New Orleans lies on either side of the IHNC.

### **3.1.2 Climate**

The project area has a subtropical marine climate strongly influenced by the water surface of many sounds, bays, lakes and the Gulf of Mexico. Prevailing southerly winds increase the marine climate characteristics. During the fall and winter, the project area experiences cold continental air masses which produce frontal passages with temperature drops. During the spring and summer, the project area experiences tropical air masses which produce a warm, moist airflow conducive to thunderstorm development.

The project area is susceptible to tropical storms and hurricanes. These weather systems can cause considerable property and environmental damage and loss of human life. The most recent hurricanes were Katrina and Rita in 2005, which caused devastating damage in the project area.

## **3.2 SIGNIFICANT RESOURCES**

### **3.2.1 Water Quality**

Over the past 6,000 to 7,000 years, salinity in the project area has shifted with the major deltaic meandering of the Mississippi River. Modern efforts to control flooding and improve navigation included numerous bank stabilization, channel alignment, dredging, lock, dam, levee, and spillway projects on the Mississippi River. Such alterations to the Mississippi River and surrounding wetlands have increased salinity in the project area by altering the flow of freshwater in the region (USACE 2004).

Prior to construction of the MRGO typical tidal flow within the Breton Sound area was reduced as it moved across the marshes and wetlands inward toward Lake Borgne (USACE 2004). The Bayou La Loutre ridge provided a basin boundary that limited the flow of saline water from the Breton Sound area into Lake Borgne (Rounsefell 1964). The MRGO provides a more direct flow of higher salinity and higher density water inland toward areas of St. Bernard and Orleans Parishes due to the breaching of the La Loutre Ridge (Wicker, et al. 1981).

A hypoxic/anoxic zone in Lake Pontchartrain was first described by Poirrier (1978). Its existence was verified by extensive water quality sampling done by DEQ in 1980 and 1982 (Schurtz and St. Pe, 1984). This zone appears to be caused primarily because the MRGO carries bottom water in excess of 20 parts per thousand (ppt) which enters the

IHNC and then Lake Pontchartrain during the flood tide cycle (Georgiou and McCorquodale 2002). This saline water sinks to the bottom where it moves with the bottom lake currents and can cover at least 1/6 of the lake's bottom. This stratified water inhibits both mixing and oxygenation, generally leading to hypoxic (low oxygen) or anoxic (no oxygen) conditions near the lake bottom (Schurtz and St. Pe 1984). This H-A zone seems to appear most often in the spring and summer (Abadie and Poirrier 2001).

Coliform levels along the MRGO have usually exceeded the DEQ criteria, indicating a widespread area of water and wetlands that are subject to bacterial pollution. The likely source is nearby populated areas. Measured dissolved oxygen levels at Bayou Dupre have consistently been above the minimum state standard and Environmental Protection Agency (EPA) criteria. With rare exceptions, the pH measurements also have been within the desirable range of 6.5 to 9.0. Toxic substances, including heavy metals and synthetic organics, have been measured above EPA criteria levels, but no patterns consistently exceeding the criteria for particular substances have been observed.

#### 3.2.1.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

No significant increase in average annual salinity is projected in the foreseeable future for Lake Maurepas and Lake Pontchartrain. Salinity is expected to increase in the Lake Borgne region and surrounding marshes due to wetland loss in the area (Tate, et al. 2002; USACE 2004). Other water quality parameters would likely remain unchanged. The "H-A zone" in Lake Pontchartrain could continue to exist.

#### 3.2.1.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

During construction of the total closure structure, turbidity would be temporarily increased and dissolved oxygen could drop in the vicinity of the work.

In 2002, researchers modeled the seasonal changes in salinity that might occur in the Lake Pontchartrain Basin as a result of varying the depth and width of the MRGO at the Bayou La Loutre ridge (Tate, et al. 2002). Results of the study are presented in Appendix D. The biggest modeled reductions in salinity are at Martello Castle and Alluvial City north of the closure and adjacent to the MRGO (see Figure 1.1). By lowering salinity stratification north of the total closure structure, it is possible that much of the stratification in Lake Pontchartrain could be reduced, and it is expected that the size of the "H-A zone" in the lake could shrink (Abadie and Poirrier 2001). Other water quality parameters in MRGO and vicinity might remain unchanged.

#### 3.2.1.3 Alternative 3 - Cease All MRGO Operations and Maintenance Activities Immediately

It is estimated that salinity could remain as it is for several years. In about 2014, the Breton Sound segment of the MRGO could silt to 12 feet. The channel across the sound would eventually reach ambient depth. USACE estimates the jetty reach might not silt to 12 feet for 15 years and the lower half of the Inland Reach could take 40 years to reach 12 feet. It is estimated that salinity might gradually drop as channel depth decreases, but

tides and southerly winds could continue to push water with high salinity up the MRGO for many years.

### 3.2.2 Vegetation

Coastal Louisiana was created by the Mississippi River as it moved across the landscape over the last 7,000 years. It would create a delta, then find a shorter way to the Gulf and create another delta as the former one deteriorated. Bayous Sauvage and La Loutre were Mississippi River distributaries that created much of Orleans and St. Bernard Parishes. When Europeans arrived, they started taming the river with levees so the area could be inhabited. After the 1927 flood, the river was leveed most of its way through Louisiana. These levees prevented the nearly annual flooding that brought sediment and nutrients to the wetlands and sustained them. Channels were dug for navigation and canals to extract petroleum which changed the hydrology of the wetlands, allowed saltwater to move into freshwater wetlands and ponded water on other wetlands (USACE 2004). Nutria were introduced in the 1930's and escaped and now damage wetlands. Natural subsidence is occurring at a rate of approximately one to three feet per century in the study area (USACE 2004). Storms also cause erosion and hurricanes can destroy significant amounts of marsh. For these natural and man-made reasons, coastal Louisiana is losing about 24 square miles of wetlands per year (Barras et al. 2003).

Table 3.1 shows habitat change and wetland loss between 1956 and 1990 in the project area, which amounts to a loss of 68,660 acres of wetlands. Factors such as subsidence, navigation channels, oil and gas exploration and production, development and storms have contributed to these losses. Approximately 67 percent of the swamp in the project area was lost while saline marsh gained 8 percent.

**Table 3.1 Habitat Change in Project Area 1956-1990**

<b>Middle and Lower Basin Wetlands</b>	<b>1956</b>	<b>1978</b>	<b>1990</b>
Fresh/intermediate Marsh	24,780	22,270	21,280
Brackish Marsh	145,190	135,890	103,360
Saline Marsh	74,020	60,220	79,645
Swamp	43,620	20,760	14,600
<b>Total</b>	<b>287,610</b>	<b>239,140</b>	<b>218,950</b>

(Wicker, 1980; Barras, Bourgeois, Handley, 1994)

Habitat mapping was done by O'Neil in 1949, Chabreck, Joanen and Palmisano in 1968, and Chabreck and Linscombe in 1978, 1988 and 1997. The description below is based on these maps (USGS 2002).

Marsh type is dependent on salinity which is generally determined by rainfall and man-induced changes such as channel and canal dredging. The exact locations and acreages of fresh and intermediate marshes in the project area have fluctuated over time, probably depending on rainfall during the year. Intermediate marsh has been present in the Central Wetlands three of the five years it has been mapped. Brackish marsh has decreased significantly in acreage and fluctuated slightly in location throughout the habitat type mapping period. From 1949-1978 saline marsh was only found south of the Bayou La

Loutre ridge and in the outer Biloxi Marshes. In 1988 saline marsh had encroached up the MRGO to about Bayou Dupre and into the Biloxi Marshes near the MRGO. By 1997, it was found further north along the MRGO, past Bayou Dupre.

#### 3.2.2.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Following the restoration of the channel to its full dimensions, which is expected to create about 1,512 acres of marsh, it would be maintained for the 50-year period of analysis. There would be no beneficial use in the Inland Reach because material would be placed in upland confined disposal areas. Based on past dredging volumes, an average of approximately 17 acres is estimated to be created each year behind the jetties. An average of approximately 21 acres per year is assumed to be created on Breton Island.

Numerous factors contribute to wetlands losses and coastal erosion in the project area including delta deterioration, subsidence, canal and channel construction, wind and wake erosion, salt water intrusion, oil and gas exploration, herbivory, and storms. In order to estimate how many of these created wetlands would remain in 50 years, a standard Wetland Value Assessment spread sheet was used (Roy, 2006). Taking into account the acres assumed created each year and subtracting the acres estimated to be lost each year, there would be approximately 2,702 acres remaining at the end of the fifty year period of analysis.

However, during the same 50 years, erosion along unprotected areas of the MRGO north bank would result in the loss of approximately 4,565 acres of marsh. There could be an estimated net loss of about 2,343 acres of marsh over the 50-year period of analysis (see Appendix G).

#### 3.2.2.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

There would be no beneficial use of dredged material. It is assumed that there would be less bank erosion on the MRGO between the GIWW and the Gulf of Mexico than with the future without condition since there would be no deep- or shallow-draft traffic on the closed channel. It is possible that the loss prevented might be a significant percent of the 2,343 net loss of the future without condition. Although data are not available to permit quantifying changes in vegetation, it is unlikely that the changes in salinities due to closure could cause any large-scale changes in vegetation types within the Pontchartrain Basin.

Two areas immediately adjacent to the MRGO may experience changes in habitat type. Modeling results (Tate et al., 2002) indicate that a total closure structure would return salinity to the brackish marsh salinity range of 4-15 ppt at all months between Martello Castle and Bayou La Loutre (see Appendix D, Exhibit 2). Thus, the land bridge east of MRGO should become brackish marsh most years. In the Central Wetlands, there could be intermediate marsh near the Forty Arpent Levee and more cypress should regenerate.

### 3.2.2.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

It can be assumed that some deep and shallow-draft vessels could use the channel until about 2014, which is estimated to cause more bank erosion on unprotected banks of the MRGO than Alternative 1. Compared to the future without de-authorization, this alternative is anticipated to cause significantly less future marsh loss because deep and shallow-draft vessels will be unable to use the channel for over 40 years. Salinity in the basin is not likely to change significantly and therefore marsh types would probably remain as at present.

### **3.2.3 Wildlife**

Kerlin (1979) described the wetlands of St. Bernard Parish, south of Lake Borgne, as being “second only to the marshes of the lower Mississippi River Delta in importance to waterfowl in southeastern Louisiana.” The area supported at least 250,000 ducks during the winter and was important for the production of muskrat, nutria, mink, river otter, and raccoon, all staples of the Louisiana fur industry.

Since about 1970, waterfowl and furbearers have declined in the lower basin (Kerlin 1979). However, they are still present. Alligators too have declined, but are still present (Kinler and Campbell 2002). Birds found in the project area include nine species of wading birds, more than five species of seabirds, four species of shorebirds, six species of songbirds, and several raptor species. Game mammals present are swamp rabbit, raccoon, and fox/gray squirrels. Non-game mammals include opossum, nine-banded armadillo, and several species of bats, rodents, and insectivores (USFWS 1997).

Personnel from Louisiana Department of Wildlife and Fisheries, U.S. Fish and Wildlife Service and Natural Resources Conservation Service provided recent (since 1985) trends in wildlife for the 1998 Coast 2050 Study (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, 1998). They assessed common wildlife in the mapping units of the Middle and Lower Basin. Populations of seabirds, shorebirds, dabbling and diving ducks and raptors have been generally steady there since 1985. Around Lake Pontchartrain populations of furbearers, game mammals and alligators have been steady. In the lower basin, these animals have generally been decreasing since 1985.

The bald eagle was officially removed from the List of Endangered and Threatened Species as of August 8, 2007. However, it continues to be protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). The USFWS developed the National Bald Eagle Management (NBEM) Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute “disturbance,” which is prohibited by the BGEPA. Those guidelines recommend maintaining: (1) a specified distance between the activity and the nest (buffer area); (2) natural areas (preferably forested) between the activity and nest trees (landscape buffers); and (3) avoiding certain activities during the breeding season. The buffer areas serve to minimize visual and auditory impacts associated with human

activities near nest sites. Ideally, buffers would be large enough to protect existing nest trees and provide for alternative or replacement nest trees. On-site personnel should be informed of the possible presence of nesting bald eagles within the project boundary, and should identify, avoid, and immediately report any such nests to the USFWS Regional Office located in Lafayette, Louisiana. A copy of the NBEM Guidelines is available at: <http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>. Bald eagles are currently winter breeding residents in southern Louisiana.

Section 10 of the Main Report provides common and scientific names of plants and animals mentioned throughout this report and appendices.

#### 3.2.3.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Marsh loss that is estimated to occur with this scenario means that there could be less habitat available for wildlife that utilizes marshes such as waterfowl and furbearers. It is possible that this could lead to fewer numbers of certain species, such as mallards, green-winged teal and muskrat. Although bald eagles are unlikely to nest near the MRGO channel, they may use the area as forage. However, they are likely to avoid the area during maintenance dredging and temporarily disperse into adjacent areas with available foraging habitat.

#### 3.2.3.2 Alternative 1 –Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

The estimated reduction in marsh loss could increase the abundance of wildlife that utilizes marsh, such as wading birds and sea birds, compared to the future without de-authorization. The reduction of salinity above the total closure structure could improve portions of the project area slightly for waterfowl and furbearers. Although bald eagles are unlikely to nest near the proposed project area, they may use the area as forage. However, they are likely to avoid the project site during construction and disperse into adjacent areas with available foraging habitat.

#### 3.2.3.6 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

It is possible that there could be less of an increase of marsh-dependent wildlife than Alternative 1. Salinity in the basin is not likely to change significantly, so habitat for waterfowl and furbearers are anticipated to stay as it is now. Bald eagles are unlikely to be affected under this alternative.

### **3.2.4 Fisheries**

Rounsefell (1964) characterized fishery resources in the marsh and bayou areas now traversed by the MRGO using bimonthly sampling data collected by the Texas Agricultural and Mechanical Research Foundation during the period July 1959 to March 1961 (El-Sayed 1961). Estuarine-marine species dominated the fish communities with spot, Atlantic croaker, anchovy, and sea trout ranked among the top 10 species in every area sampled. Only two freshwater species, blue catfish and sunfish, ranked among the top 10 species. Four non-migratory estuarine species ranked among the top 10 species in

each of the lower salinity areas. Four marine species were among the top 10 most abundant species in the higher salinity areas (El-Sayed 1961).

The five most widespread and economically important fish species (spot, Atlantic croaker, anchovy, sea trout, and Gulf menhaden) were more abundant in the higher salinity areas. Neither brown shrimp nor white shrimp exhibited notable salinity preferences and were transient residents of the marshes. Small blue crabs were most abundant in low salinity waters (Rounsefell 1964).

Fontenot and Rogillio (1970) sampled Lake Borgne and the Biloxi Marshes from 1960-1968. They reported an overall increase in salinity in the early 1960's. Of the 22 species of freshwater fish caught early in the study, 10 species disappeared by the end of the study. Ecological affinities were evenly distributed with 32 percent freshwater species, 29 percent estuarine-marine species, and 29 percent marine species. The six important sport fish in the area, spotted sea trout, Atlantic croaker, black drum, red drum, spot and Gulf sheepshead, were not influenced by the increased salinity.

Lake Pontchartrain was studied by Thompson and Fitzhugh (1985) who described it as having a strong freshwater species component before MRGO with freshwater fish comprising 33 percent of the species, marine fishes 30 percent and estuarine-marine species 20 percent. However, estuarine-marine species dominated the lake in numbers of individuals with Atlantic croaker, Gulf menhaden, sand seatrout and red drum being common. White shrimp were more common than brown shrimp most years. Much of the lake bottom was disturbed by dredging for *Rangia* clams. Large clams were generally found only near the edges of the lake (Thompson and Fitzhugh 1985).

While studying Lake Pontchartrain, Thompson and Fitzhugh (1985) found that the 10 most abundant species showed patterns of relative abundance similar to pre-MRGO surveys. Bay anchovy and Atlantic croaker were the most abundant in all studies. However, species diversity declined dramatically after MRGO. In the 1950s otter trawls yielded 44-60 species; in the 1970s, only 27-33 species were collected. White shrimp landings generally decreased, while brown shrimp landings increased after the construction of MRGO in both Lake Pontchartrain and Lake Borgne, most likely as a result of salinity increases (Thompson and Fitzhugh 1985).

Benthic species were taken less frequently in 1978 than in 1953-54, indicating deterioration of the lake bottom due to shell dredging (Sikora and Sikora 1982). Shell dredging ceased in 1990 and the benthos was expected to improve (Abadie and Poirrier 2000).

Personnel from Louisiana Department of Wildlife and Fisheries and National Marine Fisheries Service provided recent (last 10-20 years) trends in fisheries for the 1998 Coast 2050 Study (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority.1998). They assessed common commercial and recreational fish in the mapping units of the Middle and Lower Basin. They found trends had been steady for red and black drum, brown land white shrimp,

spotted seatrout, blue crab, American oyster, Gulf menhaden and southern flounder in most of the area. Red drum have been increasing in the Biloxi Marshes and Eloi Bay. The oyster has been decreasing in the Central Wetlands and Eloi Bay.

The “H-A zone” which appears to develop primarily due to high salinity from the MRGO adversely affects benthos. In the spring and summer, there are often no large Rangia clams in the 1/6 of the lake often affected by the “H-A zone.” Other sessile benthic organisms are probably adversely impacted during the hypoxic events (Junot et al. 1983).

#### 3.2.4.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

During dredging, turbidity would temporarily increase. Fish could avoid the turbid area. Benthos would be destroyed by actual dredging and by disposal in the sound. However, populations should return in a few months. Some shallow-water benthos would be destroyed during marsh creation, but it could be replaced with the benthos typical of a saline marsh. It is probable that the six most important sport fish could be present in at least the same numbers as they are now. In Lake Pontchartrain large Rangia clams and other benthos are expected to remain absent from the “H-A zone.” Fishery production in the lake could remain as it is at present.

In the Lower Basin a net loss of marsh might cause a slight decline in estuarine dependent fish. Fishery distribution in the Upper Basin should remain as it is at present because salinity has stabilized (Tate et al. 2002).

#### 3.2.4.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Placement of the total closure structure could destroy about 17 acres of benthic habitat. Reducing marsh loss is estimated to improve estuarine dependent fisheries compared to the future without de-authorization. Passage for fish up and down MRGO would be blocked by the total closure structure. There are numerous alternate routes such as Bayou La Loutre, the Back Levee Canal, Lena Lagoon, Lake Athanasio, Alabama Bayou, and others that would allow organism movements through the estuary. Portions of the basin north of the total closure structure could become slightly less saline (see Water Quality). Rock surfaces of the total structure could be utilized as an attachment surface by epiphytic algae and invertebrates that form an additional food web base. Fishery abundance and distribution should increase slightly compared to the future without. It is probable that the six most important sport fish could be present in at least the same numbers as they are now. Salinity stratification in Lake Pontchartrain could be reduced and the “H-A zone” is estimated to be diminished. This could allow large Rangia clams to exist throughout the lake and other sessile benthos could increase, which should provide more food for fish that rely on benthos.

#### 3.2.4.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

Salinity in the basin is not likely to change significantly. There are expected to be slightly less improvements in estuarine-dependent fisheries than Alternative 1. It is

probable that the six most important sport fish might be present in the same numbers as they are now. In Lake Pontchartrain, large Rangia clams and other benthos are expected to remain absent from the “H-A zone.” Thus fisheries in the lake could remain as they are today.

### **3.2.5 Essential Fish Habitat (EFH)**

The Magnuson-Stevens Fishery Conservation and Management Act, mandating protection of Essential Fish Habitat, became law in 1995. Essential fish habitats are “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” Specific categories of EFH include all estuarine waters and substrates (mud, sand, shell, rock, and associated biological communities), including the sub-tidal vegetation (sea grasses and algae) and adjacent inter-tidal vegetation (marshes and mangroves).

The Gulf of Mexico Fishery Management Plan (FMP) designates the fresh, estuarine, and marine waters in St. Bernard Parish as EFH. The FMP manages several fisheries occurring in St. Bernard Parish or adjoining waters; they include brown shrimp, white shrimp, red drum, gray snapper, and Spanish mackerel. Categories of EFH in St. Bernard Parish have been designated by the Gulf of Mexico Fishery Management Council through the 1998 generic amendment of the FMP for the Gulf of Mexico. In the Inland Reach of the MRGO white shrimp, brown shrimp, red drum, and sharks are likely to be present.

EFH in the project area includes the estuarine waters and substrates of the MRGO channel cut and adjacent water bottoms from the Gulf of Mexico to Mile 60. Substrates include mud bottoms, some of which have been dredged and re-deposited.

#### **3.2.5.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)**

Bottom habitat would be temporarily disturbed during dredging and open water disposal in the sound. Marsh could be created with dredged material in amounts as were created pre-Katrina and bank erosion on the unprotected portions of the north bank could continue. There could possibly be a net loss of marsh over 50 years, all valuable EFH.

#### **3.2.5.2 Alternative 1 –Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately**

There could be destruction of about 17 acres of EFH on the bottom of the MRGO at the total closure structure location. Passage for brown and white shrimp, sharks and red drum up and down MRGO would be blocked by the total closure structure. However, there are numerous alternate routes such as Bayou La Loutre, the Back Levee Canal, Lena Lagoon, Lake Athanasio, Alabama Bayou, and others that would allow for continued organism movement through the estuary. Compared to the future without de-authorization, it is possible that this alternative could decrease future marsh loss increasing valuable EFH.

### 3.2.5.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

There would be no dredging so EFH at the bottom of MRGO and in disposal areas in the sound would not be temporarily disturbed. The channel would slowly shoal, when filled significantly it would be more valuable EFH. Compared to the future without de-authorization, this alternative is expected to significantly decrease future marsh EFH loss, but the decrease is not likely to be as much as that in Alternative 1.

### **3.2.6 Threatened and Endangered Species**

The Endangered Species Act of 1973 protects Federally listed species and their designated critical habitats.

A variety of whales including several threatened and endangered species ply the deeper waters of the Gulf of Mexico, but would not normally be expected to occur in inshore or near shore waters. The hawksbill sea turtle (E) and leatherback sea turtle (E) are extremely rare in this portion of the Gulf of Mexico, and only occasional strays occur in Louisiana

Prior to Hurricane Katrina, the USACE used dredged material from Breton Sound to create an average of 21 acres of barrier island habitat per year on Breton Island. No placement of dredged material has occurred on Breton Island since Hurricane Katrina. Hurricane Katrina nearly destroyed all of South Breton Island and left only a small piece of North Breton. The remainder of the Chandeleur chain was also severely damaged.

In the past, brown pelicans bred on Breton Island and foraged in the waters of Breton and Chandeleur Sounds. Brown pelican nesting success has apparently decreased since Hurricane Ivan in 2004. However, brown pelicans are not presently nesting, and have not nested in the recent past on Breton Island. In the early 2000's, brown pelicans nested on islands created by the USACE at Baptiste Collette Bayou. These islands do not appear heavily damaged by the 2005 hurricane season.

Prior to the 2004-2005 hurricane seasons, wintering piping plovers occasionally used exposed flats in the area, especially on the Chandeleur Islands, including Breton Island. Portions of these islands are designated as Critical Habitats.

The loggerhead sea-turtle occasionally occurs in the MRGO in the vicinity of the Bar Channel. Kemp's Ridley sea turtle has appeared recently in some numbers in the Grand Isle/Grand Terre area, and apparently occurs in the vicinity of the MRGO. The green sea turtle has also been sighted in the vicinity of the MRGO. Sea turtles are apparently rare in the MRGO. When dredging occurs, sea turtle generally leave the vicinity of the dredge.

Manatees have been sighted within the MRGO, and are known to travel long distances up coastal waterways from the Gulf of Mexico. On July 9, 2001, a manatee was observed passing safely through the IHNC Lock and into the Mississippi River. Manatees are usually within Louisiana coastal waterways only during the warm weather/warm water months.

Reports of incidental catches and sightings show that the Gulf sturgeon exists within several coastal waterways and lakes in southeast Louisiana, including those connected to the MRGO. Lake Pontchartrain east of the Causeway and Lake Borgne are designated as Critical Habitat for the Gulf sturgeon. The potential exists for Gulf sturgeon to be within the MRGO through access from Breton Sound, Lake Borgne, the IHNC, and the GIWW.

In 2006, USACE, MVN prepared an extensive draft Biological Assessment to address impacts that USACE navigational operations and maintenance projects might have on the Gulf sturgeon. Data and conclusions from this report are incorporated by reference into this LEIS. The Gulf sturgeon spends the late fall, winter and early spring foraging in the Gulf of Mexico and its estuaries such as Lakes Borgne and Pontchartrain. They then enter coastal rivers like the Pearl River April through June to spawn and rest. The sturgeon leave the rivers for the estuaries and the Gulf September through November.

There have been four records of Gulf sturgeon within the project area. In 1974 a commercial fisherman reported taking a 7-foot Gulf sturgeon in Bayou Bienvenue. A commercial fisherman in 1983 reported catching a 6-foot Gulf sturgeon in Violet Canal. In 1990, Louisiana Wildlife and Fisheries (LDWF) personnel captured a 32-inch Gulf sturgeon in Lena's Lagoon near the MRGO. In January 2005 a sturgeon was found in the MRGO near the Breton Sound Marina during an USACE study of sonic-tagged Gulf sturgeon (Kirk 2007).

Estuaries near river mouths are important because adults and sub-adults have fasted while in the river. They eat available polychaetes, gastropods, isopods and amphipods. They prefer sandy bottoms such as those found in Lake Pontchartrain near Goose Point, Fountainbleau State Park, and just west of Hwy 11. The eastern part of the lake is an important wintering habitat for sub-adults and juveniles.

#### 3.2.6.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Beneficial use of dredged material could continue on Breton Island and this area could be available for use by brown pelicans and wintering piping plovers. Existing detailed dredging contract conservation specifications dealing with manatees, Gulf sturgeon, and sea turtles would continue, as would coordination with USFWS and National Marine Fisheries Service (NMFS). Sea turtles, in agreed upon numbers would continue to be taken in the Bar Channel. Thus, the maintenance of the deep-draft channel is not likely to adversely affect threatened or endangered species.

#### 3.2.6.2 Alternative 1 - Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Any brown pelicans that might occur in the project area during construction and maintenance could be temporarily displaced to nearby suitable habitat. There could be less habitat for brown pelicans and less Critical Habitat for the piping plover since there would be no beneficial use on Breton Island because maintenance dredging would cease. No more sea turtles would be taken in the Bar Channel. For construction of the total

closure structure, existing detailed contract specifications which protect sea turtles, manatees and Gulf sturgeon would continue, as would coordination with USFWS and NMFS (see Appendix J). Passage for Gulf sturgeon and manatees up and down MRGO would be blocked by the total closure structure. However, there are numerous other alternate routes such as Bayou La Loutre, the Back Levee Canal, Lena Lagoon, Lake Athanasio, Alabama Bayou, and others that allow for fish passage through this portion of the estuary. Thus, construction and maintenance of the total closure structure is not likely to adversely affect threatened or endangered species.

### 3.2.6.3 Alternative 3- Cease All MRGO Operations and Maintenance Dredging Activities Immediately

There would be no impacts to endangered or threatened sea turtles since the Bar Channel would not be dredged. There could be less habitat for brown pelicans and less Critical Habitat for the piping plover since there would be no beneficial use of dredged material on Breton Island. This alternative is not likely to adversely affect any endangered or threatened species.

## **3.2.7 Natural and Scenic Rivers System**

The Louisiana Natural and Scenic Rivers System was established in 1970. There are presently seven waterways designated by the State of Louisiana as Natural and Scenic Rivers in the vicinity of the MRGO (see Figure 3.1). The portion of Bayou Bienvenue from Bayou Villere to Lake Borgne is designated. The remaining designated waterways in the project area are in the Central Wetlands with Pirogue, Bashman and Terre Beau Bayous being clustered around the area where Bayou Dupre (also scenic) goes through the MRGO disposal area. Bayou Chaperon is about 2 miles north of Bayou Dupre and runs from the Forty Arpent Levee northeastward to the MRGO disposal area. The Lake Borgne Canal (Violet Canal) runs from the Mississippi River levee to the Central Wetlands where it meets Bayou Dupre.

### 3.2.7.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Maintaining the authorized deep-draft channel should have essentially no impact on any Louisiana natural and scenic rivers.

### 3.2.7.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Construction of the total closure structure should have essentially no impact on any Louisiana natural and scenic rivers.

### 3.2.7.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

No impact.

Figure 3.1 – Natural and Scenic Rivers System



### **3.2.8 Air Quality**

Congress passed The Clean Air Act in 1963 during construction of MRGO. St. Bernard Parish is currently classified in attainment of all NAAQS (USEPA EA #PO-30). This classification is the result of area-wide air quality modeling studies.

#### 3.2.8.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

This alternative would have no impact on present air quality and attainment status. However, ambient air quality would be impacted temporarily due to the emissions of dredges in the project vicinity. At construction cessation, air quality in the project area would return to pre-construction conditions. The total volatile organic compound emissions for this project during construction are anticipated to be well below the minimum level of 100 tons/year. Therefore, this action conforms to the Louisiana State Implementation Plan.

#### 3.2.8.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Impacts would be the same as future without described above.

#### 3.2.8.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

No impacts.

### **3.2.9 Recreation Resources**

Several non-Corps, state and Federal areas within or adjacent to the project area, provide recreational resources to the public (see Table 3.2). Many of the Important Birding Areas (IBA) in Louisiana recognized by the National Audubon Society (NAS) are State or Federally operated areas. In this basin the NAS lists Breton National Wildlife Refuge (NWR) as an IBA. According to an April 2007 press release by the NAS, “The Breton/Chandler barrier island chain once housed tens of thousands of nesting terns and ducks, more than enough to meet the criteria as a global IBA for congregatory species. Despite the loss of 50% of their habitat area as a result of Hurricane Katrina, these islands still support globally important populations of Royal and Sandwich terns.”

Marsh losses in the area are associated with the channel and other factors such as subsidence, storms, development and oil and gas exploration. However, habitat loss apparently has not influenced the six important sport fish in the area, spotted sea trout, Atlantic croaker, black drum, red drum, spot and Gulf sheepshead. Overall, there are less freshwater fish caught in the area today compared to historic data. Species diversity has declined, reducing the variety of fish caught by recreational fisherman (Thompson and Fitzhugh 1985).

Waterfowl hunting in the area has changed due to elimination of valuable wintering habitat according to biologists of the LDWF. The marshes south of Lake Borgne are of less value to certain types of waterfowl (snow geese, mallard, and green-winged teal) due to salinity intrusion and marsh deterioration caused by many factors. Recreational

hunting for certain species has been adversely affected locally but remains strong in other areas of the state. Access to fishing and hunting areas is through bayous, canals and by way of the MRGO via boat launch ramps.

**Table 3.2 Major Public Recreation Resources within Lake Pontchartrain Basin**

State of Louisiana	Lake Pontchartrain Sanctuary	Trawling is prohibited in Lake Maurepas and that portion of Lake Pontchartrain from the shoreline 1 ¼ miles out from the Jefferson Orleans Parish line west to South Point, from South Point along the railroad bridge west from the railroad bridge to Goose Point. Trawling is prohibited between the railroad bridge and the I-10 in Lake Pontchartrain.
US Fish and Wildlife Service National Wildlife Refuges (NWR)	Bayou Sauvage NWR	A refuge of 22,770 acres with estimated annual visitation of 400,000 with a value of \$15 million; one of its objectives is to provide opportunities for fish and wildlife-oriented recreation in an urban setting, offering trails, fishing, bird watching, canoeing, photography, bicycle path, crawfishing and crabbing, van tours and wildlife observations.
	Breton NWR	A refuge of 18,000 acres, of which 5,000 acres are designated as Class 1 Wilderness, with estimated annual visitation of 100,000 with a value of \$10 million. Public opportunities include fishing, photography, camping and bird watching.
	Big Branch NWR	A refuge of 15,000 acres offering environmental education, birding, fishing, hunting, biking, hiking and canoeing.
Louisiana Wildlife and Fisheries (LDWF) Wildlife Management Areas (WMA)	Biloxi WMA	39,583 acres, offering hunting and fishing, camping, boating, crabbing, shrimping and bird watching.
	Joyce WMA	15,609 acres offering hunting, fishing crawfishing, bird watching and berry picking.
	Manchac WMA	8,325 acres, offering hunting, fishing, crabbing with a drop net and bird watching.
	Pearl River WMA	34,896 acres, offering fishing, canoeing, boating, crawfishing, waterfowl hunting, and camping.
	St. Tammany Wildlife Refuge	1,309.54 acres remain managed as a wildlife refuge. A variety of resident wildlife species inhabit the refuge including furbearers and alligators. It also serves as a resting and feeding area for wintering waterfowl.

**3.2.9.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)**

Recreation fishing would be temporarily disturbed during dredging operations. Much of the recreational activities occurring in Louisiana consist of hunting, fishing and wildlife viewing. Each of these activities are directly related to the conditions of natural resources of the area, and affected by land loss and changes in habitat diversity, and wildlife and fisheries populations that are expected to occur under the future without de-authorization. Populations of migratory birds and other animals could decrease that are directly dependent on the marsh and swamp.

Recreational resources in the project area that would be most affected in the future without action are those related to possible loss of wetlands/marshes and habitat diversity. Many recreational activities are based on aquatic resources and directly related to the habitat and species in an area. Habitat changes affect the wildlife populations, thereby affecting many recreational resources. Because salinity levels are expected to be

stable in the Middle Basin over the future without-project condition, little habitat change is expected. Habitat change could occur in the Lower Basin. However, loss of marshland from various causes over the project life and an increase in open water might have slight impacts on recreational fishing and hunting for estuarine-dependent species over the project life. Fishery habitats might decline as spawning places in the marsh are destroyed. A slight decline in the game population would also affect the hunting opportunities. Access to fishing and hunting areas would be through bayous, canals and by way of the MRGO via boat launch ramps.

### 3.2.9.2 Alternative 1: Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

The MRGO would no longer be used for access to points south of Bayou La Loutre. Passage for fish up and down the MRGO would be blocked by the total closure structure. However, many other local waterways are available as an alternative. Because fishery abundance and distribution are expected to increase slightly as compared to the future without de-authorization, there could be minimal but positive impacts on recreational fishing and hunting. The six most important sport fish could be present in the same numbers as they are now. Estuarine-dependent fisheries could also be positively impacted due to decreased loss in marsh habitat compared to future without de-authorization conditions. Lower salinity in portions of the project area is anticipated to have minimal positive effects on waterfowl compared to the future without de-authorization.

### 3.2.9.3 Alternative 3: Cease All MRGO Operations and Maintenance Dredging Activities Immediately

Under this condition, the MRGO between the GIWW and the Gulf of Mexico would not be dredged so recreational resources would temporarily be undisturbed. The channel would slowly shoal over time. Wetlands loss is anticipated to be significantly less than future without de-authorization, but more than in Alternative 1. Salinity in the basin is not likely to change significantly; there should be no positive or negative impact to fisheries from salinity changes. The six most important sport fish could be present in the same numbers as they are now. Waterfowl hunting could slightly increase under this alternative, compared to future without de-authorization. Access to fishing and hunting areas would be through bayous, canals and by way of the MRGO via boat launch ramps.

## **3.2.10 Cultural Resources**

### 3.2.10.1 Prehistoric Period

Several prehistoric sites are located along and near Bayou La Loutre. These archaeological sites range in age from the Troyville Period, ca. A.D. 400 to A.D. 700 through the Mississippian Period, ca. A.D. 1100. These time periods show an increase in population and a resulting proliferation of sites. Mound building continued but rather than used as burial mounds as in the preceding Marksville period (A.D. 200 to A.D. 400), these mounds were used as ceremonial platforms. Around 1100 A.D. in the Coles Creek, Plaquemine and Mississippian periods, large ceremonial centers were constructed with two or more large pyramidal mounds around a plaza in which they conducted religious

and civic ceremonies. During the Plaquemine/Mississippian periods, corn, squash and gourds were added to a hunting and gathering economy. Sites along Bayou La Loutre dating to the prehistoric period are 16SB91, 16SB76, 16SB142 and 16SB77.

#### 3.2.10.2 Modern Conditions

Although people lived in the area, it was not until around 1829 and into the 1840s that U.S. surveyors began to map the area. The 1840s Plat maps show several small plantations and cabins along the southeast bank of Bayou La Loutre. The area of land around the MRGO coastward from its intersection with Bayou La Loutre does not indicate land claims or settlements although the marsh was being utilized if not permanently settled. The archaeological record along Bayou La Loutre shows historic use as early as the late 1700s. Historic sites along Bayou La Loutre are 16SB92 which consists in two historic house foundations; 16SB91 which besides a prehistoric component also contains historic ruins and one tombstone; 16SB90, a late 1700s or early 1800s cemetery; 16SB142 a scatter of historic artifacts; and an unspecified historic site, 16SB77.

Oil drilling began in eastern St. Bernard Parish around the late 1930s with the construction of numerous canals such as the Bakers Canal and Engineers Canal which extend off of Bayou La Loutre. The seafood industry remains important in the area. Many of the businesses along the Bayou La Loutre and Bayou Yscloskey area harvest oyster and shrimp. Oil activity continues to occur in the area.

The entire project area has been inventoried for cultural resources. In 1979, Coastal Environments, Inc. performed an inventory along the entire MRGO and identified most of the sites in the project area (Coastal Environments 1982).

It is expected that Hurricane Katrina heavily damaged many of the sites in the Bayou La Loutre area. Several of the sites along Bayou La Loutre were not evaluated for National Register eligibility. These sites are: 16SB91, 16SB142, 16SB76, 16SB142, 16SB143 and 16SB77. Sites that have been determined to be not eligible to the National Register of Historic Places are: 16SB92 and 16SB90. No sites along Bayou La Loutre have been determined eligible to the National Register of Historic places.

#### 3.2.10.3 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

The Corps has met with the State Historic Preservation Office (SHPO) and determined that this action would not have an adverse effect on historic properties.

#### 3.2.10.4 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

The Corps has met with the SHPO and determined that this alternative would not have an adverse effect on historic properties.

### 3.2.10.5 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

The Corps has met with the SHPO and determined that this alternative would not have an adverse effect on historic properties.

### **3.2.11 Aesthetics (Visual Resources)**

The aesthetic values of aquatic areas are usually the enjoyment and appreciation derived from the natural characteristics of a particular area. Aesthetic values found within the project area's tidal marshes apply to the quality of life enjoyed by the general public. Richard Smardon, in *The Future of Wetlands Assessing Visual-Cultural Values* (1983), describes how tidal marshes rate fairly high in landscape quality in comparison to other landscape types. Thus many wetland landscape types, especially open salt marshes, tend to rate highly in scenic quality in the landscape continuum.

At the time of settlement, natural levee ridges bordered Bayou La Loutre and formed the major high elevation features within the project area. These levee ridges most likely appeared as linear woody vegetated islands protruding from the marsh. Ridges, intermingled with meandering water and rich, complex emergent vegetation patterns, presented ideal proportions of vegetation and open water. The variety of natural levee vegetation was mapped in an 1845 plat of a section of Bayou La Loutre. Vegetation existing then included cane, palmetto, live oak, sweetgum, hackberry, elm, ash, and wax myrtle.

Profound changes in the environment brought on by natural and human activities have altered the visual surroundings of the Bayou La Loutre area. Major changes include an increase in marsh deterioration due to navigation channels, oil and gas related canals, logging canals and subsidence. These changes have resulted in the area being dominated by geometric forms and patterns not natural to the tidal marsh environment. Subsidence has greatly reduced the extent of the natural levee zone. The natural levees of Bayou La Loutre, in the area where the MRGO crosses it today, no longer support the hardwood vegetation as described in the above, but are characterized by shrubby subsiding levee vegetation including palmetto, marsh elder, sea oxeye, big cordgrass and roseau.

### 3.2.11.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Overall, some of the surrounding marsh is expected to be lost as the result of shoreline erosion. This opening of the shoreline could reduce the visual appeal of the area.

### 3.2.11.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

The rock material used to construct the total closure structure would stand in contrast to Bayou La Loutre's vegetated southern levee ridge. The total closure structure would be maintained, not allowing vegetation to take hold and grow in the rock. Closing the MRGO at Bayou La Loutre could also cause an increase in erosion along Bayou La Loutre's levee ridges as recreational boat traffic would utilize it to access the Gulf of

Mexico and other points of interest. Beneficially, the rock total closure structure would serve to break up the unnatural linear southeast MRGO viewshed.

### 3.2.11.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

The opening of the shoreline could reduce the visual appeal of the area compared to Alternative 1.

### **3.2.12 Navigation**

Prior to completion of the MRGO, navigation in the vicinity was on the GIWW, the Mississippi River, and surrounding bays, lakes, and bayous. Ocean going vessels were restricted solely to the Mississippi River. Other vessels, ranging from tugs and barges to smaller motorized and sail craft, used waterways suitable for their draft.

The latest Waterborne Commerce Statistics Center (WCSC) data are available for 2005 (<http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusmvgc05.pdf>) and 2006 (<http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusmvgc06.pdf>). Traffic records from the WCSC show MRGO utilization steadily increasing until reaching a peak in terms of tonnage carried in 1978 and in terms vessel trips in 1982. Table 3.3 illustrates MRGO total domestic and foreign tonnage for the period 1977-2006. Table 3.3 contains data with 4-year increments from 1970-94 and 1995-06 continuous records (See Appendix B). Both tonnage and total vessels have decreased since that time.

Foreign-flag deep-draft vessel movements consist of self-propelled ocean-going vessels. Maximum loaded vessel drafts were approximately 36 feet with vessels taking advantage of advance maintenance and tides. For the period 1995-06, approximately 20 percent of vessels traveled with loaded drafts over 30 feet. Domestic cargo on the MRGO consists of shallow-draft barge traffic and coastwise ocean-going vessels. The maximum loaded drafts for the tow vessels are 12 feet or less and domestic coastwise vessels have maximum drafts in excess of 30 feet.

Comparison of tonnage volumes for the most recent period of record (2002-06) with the previous period (1992-94) shows current volumes down by nearly 60 percent, with drops in both domestic and foreign freight volumes. While total tonnage declined, the percentage of foreign freight maintained a larger share of total tonnage than domestic freight. The percentage of foreign freight represents approximately 85 percent of 1999-06 total tonnage. In spite of distributional changes, the overall trend illustrates a downturn for all traffic, with 2004 volumes representing an historic low before declining further in 2005 due to Hurricane Katrina. In 2006, volumes increased to greater than 2004 and 2005 volumes, but reflect a 48% decrease over 2003 levels. While the pre-Katrina declines were driven by a variety of factors, the MRGO authorized depth of 36 feet, which is recognizably shallow in comparison to some other U.S. Gulf Coast deep-draft channels, and the current dimensions of the IHNC Lock, are contributors. The IHNC Lock dimensions are 640 feet by 75 feet by 31.5 feet. The limitations of the MRGO, in terms of its 36-foot depth and the IHNC Lock likely impeded commercial navigation growth during periods of significant increases in the sizes of large vessels serving U.S. ports. The

lack of funds for operation and maintenance dredging during the 1990s, and the necessity to direct funds elsewhere for emergency dredging during the pre-Katrina years, is also likely to have contributed to declining trends.

Annual vessel trip totals are displayed in Table 3.4, which shows that cargo vessels have predominated. The number of trips has decreased since peaking in 1982 to a greater extent than has the tonnage, representing a move toward larger ships and bigger loads. Declines in annual MRGO vessel trip counts are also, of course, directly associated with the declining tonnage volumes as shown in Table 3.5.

Since its authorization, the size and draft of vessels using the MRGO has tended to increase to meet the competitive demand for more efficient movements of bulk commodities.

Note: For this report, the USACE is using the definition of deep-draft vessels contained in ER-1105-2-100. This defines deep-draft as those vessels requiring greater than 14 feet. The type of cargo vessel most often found on the MRGO is one that carries dry cargo. Very few tanker vessels use the MRGO.

As mentioned, cargo vessels are the predominant vessel type. Table 3.6 presents distribution of 2000 - 2004 freight tonnage by approximate vessel dead-weight tonnage (DWT) range, type, and beam width.

**Table 3.3 MRGO Tonnage by Year (1000s short tons)**

<b>Year</b>	<b>Total Tonnage</b>	<b>Foreign</b>	<b>Domestic</b>
1970	4,013	2,522	1,491
1974	5,308	3,386	1,922
1978	9,411	5,136	4,275
1982	5,572	3,878	1,694
1986	8,145	5,254	2,891
1990	7,084	4,611	2,473
1994	4,690	3,347	1,343
1995	5,701	3,416	2,285
1996	5,042	3,314	1,728
1997	5,253	3,552	1,701
1998	4,007	2,974	1,033
1999	5,369	4,619	750
2000	5,850	5,065	785
2001	4,173	3,634	539
2002	3,290	2,786	504
2003	2,847	2,442	406
2004	1,206	1,045	161
2005	741	676	65
2006	1,474	1,373	101

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center.

**Table 3.4 MRGO Number of Trips by Vessel Type (1970-2006)**

<b>Year</b>	<b>Total Trips</b>	<b>Passenger &amp; Cargo Vessels (Dry and Liquid)</b>	<b>Tow or Tugboat</b>	<b>Barge (Dry and Liquid Cargo)</b>
1970	4,809	1,476	1,220	2,113
1974	12,941	7,551	1,837	3,553
1978	17,956	11,828	1,841	4,287
1982	18,419	15,084	1,190	2,145
1986	6,212	1,941	1,460	2,811
1990	4,479	1,486	1,110	1,883
1994	5,130	3,006	903	1,221
1995	4,263	2,300	628	1,335
1996	6,934	5,433	519	982
1997	5,591	3,797	696	1,098
1998	2,827	1,700	462	665
1999	2,368	1,420	296	652
2000	2,386	1,541	188	657
2001	2,341	1,550	377	414
2002	2,590	1,693	488	409
2003	3,897	1,902	692	1,303
2004	2,584	1,972	447	164
2005	1,157	581	454	122
2006	868	215	461	192

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center.

**Table 3.5 MRGO Number of Trips by Vessel Type (Selected Years)**

Year	Total	Passenger & Cargo	Tow or	Barge (Dry and Liquid
	Total Tonnage	Vessels (Dry and Liquid)	Tugboat	Cargo)
1970	4,809	1,476	1,220	2,113
1974	12,941	7,551	1,837	3,553
1978	17,956	11,828	1,841	4,287
1982	18,419	15,084	1,190	2,145
1986	6,212	1,941	1,460	2,811
1990	4,479	1,486	1,110	1,883
1994	5,130	3,006	903	1,221
1995	4,263	2,300	628	1,335
1996	6,934	5,433	519	982
1997	5,591	3,797	696	1,098
1998	2,827	1,700	462	665
1999	2,368	1,420	296	652
2000	2,386	1,541	188	657
2001	2,341	1,550	377	414
2002	2,590	1,693	488	409
2003	3,897	1,902	692	1,303
2004	2,584	1,972	447	164
2005	1,157	581	454	122
2006	868	215	461	192

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center

**Table 3.6 MRGO Approximate Percentage of Foreign Freight by General DWT Range for Calendar Years 2000, 2002 and 2004**

DWT Range Estimate	% of short tons	Predominate Vessel Type
<10,000	16%	Refrigerated Cargo Vessel
10,000-19,999	14%	General Cargo, Containership
20,000-39,999	29%	Containership, General Cargo
40,000-59,999	19%	Containership, Chemical Carrier
60,000-75,000	22%	Bulk Carrier
Total	100%	

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center

Examination of the 1970-96 historical trends for ocean-going freight indicates general upward movement in volume of cargo per vessel trip. A general upward trend, with recognizable annual fluctuations, was evident until 1988. In addition to ocean-going freighters, a large number of tugs and towboats use the MRGO. The general increase in barge trips relative to tow trips suggests transition towards larger volumes per barge and per tow-barge movement. Tank barges of 298-foot x 54-feet are the most frequent size. The largest tows are generally 4-barge tows consisting of three 298-foot x 54-foot barges and one 150-foot x 54-foot barge pushed by towboats generally ranging from 1,800 to 3,000 horsepower.

Table 3.7 presents information about the type of commodities shipped through MRGO. In 2004 and 2006, the commodity groups with the greatest number of tons transported on the MRGO were 1) “Manufactured Equipment, Machinery and Products”, 2) “Food and Farm Products”, 3) “Chemicals and Related Products”. For each of the groups, foreign commerce represented more than 80% of the group total.

**Table 3.7 Composition of Tonnage (short tons), 2004 and 2006**

Industry Group	2004			2006		
	Total	Domestic	Foreign	Total	Domestic	Foreign
Coal	0	0%	0%	0	0%	0%
Crude Petroleum	4	100%	0%	0	0%	0%
Petroleum Products	44	80%	20%	56	100%	0%
Crude Materials (exc. Fuels)	166	7%	93%	191	21%	79%
Food and Farm Products	292	0%	100%	569	0%	100%
Primary Manufactured Goods	251	14%	86%	117	3%	97%
Chemicals	109	18%	82%	484	0%	100%
Manufactured Equipment	323	17%	83%	22	0%	100%
All Others	17	0%	100%	35	0%	100%
<b>TOTAL</b>	<b>1,206</b>	<b>13%</b>	<b>87%</b>	<b>1474</b>	<b>7%</b>	<b>93%</b>

Source: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center

In FY06-07, Congress did not appropriate funds for dredging the MRGO between the GIWW and the Gulf of Mexico. As a result, the controlling depth of the channel is currently approximately 22 ft. This has allowed some deep-draft and all shallow-draft traffic to continue to operate on the channel. Deep-draft vessels are entering the MRGO light-loaded, calling on tidewater port facilities in New Orleans, and exiting through the IHNC Lock into the Mississippi River for outbound voyages. Some maritime interests have reported modifying vessel operations by moving products over to Mississippi River docks for loading. Other companies have adopted other operations modifications to continue commerce.

During times of extreme congestion of the IHNC Lock or when the lock is inoperable, some tows travel downstream on the Mississippi River to Baptiste Collette Bayou, exit Baptiste Collette Bayou into Breton Sound, and then enter the Inland Reach of MRGO. Eastbound tows then travel back inland on the MRGO to the GIWW Reach before continuing eastbound to locations in Mississippi, Alabama, and Florida. Westbound tows use the reverse route to avoid the IHNC Lock when it is congested or impassable.

Analysis of deep-draft navigation indicates that maintaining the authorized dimensions of the MRGO between the GIWW and the Gulf of Mexico is not cost-effective. Average annual operations and maintenance (O&M) costs to dredge a single shipping lane in the MRGO Inland Reach are \$12.5 million. However, maintaining a single shipping lane, which is half of the authorized dimensions, only produces approximately \$3.7 million per year in transportation efficiencies. Efforts to operate and maintain the fully authorized

dimensions (i.e. a two-lane channel 500 feet wide by 36 feet deep) would be even more costly and would not produce greater navigation benefits (see Appendix C). The analysis indicates that the maintenance of a deep-draft navigation channel, of any dimension, in the MRGO between the GIWW and the Gulf of Mexico is not economically justified.

The economic information available indicates that it is not cost effective to maintain shallow-draft navigation on the channel between the GIWW and the Gulf of Mexico in terms of National Economic Development (NED) criteria. The total average annual costs to maintain a 12 ft shallow-draft channel are approximately \$6 million whereas the estimated average annual benefits are approximately \$1.2 million.

#### 3.2.12.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

It is expected that a MRGO channel maintained for deep-draft navigation would allow both deep and shallow-draft traffic to return to levels just prior to Hurricane Katrina and to continue at that level in the foreseeable future.

#### 3.2.12.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Complete closure of the MRGO would eliminate all deep-draft and some shallow-draft commercial traffic along the waterway between the GIWW and the Gulf of Mexico. Recreational traffic may continue to use some sections of the channel.

Shallow-draft tows that traverse the IHNC Lock could not continue to use the MRGO as an alternate route during times of extreme congestion or unforeseen closures at the lock. Shallow-draft commercial traffic impacted by delays or lock closure could use some naturally deep alternative routes such as Baptiste Collette Bayou, Breton Sound and Chandeleur Sound to continue east-west traffic on the GIWW. The industry has expressed a willingness to continue working with the USACE and stakeholders to better identify these or other options.

#### 3.2.12.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

After some period of time, probably about 2014, the MRGO would be closed to all deep-draft and shallow-draft commercial traffic along the waterway between the GIWW and the Gulf of Mexico. After that, impacts for would be the same as Alternative 1. Recreational and commercial fishing and oil field service traffic may continue to use some sections of the channel and surrounding waterways with adequate existing draft.

### **3.2.13 Business**

The Port of New Orleans, the local sponsor, has historically dominated business activity along the MRGO. With the Mississippi River moving about 500 million tons of cargo each year – including chemicals, coal, timber, iron, steel and more than half of the nation's grain exports, the Port of New Orleans is one of America's largest gateways to the global market. In 2004, Board of Commissioners of the Port of New Orleans (PONO) tenants on the IHNC (Maersk SeaLand, New Orleans Cold Storage, Bollinger

Gulf Repair, Southern Scrap, Lafarge Corp., U.S. Gypsum Co., Halliburton Inc., and Holcim Inc.), generated \$5 million in annual revenues for the Board.

Maritime-related industries and publicly and privately-owned facilities reliant on deep-draft access on the IHNC were profoundly impacted by Hurricane Katrina. Facilities were severely damaged and workers displaced. Disruptions were similar to those experienced by owners and employees in other business sectors affected by the storm. Two PONO tenants, Maersk SeaLand (France Road Terminal Berth 1) and CG Rail (Elaine St. Wharf), chose to discontinue operations in New Orleans and relocate to Mobile, Alabama, partly because maintained deep-draft access via the MRGO was no longer available. The USACE has no authority to compensate for these business relocations.

Remaining area businesses are still involved in the process of recovery. The IHNC port area is currently in a state of flux as some businesses seek to restore normal operations, others seek to ultimately relocate due to the unavailability of deep water access to the Gulf via the MRGO and new businesses seek to locate at newly available IHNC port facilities. Businesses that rely on shallow-draft vessel operations have essentially recovered back to pre-Katrina levels.

#### 3.2.13.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

It is expected that facilities along the IHNC that depend on deep-draft access via the MRGO would, in time, recover to business activity just prior to Hurricane Katrina.

#### 3.2.13.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

If the MRGO channel is blocked, some businesses in the IHNC area that depend on deep-draft access via the MRGO, may choose to relocate. Four facilities have been identified as falling into this category. The USACE has no authority to assist these businesses in relocation or to pay any costs.

#### 3.2.13.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

If the MRGO channel is no longer maintained between the GIWW and the Gulf of Mexico several businesses in the IHNC area that depend on deep-draft access via the MRGO may chose to reestablish their operations elsewhere. Other maritime businesses may adapt their operations practices to utilize other area waterways and transportation systems to continue to conduct commerce from their existing locations.

### **3.2.14 Employment**

Employment for Orleans Parish in the years 1999-2004, showed a marginal decline in the number of people employed. The figures presented in Table 3.8 indicate a 4.5 per cent decline in employment.

Employment for St. Bernard Parish in the years 1999-2004, showed an increase in the number of people employed. The figures presented in Table 3.8 indicate a 6.0 per cent increase in employment. Total employment for the two parishes showed an overall decline of 3.9 per cent.

**Table 3.8 Pre-Katrina Employment**

Pre-Katrina Employment						
Parish	1999	2000	2001	2002	2003	2004
Orleans	259,010	263,536	263,084	253,859	250,767	247,260
St. Bernard	16,409	16,029	15,738	16,436	21,318	17,386
Total	275,419	279,565	278,822	270,295	272,085	264,646

Source: Laworks.net

While overall employment declined for the two parishes, major industries utilizing the IHNC/MRGO have maintained stable employment in the years immediately proceeding Hurricane Katrina. After the hurricane, records developed for the Louisiana Recovery Authority show the impact on employment in Orleans and St. Bernard Parishes. The impact on local business activity has been devastating. Estimates show 27 percent of all Orleans Parish businesses failed after Hurricane Katrina and 42 percent of firms with five or fewer employees failed, while St. Bernard lost 54 percent of its businesses, the highest loss rate in the state (Louisiana Recovery Authority 2006).

Referring to Table 3.9, as a result of Hurricane Katrina and the subsequent flooding, Orleans Parish saw an immediate decline of 63,129 jobs, or 26.2 percent loss in employment. The decline continued into November 2005, where 97,468 jobs were lost, representing a decline of 40.6 percent. Except for January 2006, there has existed a slow but steady growth in jobs, yet latest figures (June 2006) still show a 36.4 percent reduction from its pre-Katrina level.

St. Bernard Parish saw an immediate decline of 6,975 jobs, or 40 percent loss in employment. The decline continued into November 2005, where 11,651 jobs were lost, representing a decline of 66.7 percent. Since November 2005, there has existed a steady growth in jobs, but latest figures (June 2006) still show a 54.1 percent reduction from its pre-Katrina level.

Employment by the seven principle businesses located along the MRGO/IHNC has declined markedly post-Katrina. Two of the seven firms have relocated outside the New Orleans area, representing a loss of 230 jobs. The remaining firms have had to adjust their employment based on the level of business they can generate given the deep-draft closure of the MRGO between the GIWW and the Gulf of Mexico and the inadequate size of the existing IHNC Lock for many ships.

3.2.14.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

It is expected that employment dependent on firms located along the IHNC/MRGO area that depend on deep-draft access via the MRGO would, in time, recover to levels just prior to Hurricane Katrina.

**Table 3.9 Employment by Employers Subject to the Louisiana Employment Security Law**

Employment by Employers Subject to the Louisiana Employment Security Law				
Parish	Month	Number Employed	Percent Change from	
			Previous Month	August 2005
Orleans	July 2005	241,175		
	August 2005	241,264	0.04%	
	September 2005	178,135	-26.2%	-26%
	October 2005	143,796	-19.3%	-40.4%
	November 2005	143,332	-0.3%	-40.6%
	December 2005	149,425	4.3%	-38.1%
	January 2006	138,068	-7.6%	-42.8%
	February 2006	142,389	3.1%	-41.0%
	March 2006	148,070	4.0%	-38.6%
	April 2006	148,644	0.4%	-38.4%
	May 2006	150,446	1.2%	-37.6%
	June 2006	153,327	1.9%	-36.4%
St. Bernard	July 2005	17,569		
	August 2005	17,625	0.32%	
	September 2005	10,650	-39.6%	-40%
	October 2005	5,974	-43.9%	-66.1%
	November 2005	5,861	-1.9%	-66.7%
	December 2005	6,128	4.6%	-65.2%
	January 2006	6,960	13.6%	-60.5%
	February 2006	7,048	1.3%	-60.0%
	March 2006	7,306	3.7%	-58.5%
	April 2006	7,689	5.2%	-56.4%
	May 2006	7,847	2.1%	-55.5%
	June 2006	8,092	3.1%	-54.1%

Source: www.laworks.net

3.2.14.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

Firms dependent on deep-draft access via the MRGO could relocate if the channel is blocked between the GIWW and the Gulf of Mexico.. If firms were to relocate within the New Orleans geographic area, there would be little change in post-Katrina employment. If the firm were to relocate outside of the New Orleans area, local unemployment would increase.

#### 3.2.14.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

Without an authorized and maintained deep-draft MRGO channel between the GIWW and the Gulf of Mexico, businesses in the area may chose to modify their employment practices or they may chose to move their companies elsewhere. If firms chose to relocate within the New Orleans geographic area, there would be little change in post-Katrina employment. If firms chose to relocate outside of the New Orleans area, local unemployment would increase.

#### **3.2.15 Community Cohesion**

Prior to Hurricane Katrina, political leaders and residents of St. Bernard Parish have petitioned for the closure of the MRGO, citing concerns over erosion, loss of wetlands and hurricane protection, particularly with respect to storm surges.

Hurricane Katrina caused tremendous damage to five parishes in the Greater New Orleans area. Many residents of the affected areas, especially St. Bernard and Orleans Parishes, identify storm surge along the MRGO as the cause for the devastating damage to their property and lives. Flooding resulted in the loss of life, property damage, business losses, and the relocation of residents. Many residents of affected communities have joined together to call for the closure of the MRGO channel.

#### 3.2.15.1 Future Without De-authorization Conditions (continuation of the existing deep-draft channel with authorized width)

Residents of the affected areas of Orleans and St. Bernard Parishes would continue to argue for the closure of the MRGO, citing damages they attribute to the storm surge that occurred during Hurricane Katrina.

#### 3.2.15.2 Alternative 1 – Construct a Total Closure Structure Across the MRGO Near Bayou La Loutre Immediately

A majority of the residents living in affected areas of Orleans and St. Bernard Parishes would likely agree that an immediate closure of the MRGO would provide the greatest level of protection for their communities.

#### 3.2.15.3 Alternative 3 - Cease All MRGO Operations and Maintenance Dredging Activities Immediately

While discontinuance of dredging would alleviate the concerns of some residents of the affected areas of Orleans and St. Bernard Parish, many would continue to argue for an immediate closure of the MRGO, maintaining that the waterway remaining open for some period of time would still represent a threat to their communities.

### **3.3 COMPARISON OF IMPACTS**

Table 3.10 provides a summary of the environmental impacts evaluated in this document.

**Table 3.10 Comparison of Impacts**

<b>Significant Resource</b>	<b>Existing conditions</b>	<b>Future-without de-authorization.</b>	<b>Alternative 1 Total Closure</b>	<b>Alternative 3 All operations and maintenance ceased</b>
Water Quality – Salinity	Construction of MRGO and other factors increased salinity in Pontchartrain Basin.	Salinity should stay stable in Mid-Basin and might increase in Lower Basin as land loss from various causes continues.	Slightly reduced salinity throughout project area soon after closure. Modeling indicates greatest reduction could be at Alluvial City - 6.0-6.6 ppt. Salinity stratification north of the structure would be reduced and it is expected that the size of the H-A zone could shrink.	Salinity unlikely to become lower for several years until much of the channel shoals
Vegetation - Wetland Loss	From 1956 to 1990, approximately 68,660 acres of wetlands were lost in the Project Area. Approximately 91 acres of wetlands are lost per year on the unprotected north bank of the MRGO due to erosion. About 38 acres of wetlands were created yearly by beneficial use of dredged material before Katrina.	Wetlands could be created when the channel is dredged to authorized dimensions and more wetlands could be created each year. These could be lost at the background loss rate of the area and at the end of 50 years there could be 2,702 acres of created wetlands remaining. Erosion on the north bank is likely to cause the loss of 4,565 acres of marsh. Net loss over 50 years could be 2,343 acres of marsh.	There would be no beneficial use dredged material to create marsh. Removal of deep and shallow-draft vessels is anticipated to reduce the erosion of marsh on the north bank. Marsh loss could be decreased by a significant percentage of the 2,343 acre net loss of the future without.	More marsh loss than Alternative 1, but probably significantly less than future without.
Vegetation – Habitat Type	Wetland habitat types generally determined mainly by salinity. Drought, and human-induced causes can change habitat type.	Habitat types are expected to generally remain as they are at present. Saline marsh could move north along the MRGO.	No large-scale change in vegetation type. It is possible that the Lake Borgne Land Bridge could change from saline marsh to brackish marsh. Central Wetlands could possibly have more intermediate marsh and cypress.	Habitat types are expected to remain generally as they are at present.
Wildlife	Wintering waterfowl and furbearers have declined since about 1970, however are still present.	Estimated loss of marsh could reduce numbers of waterfowl, furbearers and other wildlife that are marsh-dependent	Reduction in marsh loss could increase abundance of marsh-dependent wildlife compared to the future without. Reduced salinity north of the closure could improve the area slightly for waterfowl.	Less of an increase of marsh-dependent wildlife than Alternative 1. Habitat for waterfowl and furbearers is anticipated to stay as it is now.
Fisheries – Fish	After about 1970, 22 species of freshwater fish were	Could be slight decline in estuarine-dependent fish due to marsh loss.	Could be slight increase in estuarine-dependent fish compared	Slightly less increase in estuarine-dependent fisheries when compared to

<b>Significant Resource</b>	<b>Existing conditions</b>	<b>Future-without de-authorization.</b>	<b>Alternative 1 Total Closure</b>	<b>Alternative 3 All operations and maintenance ceased</b>
and Shellfish	apparently no longer found in the Biloxi Marshes/Lake Borgne area. However six important sport fish seemed to be present in approximately the same numbers as prior to about 1970. H-A zone in Lake Pontchartrain causes reduced benthic community during the H-A event.	Salinity should not change significantly so fishery distribution might remain approximately as at present. Six most important sport fish could be present in approximately the same numbers as exist now. It is likely that the H-A zone in Lake Pontchartrain could remain as it is at present.	to the future without. Fish have alternate routes, so passage up and down the MRGO should not be blocked by closure. Six most important sport fish should be present in approximately the same numbers as exist now. Salinity stratification would be reduced north of the total closure which is expected to allow the H-A zone in Lake Pontchartrain to shrink. Large <i>Rangia</i> and other benthos could colonize the area which should lead to increased fishery production in a portion of the lake.	the future without than Alternative 1 Six most important sport fish should be present in approximately the same numbers as exist now. Large <i>Rangia</i> clams and other benthos expected to remain absent from the “H-A zone.”  fisheries in lake could remain as they are today.
Essential Fish Habitat (EFH)	MRGO channel, adjacent waters and marshes and Lake Pontchartrain are EFH	Bottom habitat in MRGO would be temporarily disturbed by dredging. Possible net loss of 2,343 acres of marsh which is valuable EFH.	Less than 17 acres of EFH on the bottom of the MRGO would be destroyed by the closure structure. There are alternate routes so passage of managed species up and down the MRGO might not be blocked by the closure. It is possible that this alternative could have significantly less loss of marsh EFH than the future without.	Compared to future without, this alternative is expected to significantly decrease future marsh EFH loss, but decrease is not likely to be as much as that in Alternative 1.
Threatened and Endangered Species (T&E)	Brown pelicans have not nested on Breton Island in the recent past. Beneficial use has nourished Breton Island and piping plovers have utilized the island. Sea turtles in agreed-upon numbers have been taken in the Bar Channel. Detailed contract specifications to protect the sturgeon, manatee and sea turtles have been used. Maintenance of the channel did not adversely affect T&E species.	Brown pelicans have not nested on Breton Island in the recent past. Piping plovers might occasionally use Breton Island. Sea turtles in agreed-upon numbers might continue to be taken in the Bar Channel. Detailed contract specifications to protect the sturgeon, manatee and sea turtles would continue. Maintenance of the channel should not adversely affect any T&E species.	Brown pelicans have not nested on Breton Island in the recent past. Piping plovers occasionally use Breton Island. There are nearby habitats that might be similar to Breton Island. No sea turtles would be taken in the Bar Channel. Alternate routes are available so passage for sturgeon, manatee and sea turtles should not be blocked by closure structure. Detailed contract specifications to protect the manatee and sturgeon would continue. Every effort would be made to construct the closure during the May through September window when the	This alternative is not likely to adversely affect any endangered or threatened species.

<b>Significant Resource</b>	<b>Existing conditions</b>	<b>Future-without de-authorization.</b>	<b>Alternative 1 Total Closure</b>	<b>Alternative 3 All operations and maintenance ceased</b>
			sturgeon are in the rivers. The closure structure is not likely to adversely impact any T&E species.	
Natural and Scenic Rivers	Seven scenic bayous in project area.	No impact.	No impact.	No impact.
Air Quality	St. Bernard Parish classified in attainment of all NAAQS.	Ambient air quality is likely to be temporarily impacted during dredging.	Ambient air quality is likely to be temporarily impacted during construction.	No impact.
Recreation	Fewer freshwater fish present after about 1970. Six most important sport fish present in good numbers. Waterfowl hunting less productive than before about 1970 in St. Bernard Parish	Hunting and fishing could slightly decrease due to anticipated marsh loss.	Waterfowl hunting and estuarine dependent fishing could be slightly positively impacted compared to the future without.	Salinity above La Loutre ridge unlikely to change, thus hunting and fishing success could be less than Alt. 1
Cultural	Entire area in vicinity of closure has been inventoried.	USACE has met with SHPO and determined that maintenance of the channel would not have an adverse effect on historic properties.	USACE has met with SHPO and determined that construction of the closure would not have an adverse effect on historic properties.	USACE has met with SHPO and determined that this alternative would not have an adverse effect on historic properties.
Aesthetic	Natural levee ridges of Bayou La Loutre have subsided and no longer support the trees they once did. Marsh has been lost due to channels, canals and subsidence. Area now dominated by forms not natural to the tidal marsh environment.	General loss of marsh could occur, reducing visual appeal.	The closure structure could cause an unnatural break in the vegetated La Loutre ridge. The closure structure should serve to break up the unnatural linear southeast MRGO viewshed.	There would be no structure to cause an unnatural break or break up the unnatural viewshed.
Navigation	MRGO tonnage peaked in 1978, trips in 1982. In 2004 tonnage was 13% of that in 1978 and trips were 14% of 1982.	Deep- and shallow-draft traffic would return to pre-Katrina levels.	Both deep-draft and shallow-draft shipping would be eliminated. Shallow-draft tows that use MRGO as an alternate route when the IHNC is congested or unexpectedly closed could no longer do so.	Shallow-draft could continue until about 2014. Then impacts would be the same as Alt. 1

<b>Significant Resource</b>	<b>Existing conditions</b>	<b>Future-without de-authorization.</b>	<b>Alternative 1 Total Closure</b>	<b>Alternative 3 All operations and maintenance ceased</b>
Business	Katrina stopped deep-draft access, except through the IHNC Lock, many maritime related businesses in area severely impacted. Two chose to relocate to Mobile. Others are trying to recover; some may plan to relocate. Shallow-draft facilities essentially recovered.	Facilities along the IHNC that rely on deep-draft would, in time, recover to pre-Katrina levels.	Businesses that depend on deep-draft may choose to relocate. Businesses that rely on shallow-draft would have the added expense of using the Mississippi River to access their facilities. The USACE has no authority to relocate impacted businesses.	Businesses that depend on deep-draft may choose to relocate. Businesses that rely on shallow-draft would have the added expense of using the Mississippi River to access their facilities about 2014. The USACE has no authority to relocate impacted businesses.
Employment	Post-Katrina 230 jobs lost from MRGO-IHNC area due to relocation and other businesses downsizing. Orleans Parish shows 34.6% reduction from pre-Katrina jobs and St. Bernard shows 54.1% reduction.	In general, Orleans and St. Bernard Parishes may never return to pre-Katrina employment. Employment in MRGO-IHNC area should, in time, recover to pre-Katrina levels.	More deep-draft firms would relocate, if in New Orleans, no impact; if outside, loss of employment. Shallow-draft firms might use the Mississippi River or relocate.	More deep-draft firms would relocate, if in New Orleans, no impact; if outside, loss of employment. After 2014, shallow-draft firms might use the Mississippi River or relocate
Community Cohesion	Many residents of St. Bernard and Orleans blame MRGO for storm surge that did devastating damage to property and lives. Majority demanding closure.	Residents of St. Bernard and Orleans would continue to vociferously demand closure.	Majority of residents of St. Bernard and Orleans Parishes would continue to be concerned about presence of MRGO. Most residents of St. Bernard and Orleans would agree that closure would provide the greatest protection to their communities	While discontinuance of dredging would alleviate concerns of some, majority would continue to vociferously demand closure

## 3.4 CUMULATIVE EFFECTS ANALYSIS

### 3.4.1. Cumulative Effects Background

The primary goal of cumulative effects analysis (CEA) is to determine the magnitude and significance of the environmental consequences, adverse or beneficial, of the proposed alternatives in the context of the cumulative effects of other past, present, or reasonably foreseeable future actions.

The spatial component considered for this CEA is within the Pontchartrain Basin as depicted on Figure 3.2. The portion of the boundary illustrated around Lake Pontchartrain essentially represents the transition between non-estuarine and estuarine influenced habitat. The remaining boundary was determined by identifying physical barriers (such as a ridge or levee) and the open waters of Breton Sound that have been impacted directly through the operation and maintenance of the navigation channel in Breton Sound (represented by the dashed line). The temporal component to be considered for this CEA is the beginning of construction of the MRGO in the early 1960's through a typical USACE fifty year project evaluation period. A qualitative checklist for the identification of potential cumulative effects of the Future Without alternatives as well as alternatives 1 and 3 of this proposed legislative action are included as Tables 3.11, 3.12, and 3.13 respectively.

Cost considerations and technical limitations preclude the USACE from obtaining the information necessary to quantify cumulative impacts to any significant resource. However, in this case, a qualitative analysis of cumulative impacts is sufficient to inform a reasoned choice among alternatives. The use of a plus/minus system as a gauge is based upon best professional judgment and knowledge of past, present and reasonably foreseeable future actions within the described and illustrated spatial boundary. A key is included in Tables 3.11, 3.12, and 3.13 describing relative potential for beneficial or adverse impacts. This checklist approach to analyzing cumulative impacts is an accepted methodology described further in the 1997 CEQ handbook for *Considering Cumulative Effects Under the National Environmental Policy Act* (Appendix A).

**Table 3.11 Checklist for Identification of Cumulative Effects of Future Without Alternative**

Checklist for Identification of Cumulative Effects of the Future Without Alternative.						
Potential Impact Area	Future Without		Past actions	Other Present Actions	Future Actions	Cumulative Impact
	Construction	Operation				
Water Quality	=	+	---	=	+	=
Fisheries	=	=	---	+	+	=
Wetland Vegetation	+	-	---	+	+	+
Wildlife	=	-	---	=	+	-
Essential Fish Habitat	-	-	--	+	+	-
Threatened and Endangered Species	=	=	-	+	+	=
Natural and Scenic Rivers	=	=	=	=	=	=
Air Quality	=	=	=	=	=	=
Recreation	-	-	-	+	+	-
Cultural	=	=	-	+	+	=
Aesthetics	=	-	-	+	+	=
Navigation	-	-	++	=	=	=
Economics	=	=	=	+	+	=

Key: - low adverse effect      -- moderate adverse effect      --- high adverse effect  
 = no effect      + low beneficial effect      ++ moderate beneficial effect      +++ high beneficial effect

**Table 3.12 Checklist for Identification of Cumulative Effects of Alternative 1**

Checklist for Identification of Cumulative Effects of Alternatives 1.						
Potential Impact Area	Alternative 1		Past actions	Other Present Actions	Future Actions	Cumulative Impact
	Construction	Operation				
Water Quality	=	++	---	=	+++	++
Fisheries	=	+	--	+	++	+
Wetland Vegetation	+	+	---	++	+++	++
Wildlife	=	+	--	+	+	=
Essential Fish Habitat	-	=	-	+	+	+
Threatened and Endangered Species	=	=	-	+	+	=
Natural and Scenic Rivers	=	=	=	=	=	=
Air Quality	=	=	=	=	=	=
Recreation	-	=	-	+	+	=
Cultural	=	=	-	+	+	=
Aesthetics	=	=	-	+	+	=
Navigation	-	-	+++	=	=	=
Economics	=	=	+	+	+	+

Key: - low adverse effect      -- moderate adverse effect      --- high adverse effect  
 = no effect      + low beneficial effect      ++ moderate beneficial effect      +++ high beneficial effect

**Table 3.13 Checklist for Identification of Cumulative Effects of Alternative 3**

Checklist for Identification of Cumulative Effects of Alternative 3.						
Potential Impact Area	Alternative 3		Past actions	Other Present Actions	Future Actions	Cumulative Impact
	Construction	Operation				
Water Quality	=	+	---	=	++	+
Fisheries	=	+	--	+	+	=
Wetland Vegetation	=	+	---	+	++	+
Wildlife	=	+	--	+	+	=
Essential Fish Habitat	-	=	-	+	+	+
Threatened and Endangered Species	=	=	-	+	+	=
Natural and Scenic Rivers	=	=	=	=	=	=
Air Quality	=	=	=	=	=	=
Recreation	-	=	-	+	+	=
Cultural	=	=	-	+	+	=
Aesthetics	=	=	-	+	+	=
Navigation	-	-	+++	=	=	=
Economics	=	=	+	+	+	+

Key: - low adverse effect      -- moderate adverse effect      --- high adverse effect  
 = no effect      + low beneficial effect      ++ moderate beneficial effect      +++ high beneficial effect

Past actions within the spatial and temporal boundaries identified include construction of the MRGO navigation in the early 1960's, maintenance and operation of the channel, and environmental restoration projects in proximity to the channel. Other present and future actions (those projects authorized and/or funded) within the spatial and temporal boundaries identified, include projects planned for coastal environmental improvements that are a part of the Coastal Impact Assistance Program, CWPPRA, and proposed measures to be undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234. Additional future actions within the spatial and temporal boundaries identified possibly include projects approved as a part of LCA and the potential for increased hurricane protection enhancement in the vicinity of the Inner Harbor Navigation Canal (Public Law 109-234).

Plans, or alternatives, being developed and analyzed through LACPR will be presented to Congress. An associated programmatic environmental impact statement is currently being prepared. Due to the current status of the LACPR effort, it is worth mentioning in cumulative effects. However, because of the speculative nature of the LACPR, the alternatives will not be included in this analysis.

Additionally, the state of Louisiana has developed and adopted a conceptual state master plan for the protection and restoration of coastal Louisiana called *Louisiana's Comprehensive Master Plan for a Sustainable Coast*. Because the state master plan has been adopted by the state of Louisiana it must be noted within the context of CEA. However, the state master plan is conceptual and subject to change on an annual basis. Although the document describes implementation, it is not clear what mechanisms, particularly state action and funding, would be used to actually implement any measures. Therefore, the inclusion of the state master plan in this CEA is noted, but the effects of any proposed recommendations are not included in determining the outcome of cumulative effects.

### **3.4.2. Summary of Cumulative Effects.**

#### Future Without De-authorization

No real change or adverse environmental cumulative effects are anticipated for all resources, except for wetland vegetation, are anticipated. The reasoning, or rationale, for assigning low beneficial cumulative effects for the resources just mentioned is the additive effect of past and present actions combined with this alternative. It is estimated that the Future Without alternative is unlikely to influence salinity or marsh vegetation types or reduce the "H-A zone" in Lake Pontchartrain. However, ecosystem restoration measures, such as a freshwater diversion structure at Violet, could be more difficult to implement than under Alternative 1. For example, without a structure in the MRGO channel, a much larger freshwater diversion would be required at Violet, which would increase cost significantly and decrease the ability to control desired environmental results within the greater Pontchartrain Basin. Overall, the potential cumulative impact for the Future Without alternative is unchanged, or slightly negative.

#### Alternative 1

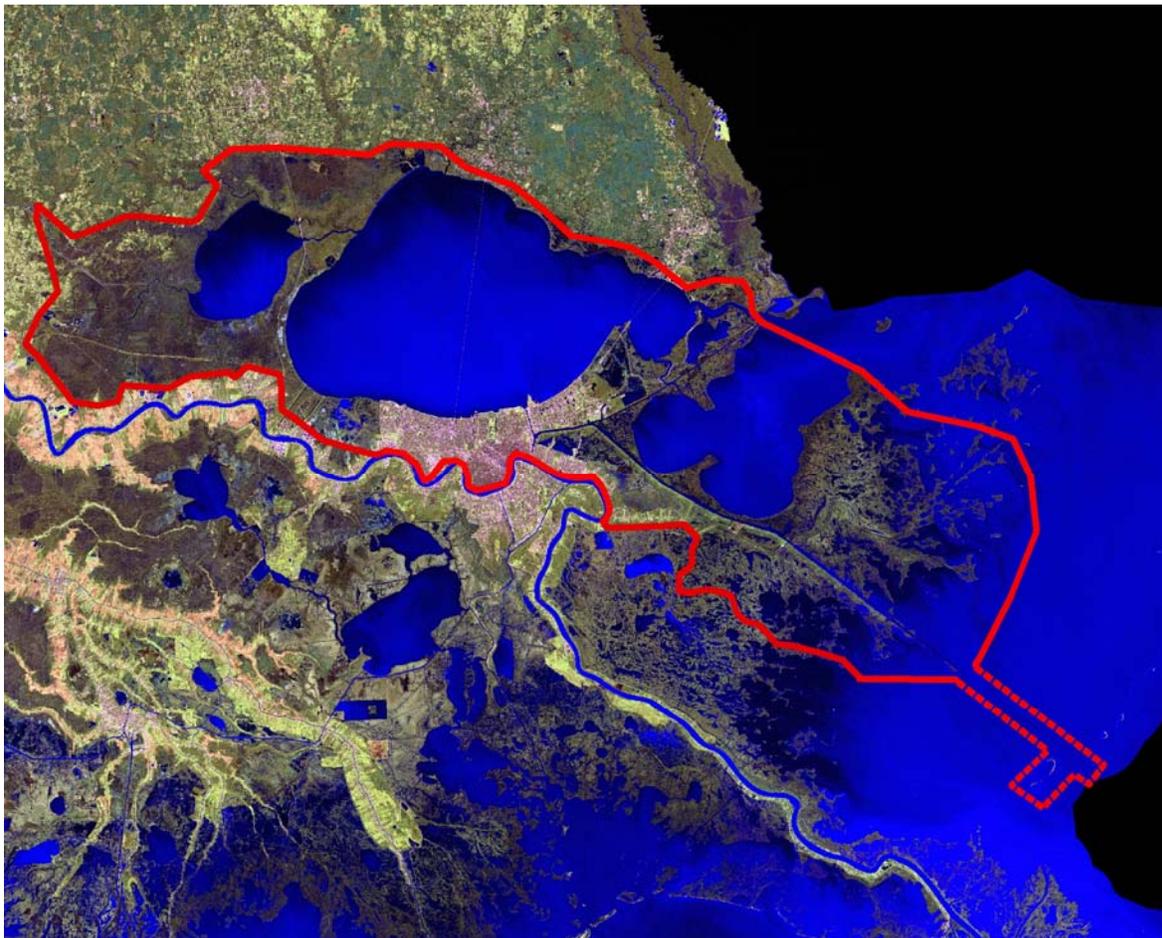
Positive environmental cumulative effects are anticipated for water quality, fisheries, wetland vegetation, essential fish habitat, and economics. For water quality and wetland vegetation, the cumulative effects would be moderately beneficial primarily due to potential future projects within the spatial boundary that would be conducive for improving water quality and wetland vegetation resources. For instance, a proposed diversion from the Mississippi River in the vicinity of Violet, Louisiana would direct freshwater into an area north of the closure structure. The combined action of the total closure and the diversion would likely further reduce salinities north of the structure. This salinity reduction could promote the re-growth of Cypress in the Central Wetlands and the re-establishment of fresh and intermediate marsh in some proximity to the diversion outfall and the closure structure. The rationale for not assigning a high beneficial effect as a result of cumulative effects is due to other past (i.e., construction of the MRGO) or present actions (i.e., no beneficial use of dredge material due to no dredging of the MRGO) actions that have had or continue to have an adverse effect or no effect at all on these particular resources. Furthermore, the same reasoning can be applied to the remaining resources receiving a low beneficial effect (fisheries, essential fish habitat, and economic resources). Those resources received a low beneficial

cumulative effect not because future projects potentially provide a lower cumulative effect, but because of past (i.e., construction of the MRGO) and present actions (i.e., no beneficial use of dredge material due to no dredging of the MRGO) within the temporal boundary of the CEA. Overall, the potential cumulative impact for Alternative 1 is a slightly beneficial effect.

### Alternative 3

Positive environmental cumulative effects are anticipated for water quality, wetland vegetation, and economics. The reasoning, or rationale, for assigning low beneficial cumulative effects for the resources just mentioned is the additive effect of past and present actions combined with this alternative. It is estimated that Alternative 3 is unlikely to influence salinity or marsh vegetation types or reduce the “H-A zone” in Lake Pontchartrain until the MRGO channel has shoaled sufficiently enough to limit tidal flows. Cumulative impacts for all other resources would be expected to remain nearly the same over the same period of evaluation. Overall, the potential cumulative impact for Alternative 3 is unchanged, except for the resources identified earlier in this paragraph.

**Figure 3.2 – CEA Spatial Boundary**



## **SECTION 4 PUBLIC AND AGENCY INVOLVEMENT**

### **4.1 INTRODUCTION**

This section documents details of the study's public involvement and coordination efforts with Federal, state, local agencies and entities, parishes, and other interested parties. Chapter 5 describes the study's compliance with environmental requirements, including coordination with the U.S. Fish and Wildlife Service.

Scoping is not required for a LEIS, however, in conducting this study the USACE emphasized efforts to allow open and broad participation in the planning process. Federal, state and local government parties and other organizations were invited to help formulate plans for de-authorization of the MRGO and environmental restoration in the area influenced by the MRGO. Several groups did develop such plans.

A public meeting was held on October 18, 2006 to present the study process and accept comments. Another public information meeting was held on May 19, 2007 to present alternatives evaluated in detail and the Recommended Plan and to accept questions and comments. All comments made during the 45-day public comment period will be incorporated into an Addendum to the LEIS.

In addition, there is an interactive web page (<http://mrgo.usace.army.mil/>) that provides a library of project information, materials from stakeholder meetings, and a comment button allowing the public to submit questions or information to the study team.

### **4.2 STAKEHOLDER PARTICIPANTS**

Stakeholder participants included, but were not limited to:

- St. Bernard Parish
- Governor's Office of Coastal Activities
- Governor's Advisory Commission on Coastal Restoration and Conservation
- Louisiana Coastal Protection and Restoration Authority
- Louisiana Department of Natural Resources
- Louisiana Department of Transportation and Development
- Louisiana Department of Wildlife and Fisheries
- Environmental Protection Agency
- United States Coast Guard
- Maritime Administration (MARAD)
- United States Fish and Wildlife Service
- Port of New Orleans
- Gulf Intracoastal Canal Association
- Lake Pontchartrain Basin Foundation
- Coalition to Restore Coastal Louisiana
- Gulf Restoration Network
- American Rivers
- Sierra Club
- Biloxi Marshlands Corporation

Steamship Association of Louisiana  
Gulf States Maritime Association  
Bring New Orleans Back Commission  
New Orleans Business Council  
LSU Hurricane Center  
National Aeronautic and Space Administration  
Sierra Club  
Lake Borgne Basin Levee District  
Levees.org  
National Wildlife Federation  
Louisiana Wildlife Federation  
Southeast Louisiana Flood Protection Authority-East  
Environmental Defense  
National Audubon Society  
The Nature Conservancy  
Federal Emergency Management Agency  
Louisiana Environmental Action Network  
City of New Orleans  
Local and regional businesses  
Private citizens

### **4.3. STAKEHOLDER MEETINGS**

During 2006, USACE, New Orleans District held a series of eight public stakeholder forums to identify various plans and proposals for the future of the MRGO. Meetings included technical presentations and open discussions on topics including wetlands, navigation, storm protection, and the local economy. Each stakeholder group was invited to make detailed presentations on any plans they developed. Four stakeholder groups (St. Bernard Parish, Lake Pontchartrain Basin Foundation, Bring New Orleans Back Commission and Biloxi Marshlands Corporation) submitted their plans for consideration in development of the Interim Report. These plans included measures to close or modify the MRGO, for hurricane protection and for coastal restoration. These plans are described later in Section 4. In the end, there were 16 consensus measures supported by many stakeholders (see Section 4.4.5). However, the different stakeholders could not agree on a comprehensive plan to close the channel. Their recommendations varied from total closure to a sector gate with a draft of 28 feet. Many of the measures from the stakeholder plans were incorporated into the Interim Report to Congress.

A ninth stakeholder forum was held on April 16, 2007, following the release of the Interim Report to Congress and publication of the Notice of Intent to prepare a LEIS. Navigation interests were concerned that none of the alternatives evaluated in detail maintained continued shallow-draft navigation. They were disturbed there would no longer be an alternate route when the IHNC Lock was congested or be inoperable. On the other hand, St. Bernard Parish officials spoke out very strongly in favor of total closure as soon as possible. The representative from the Holy Cross Neighborhood Association did not want the IHNC Lock Replacement fast tracked as part of the MRGO de-authorization.

Another stakeholder forum was held on May 8, 2007. At that meeting the USACE team provided an overview of preliminary details developed on each of the alternatives evaluated in detail. In addition, the USACE announced a target report and LEIS completion schedule and provided an update on the ongoing in-house review of the draft Final Report to Congress and draft LEIS. Stakeholders from the shallow-draft navigation industry made brief comments on the direction of the study and asked for consideration for an emergency alternative navigation route in times of high congestion or prolonged maintenance of the IHNC Lock. Stakeholders from St. Bernard Parish offered some potential alternative routes. The USACE agreed to facilitate further discussions between the parties with the goal of resolving the issue prior to completion of the Final Report to Congress.

#### **4.4 STAKEHOLDER PLANS**

The State of Louisiana, Federal agencies, environmental organizations, planning groups, businesses, and individuals have developed plans for coastal protection and restoration that include MRGO related components. In some cases, the plans are specific to the MRGO area; in others, the channel is merely a component of larger proposals. In conducting this study the USACE invited stakeholders to present their plans as part of efforts to identify common approaches to help achieve consensus. The following non-Federal plans and studies are highlighted given their relevance to this de-authorization study.

##### **4.4.1 St. Bernard Parish Plan**

The features of the St. Bernard Parish Plan in the vicinity of MRGO are summarized below and the plan is available on the internet at <http://www.sbp.org>.

- 1) Construct Five Floodgates: at Seabrook, on the GIWW, on MRGO near Bayou Bienvenue, on Bayou Dupre at Lake Borgne, and on the MRGO near Verret.
- 2) New Bankline Stabilization on the entire shore of Lake Borgne.
- 3) Breakwaters in Lake Borgne.
- 4) Restore La Loutre Ridge to +8 feet.
- 5) Total Closure of MRGO by a structure at the Bayou La Loutre Ridge.
- 6) Rock Dike Closure of MRGO near Lake Athanasio.
- 7) Total Closure of Alabama Bayou at MRGO.
- 8) Freshwater Diversion from Mississippi River at Violet and another site.

##### **USACE Comments on the above measures:**

- 1) Some of these are being considered under other efforts to improve IHNC storm protection.
- 2) Stabilization on some of the shore of Lake Borgne is proposed as part of operation and maintenance activities authorized under Public Law 109-234.
- 3) These are being considered under LACPR.
- 4) This is being considered under LACPR.
- 5) This is the Recommended Plan.

- 6) The USACE proposes that only one structure on the MRGO near Bayou La Loutre is needed (see discussion of evaluation and elimination of Interim Report Alternative 2b in Sections 2.2 and 2.4 of this report).
- 7) This is being considered under LACPR.
- 8) This is being considered under LACPR.

#### Other Features

- Construct new levee connecting the five proposed floodgates on the GIWW and MRGO to existing levees on the SW shore of MRGO to +17 feet.
- No Closures at Rigolets and Chef Pass.
- Raise levee that is parallel to the SW shoreline of the MRGO to +17.5 feet and other levees surrounding the Parish to +20 feet.
- Construct New Levee connecting the southernmost levees in the Parish to existing levees on the Mississippi River. Height should be +17.5 feet.
- Continue construction of 40 Arpent Levee through Verret.
- Raise Both Sides of River Levee.
- Construct New River Floodgate at Bohemia.
- Remove Old Grand Prairie Levee.
- Biloxi Marsh Restoration Plan with measures to protect and enhance existing marsh as well as create additional marsh.
- Dredge and maintain Baptiste Collette Bayou.
- Construct new channel from Baptiste Collette Bayou to Gulfport Ship Channel.
- Restore Breton and Chandeleur Island Chain with dredged material from proposed channel.
- Breakwaters to protect the Chandeleur Islands.

**USACE Comments on the above measures:** These are being considered under LACPR.

#### **4.4.2 LAKE PONTCHARTRAIN BASIN FOUNDATION PLAN**

The Lake Pontchartrain Basin Foundation (LPBF) has developed a comprehensive habitat management plan that includes measures related to the MRGO. Those features are highlighted below and the full plan is available on the internet at

<http://www.saveourlake.org/>.

- 1) Constriction of the MRGO channel at the Bayou La Loutre Ridge to 12 feet by 125 feet.
- 2) Restoration of Bayou La Loutre ridge.
- 3) Introduction of freshwater into the system through a diversion off the Mississippi River at the Violet Canal.
- 4) Armoring of eroding shorelines on the north bank of MRGO and on Lake Borgne
- 5) Reduction of ship speed on the Inland Reach.
- 6) Constriction of Bayou Dupre at Lake Borgne.
- 7) Utilization of previously dredged material for marsh creation.
- 8) A sill at Seabrook.
- 9) Discontinuation of advanced maintenance on the MRGO.
- 10) Utilization of dredged material in a beneficial manner.

**USACE comments on the above measures:**

- 1) This plan was eliminated from further study because shallow-draft is not economically justified.
- 2) This is being considered under LACPR.
- 3) This is being considered under LACPR.
- 4) Stabilization on some of the shore of Lake Borgne is proposed as part of operation and maintenance activities authorized under Public Law 109-234.
- 5) Under the Recommended Plan, this is probably not necessary.
- 6) This is being considered under LACPR.
- 7) This is being considered under LACPR.
- 8) This is being considered under other efforts to improve the Inner Harbor Navigation Canal storm protection.
- 9) Under the Recommended Plan, this is not necessary.
- 10) This is being considered under LACPR.

**4.4.3 Bring New Orleans Back Commission Plan**

The features of the Bring New Orleans Back Commission recovery plan located near MRGO are summarized below and the plan is available on the internet at <http://www.bringneworleansback.org/>.

- 1) Sector gates Seabrook, GIWW, and MRGO at Bayou Dupre with leaky levee between the latter two.
- 2) Heightening and armoring of existing levees on the MRGO.
- 3) A new levee on the eastern shore of the MRGO or the placement of surge barriers across Lake Borgne.
- 4) A normally closed deep-draft sector gate in the MRGO with a draft of approximately 28 feet.
- 5) Reintroduction of freshwater.
- 6) Rebuilding the La Loutre landbridge.
- 7) Restoration of the Biloxi Marsh.
- 8) Armoring the MRGO banks to stop erosion.
- 9) Aggressive use of dredged material to build land.
- 10) Vessel speed control.

**USACE comments on the above measures:**

- 1) This is being considered under the Inner Harbor Navigation Canal Floodgates Conceptual Study, 2006.
- 2) This is being considered under LACPR.
- 3) These are being considered under LACPR.
- 4) The Recommended Plan is a total closure structure near Bayou La Loutre.
- 5) This is being considered under LACPR.
- 6) This is being considered under LACPR.
- 7) This is being considered under LACPR.
- 8) This is being considered under LACPR.
- 9) This is being considered under LACPR.

10) Under the Recommended Plan, this is probably not necessary.

#### **4.4.4 Biloxi Marshlands Corporation Plan**

A private company, the Biloxi Marshlands Corporation, owns large tracts of wetlands in the vicinity of the MRGO and has developed a conservation and management plan for their holdings. Features of the company's plan in the vicinity of MRGO are summarized below and the plan is available on the internet at <http://www.biloximarshlandscorp.com/>.

- 1) Bayou La Loutre Ridge bank armament on both sides of the bayou.
- 2) Marsh creation and terracing.
- 3) Two water control structures in the MRGO.
- 4) Ridge refurbishment.
- 5) Vegetative plantings.
- 6) Massive freshwater diversion.
- 7) Restore the MRGO to "original" 500-ft width and fill the rest.

#### **USACE comments on the above measures:**

- 1) This is being considered under LACPR.
- 2) This is being considered under LACPR.
- 3) The USACE proposes that only one structure on the MRGO near Bayou La Loutre is needed (see discussion of evaluation and elimination of Interim Report Alternative 2b in Sections 2.2 and 2.4 of this report).
- 4) This is being considered under LACPR.
- 5) This is being considered under LACPR.
- 6) This is being considered under LACPR.
- 7) This is infeasible from an engineering viewpoint because it would involve 45-foot or longer sheet piles to keep the fill out of the reduced channel. It is also prohibitively expensive.

#### **Other features of the Biloxi Marshlands Corporation Plan:**

- Chandeleur Islands: annual vegetative plantings, introduction of sediment to the system, and the use of breakwaters, groins, and shoreline armoring to protect the existing islands.
- Northeastern Outlying Islands: bank armament and vegetative plantings and marsh creation/nourishment.
- Lower Biloxi Marsh: water control structures, bank armament, marsh creation, terraces, and vegetative plantings.
- Upper Biloxi Marsh: bank armament, marsh creation, terracing, and vegetative plantings of areas impacted by muskrat.

**USACE Comments on the above measures:** These are being considered under LACPR.

#### **4.4.5 Stakeholder Consensus Items**

The four previously identified stakeholders, as well as members of industry, met after their individual plans were developed. Many of the non-Federal interests including the Coalition to Restore Coastal Louisiana (CRCL) identified opportunities for consensus.

These items take into consideration a priority for public safety, while also including opportunities for ecosystem restoration and protection as well as economic development. The consensus items include:

- 1) Overall, establish Habitat Goals of returning the landscape to historic (1912-1932) pre-MRGO conditions (strategies to return wetlands to pre-MRGO conditions).
- 2) Restore Bayou La Loutre Ridge east of the MRGO to Christmas Camp Lake with introduced sediment and replanting of forest.
- 3) “Something” located in the MRGO at the Bayou La Loutre Ridge. There were numerous suggestions but no consensus as to what this “something” needs to be.
- 4) Restoration and protection of the Chandeleur Islands with beach nourishment and armoring.
- 5) Restoration and protection of the Biloxi Marsh through introduction of sediment and armoring.
- 6) River reintroductions including one at or near the site of the current Violet Canal.
- 7) Long distance transport of sediment via pipeline for purposes of land restoration throughout the project area.
- 8) Improve existing levees, armor them (MRGO levee including banks), increase height where needed and protect them with restored marsh (marsh aprons).
- 9) Storm breakwaters constructed from the Golden Triangle to Bayou St. Malo.
- 10) Shoreline protection from the Golden Triangle to Bayou St. Malo.
- 11) A levee constructed from approximately Verret to the GIWW including protecting the land of the Golden Triangle.
- 12) Assured maintenance of MRGO by the Federal Government to new authorized draft.
- 13) No gate constructed across the MRGO/GIWW at Paris Road.
- 14) Fully fund a deep-draft lock at the IHNC and fast track this project to provide access for navigation to businesses currently relying on the MRGO.
- 15) Find relocation funding for existing businesses that currently rely on the MRGO.
- 16) Subsidize businesses until fixes are in place.

**USACE comments on the above measures:**

The following stakeholder consensus items are being considered for incorporation into the LACPR: 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, and 14.

- 3) The “something” is now a total closure structure near Bayou La Loutre under the Recommended Plan.
- 12) Under the Recommended Plan, this is probably not necessary.
- 13) Locations are being considered under the Inner Harbor Navigation Canal work authorized in Public Law 109-234 for storm protection.

#### **4.5 FINAL INTEGRATED ECOSYSTEM RESTORATION AND HURRICANE PROTECTION: LOUISIANA’S COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST, 2007**

“• Immediately construct a closure dam at Bayou La Loutre that will restore the integrity of the Bayou La Loutre ridge. This will affect both the shallow-draft and deep-draft navigation industries, and a comprehensive closure plan should include mechanisms to mitigate the economic consequences for users that rely on the channel. However, these considerations should not in any way delay the channel’s immediate closure. In addition, actions must be taken to avoid increased erosion in nearby waterways should shallow-draft and recreational traffic circumvent the closure structure.

- Ensure that the channel remains isolated from Lake Borgne so that the channel may convey fresh water from the Mississippi River to the Biloxi Marshes and other areas of St. Bernard Parish. Without such a freshwater conduit, these marshes will not receive wetland building fresh water and sediment.
- Restore wetlands and swamps in the Central Wetlands and Golden Triangle areas.
- Integrate this MRGO closure plan with overall hurricane protection plans for the New Orleans metropolitan area.”

In Appendix A of the report, the following statement is found:

“This measure will close the MRGO at the Bayou La Loutre Ridge with an earthen plug. The MRGO begins at the confluence of the Gulf Intracoastal Waterway (GIWW) and the Inner Harbor Navigation Canal (IHNC) and extends southeastward through the Breton/Chandeleur Sound to the Gulf of Mexico. Appropriate economic mitigation plans must be implemented to address impacts to deep-draft and shallow-draft navigation facilities and industries. In addition, actions must be taken to avoid increased erosion in nearby waterways should shallow-draft and recreational traffic circumvent the closure structure. If at any time after the channel is closed with an earthen plug it is decided to restore limited navigation capacity, any new navigation structure to be constructed would be closed under normal conditions in order to maintain the integrity of the Bayou la Loutre Ridge. The lock structure would be operated only under emergency situations and only for shallow-draft traffic.”

#### **USACE comments on the above measures:**

- 1) The Recommended Plan is a rock total closure structure near Bayou La Loutre.
- 2) Some stabilization of the MRGO and Lake Borgne shoreline is proposed as part of operation and maintenance activities authorized under Public Law 109-234 as is marsh creation on the landbridge between the MRGO and Lake Borgne.
- 3) Marsh creation in the Golden Triangle is proposed as part of operation and maintenance activities authorized under Public Law 109-234. Wetland restoration in the Central Wetlands is being considered under LACPR.
- 4) This is being considered under LACPR.

#### **4.6 “MISTER GO MUST GO” PLAN**

This report, authored by Drs. John Day and Paul Kemp of LSU, Dr. Mark Ford of CRCL, and Dr. John Lopez of the LPBF was presented to the USACE in December 2006 as a guide for the Congressionally directed closure of the MRGO. The report says that construction of MRGO destroyed and continues to destroy the natural hurricane buffer provided by wetlands and cypress forests. The report claims that MRGO exacerbated Hurricane Katrina’s damage by increasing the height and speed of the storm surge and facilitated wave attack on exposed levees. The report proposes the following plan for de-authorization of MRGO:

- 1) De-authorize MRGO as a Federal navigation channel and cease maintenance dredging.
- 2) Restoration of the Ridge at Bayou La Loutre
- 3) Channel severance or constriction at other locations (four or preferably more additional locations). The constrictions must be planted with dense native wetlands vegetation to root them in place.
- 4) Restoration/Maintenance of the narrow land between Lake Borgne and the MRGO.
- 5) Restoration/Rehabilitation of bank lines along the MRGO. Place dredged material to a height of 3-5 feet to reclaim as much of the original 1965 bank lines as reasonable, especially on the south bank. Plant native coastal vegetation on the reclaimed banks and lateral fills.
- 6) Allow natural infill of the channel (especially the Sound Reach).
- 7) Expand riverine influence (Reintroduction of freshwater from Mississippi River)

#### **USACE comments on the above measures:**

- 1) This is part of the Recommended Plan.
- 2) This is being considered under LACPR.
- 3) The USACE proposes that only one structure on the MRGO near Bayou La Loutre is needed (see discussion of evaluation and elimination of Interim Report Alternative 2b in Sections 2.2 and 2.4 of this report).
- 4) Stabilization on some of the shore of Lake Borgne and marsh creation on the land bridge between the MRGO and Lake Borgne is proposed as part of operation and maintenance activities authorized under Public Law 109-234.
- 5) This is infeasible from an engineering viewpoint because it would involve 45-foot or longer sheet piles to keep the fill out of the reduced channel. It is also prohibitively expensive.
- 6) This would happen under the Recommended Plan
- 7) This is being considered under LACPR.

The report also suggests additional actions to facilitate coastal conservation and restoration, and to improve storm and flood protection as follows:

- 1) Levee Improvement (Existing levees along the MRGO must be improved to withstand storm surge from a 500 year flood and be constructed such that overtopping does not result in levee collapse and failure)
- 2) Restore Historic Habitats in the Region (as in the LPBF’s Comprehensive Management Plan)

- 3) Facilitate the usage of treated effluent from wastewater plants.
- 4) Restore Marsh Landbridges of the Biloxi Marsh.
- 5) Restore Barrier Islands.

**USACE Comments on the above measures:** All of these are being considered under LACPR.

#### **4.7 LETTER FROM NATIONAL AND LOCAL ENVIRONMENTAL GROUPS, DATED JANUARY 26, 2006**

This letter was signed by representatives of Environmental Defense, National Audubon Society, National Wildlife Federation, Louisiana Wildlife Federation, American Rivers, Coalition to Restore Coastal Louisiana, Gulf Restoration Network, the Lake Pontchartrain Basin Foundation and Levees.org. The letter pointed out the following items that were included in the “Preliminary Comprehensive Plan for De-authorizing the MRGO” report and they called them “Items of Agreement”:

- 1) “Closure of the MRGO channel to both shallow and deep-draft navigation by an armored earthen structure just south of Bayou La Loutre near Hopedale, Louisiana”;
- 2) Freshwater diversion into the MRGO and surrounding marshes (possibly in the vicinity of the Violet Canal);
- 3) Shoreline protection to prevent wetlands erosion (including maintenance of existing projects);
- 4) Habitat creation through the placement of sediment for rebuilding marshes, barrier islands, and ridges;
- 5) Increasing existing levee heights to new hurricane protection levels;
- 6) New hurricane protection levee alignments or surge protection structures.

**USACE Comments on the above measures:**

- 1) This is the Recommended Plan.
- 2) This is being considered under LACPR.
- 3) Shoreline protection on the MRGO and Lake Borgne are proposed as part of operation and maintenance activities authorized under Public Law 109-234. Maintenance of existing rock is being considered under LACPR.
- 4) This is being considered under LACPR.
- 5) This is being considered under LACPR.
- 6) This is being considered under LACPR.

The letter also stated that the following items are also essential for protecting New Orleans and St. Bernard Parish from future storms and should be included in the final plan for the MRGO:

- 1) The levees in St. Bernard Parish need to be not only higher, but better protected. Significant protection can be gained by rebuilding the banks of the MRGO, beginning with the banks in front of the St. Bernard levee, and planting new land

- with dense native vegetation. Levees should also be armored with hard structure and be designed to be overtopped.
- 2) The closure of the MRGO by itself would not restore the fresh wetland (swamp) habitats destroyed by the MRGO, which would buffer storm surge. In addition to the proposed diversion at Violet, the plan should include the significant opportunity to beneficially use treated wastewater from the New Orleans Sewage plant to rebuild wetlands near the MRGO.
  - 3) The plan calls for only one closure at Bayou La Loutre which would primarily address saltwater intrusion. Additional constrictions or closures are needed along the channel to reduce the induced effects on surge by the channel and to break wave fetch and reduce water velocity.

**USACE Comments on the above measures:**

- 1) This is infeasible from an engineering viewpoint because it would involve 45-foot or longer sheet piles to keep the fill out of the reduced channel. It is also prohibitively expensive. Work on the levees is being considered under LACPR.
- 2) This is being considered under LACPR.
- 3) The USACE proposes that only one structure on the MRGO near Bayou La Loutre is needed (see discussion of evaluation and elimination of Interim Report Alternative 2b in Sections 2.2 and 2.4 of this report).

The letter concludes with the following statement: “With congressional appropriation, the first phase of closure must be completed in 2008 and include at least a closure at Bayou La Loutre and rebuilding of the MRGO’s south bank in front of the St. Bernard levee.”

**USACE response:**

The USACE is moving as fast as possible to complete a plan to de-authorize the MRGO channel from the GIWW to the Gulf of Mexico to both deep- and shallow-draft navigation and to place a total closure structure near Bayou La Loutre. As described above, partially filling the MRGO in front of the St. Bernard levee is infeasible.

**4.8 MRGO WEB PAGE**

Additional measures to incorporate public input include an internet web page. The web page (<http://mrgo.usace.army.mil/>) offers interactive capability allowing visitors to submit information and opinions via email. The page also includes a digital library of publications related to the history of the channel, maps depicting the area, a calendar of events, minutes of stakeholder meetings, a transcript of the October 28, 2006 public meeting, the Interim Report to Congress and the Draft Final Report to Congress/Draft LEIS. In addition, notes from the May 19, 2007 public information meeting, along with the presentation slides, have been added. The information is intended to serve as a resource for the study team and interested stakeholders.

**4.9 PUBLIC MEETINGS**

A public meeting was held on October 28, 2006 at the University of New Orleans and involved an open house where stakeholder groups were offered display space to present their points of view. More than 150 people attended the public meeting, which included

a formal presentation of the study process and scope from the USACE and an open comment period for public statements from citizens, organizations, and elected officials. Public comments made in this meeting were influential in plan formulation for the Interim Report to Congress.

A public information meeting was held on May 19, 2007 at Nunez Community College in Chalmette, Louisiana. The meeting offered attendees an opportunity to view a series of posters presented by the USACE on the study. In addition, various stakeholders displayed information and interacted with the meeting attendees. More than 100 attendees listened to a formal presentation regarding the alternatives evaluated in detail and the Recommended Plan. Following the presentation, attendees had the opportunity to ask questions. All attendees were made aware of the study schedule and process.

#### **4.10 AREAS OF CONCERN AND CONTROVERSY**

Construction of the MRGO Project resulted in the conversion of marsh, wetland forest and shallow open water habitat (USACE 1999). Erosion causes additional acres to be lost each year along the MRGO channel (USACE 2004). Citizens are concerned about coastal erosion, populations of wildlife and fisheries, and increased salinity in area water bodies. Many members of the public also feel that the loss of wetlands exacerbated the flooding of St. Bernard Parish during Hurricane Katrina.

Many citizens of Orleans and St. Bernard Parishes firmly believe that the Inland Reach of the MRGO serves as a storm surge pathway during hurricanes. A number of reports concluded that the Inland Reach of the MRGO contributes very little to flooding when the surrounding marshes are inundated. Reports also indicate that to prevent storm surge in Lake Borgne from reaching the IHNC or GIWW Reach of the MRGO, flow through the GIWW Reach of the channel must be dramatically reduced or eliminated. The USACE is actively planning, designing and building numerous upgrades and new system components to increase the level of hurricane protection for the entire area. The connectivity between Lake Borgne and the GIWW Reach of the MRGO and IHNC is being addressed through efforts to provide comprehensive hurricane and storm protection through the Lake Pontchartrain and Vicinity Hurricane Protection project 100-year protection effort. See Section 1.8 and Appendix D for further discussions on the MRGO and storm surge.

Stakeholders in the navigation industry have expressed concerns that when the MRGO is de-authorized from the GIWW to the Gulf of Mexico, shallow-draft vessels would no longer be able to use the channel as an alternate route when the Inner Harbor Navigation Canal Lock is congested or inoperable. Industry members believe this could present a serious problem for fuel transport and movement of other vital commodities. In evaluating this concern the USACE determined that this potential event would be very rare. Based upon the economics evaluation of this study, expenditures to construct and maintain a shallow-draft feature for MRGO traffic is not justified. As such, the USACE, navigation industry representatives, and leaders from St. Bernard Parish are willing to work together to identify suitable alternative routes to alleviate this potential issue.

The following options have been identified as potential alternative routes around the IHNC-GIWW-MRGO system (see Figure 4.1):

1. Mississippi River to Baptiste Collette Bayou and into Breton Sound and Chandeleur Sound and up to Mississippi Sound to rejoin the GIWW. A drawback of this option is the potential lack of adequate draft in the reach between the mouth of Baptiste Collette Bayou and Mississippi Sound. In addition, navigation safety concerns could be a factor because of the long expanse of open water that would be traversed on this route.
2. Mississippi River north to the Ohio and Tennessee Rivers to eventually join the Tennessee-Tombigbee Waterway and south into Mobile Bay to rejoin the GIWW. A drawback of this option is the much greater time and distance required.
3. Mississippi River to Baptiste Collette Bayou and into Breton Sound and north up to the back retainer canal on the south side of the MRGO spoil area and up to Bayou La Loutre at Hopedale to enter the MRGO and travel up to rejoin the GIWW in the vicinity of Michoud. A drawback of this option is the potential lack of adequate draft in the reach between the mouth of Baptiste Collette Bayou and the back retainer canal and the segment up the retainer canal to Hopedale.
4. Mississippi River to Baptiste Collette Bayou and into Breton Sound and north up to the mouth of Bayou La Loutre in Bay Eloi and then through Bayou La Loutre to enter the MRGO and travel up to rejoin the GIWW in the vicinity of Michoud. A drawback of this option is the potential lack of adequate draft in the reach between the mouth of Baptiste Collette Bayou and Bayou La Loutre.
5. Emergency removal of a portion of the rock total closure structure in the event of prolonged delays or inoperability of the IHNC Lock if authorization and funding are available. A cost estimate for this option has been developed and included in Appendix C. A drawback of this option is the potential lack of adequate draft in the reach between the mouth of Baptiste Collette Bayou and the Sound Reach of the MRGO. Additional work would be needed to define implementation criteria and to identify responsible parties because under the Recommended Plan the Federal government would no longer own or maintain any MRGO features from the GIWW to the Gulf of Mexico.

The USACE will continue to develop these and other options in coordination with stakeholder groups. One possibility would be to consider efforts to improve the condition of the IHNC Lock through maintenance actions, which may improve the efficiency and reliability of the IHNC Lock and reduce the desire for an alternative route.

Stakeholders in the shallow draft navigation industry have expressed concern that prolonged closure of the Inner Harbor Navigation Canal (IHNC) Lock with no alternate route available will cause significant income and employment impacts to businesses that rely on shipments traversing the IHNC Lock and that these impacts were ignored in

economic evaluations. However, as specified in USACE guidelines, the effects on income levels and employment levels generally fall into the Regional Economic Development (RED) account. These effects are considered to be RED in nature because, 1) increases or decreases in income/employment levels in one region will tend to be offset by increases or decreases in income/employment levels in another region resulting in a minimal net effect to the nation, and, 2) losses in one region that are not captured by another region can often be made up at a later date in the initially impacted region. This is not to say that the income/employment impacts can not be National Economic Development (NED) in nature, or that the impacts are insignificant at a regional level, but that from a national perspective the net impacts are likely to be small. Given that this is the case and that NED impacts take priority over RED impacts, the economic evaluation performed for the MRGO De-Authorization Study chose not to quantify income/employment implications.

Some groups are concerned that the replacement of the IHNC Lock is somehow directly connected to the de-authorization of MRGO to deep-draft navigation. Although these projects are related, the Recommended Plan is in no way dependent on the replacement of the lock or vice versa.

Some vessels may choose to utilize Bayou La Loutre, a Federally authorized channel, to access Chandeleur Sound and numerous waterways in the Biloxi Marshes following installation of a total closure structure on the MRGO channel. Bayou La Loutre has a controlling depth of six feet limiting vessels to recreational and commercial fishing boats, small tugs and barges, and oil field service boats. Although, the potential number of vessels that would use Bayou La Loutre and the potential impacts of diverted vessel traffic along the waterway cannot be quantified at this time, the overall environmental benefits of the Recommended Plan will far outweigh any potential impacts to Bayou La Loutre. Vessel traffic and shoreline erosion rates are monitored along Bayou La Loutre and other Louisiana waterways under private, state, and Federal efforts to implement coastal restoration plans.

#### **4.11 RESOLUTION OF COMMENTS ON DRAFT LEIS**

All comments received during the 45-day public comment period on the draft LEIS are documented and responded to in Appendix P. All commenters will be sent a Notice of Availability of this Integrated Final Report to Congress and LEIS.

Figure 4.1 – Alternative Routes Around the IHNC-GIWW-MRGO System



## **SECTION 5 COORDINATION AND COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS**

### **5.1 U.S. FISH AND WILDLIFE SERVICE RECOMMENDATIONS**

The U.S. Fish and Wildlife Service (USFWS) provided a Coordination Act Report (see Appendix F) in April 2007 with the following recommendations:

- 1) The USFWS and NMFS should be provided an opportunity to review and submit recommendations on the draft plans and specifications on the MRGO total closure structure addressed in this report.
- 2) Coordination should continue with the USFWS and National Marine Fisheries Service on detailed contract specifications to avoid and minimize potential impacts to manatees and Gulf sturgeon.
- 3) Once the MRGO is de-authorized, Breton Island NWR would no longer benefit from placement of dredged material on or adjacent to the island. Many of Louisiana's barrier islands are used for nesting by brown pelicans and as wintering areas by the piping plover. As barrier islands decline, so declines those and other species' habitats. The Service recommends the Corps either retain authority to dredge between MRGO mile 3.4 to mile -2.0 (see note below) for restoration purposes only, to continue placement on or adjacent to Breton Island NWR to benefit brown pelicans, piping plovers, and other shore birds or to seek additional funding through other environmental restoration purposes as part of the project Federal Standard. Note: Shoal material removed from the MRGO Mile 3.4 to Mile -2.0 Breton Sound and Bar Channel dredging reaches is placed at Breton Island for barrier island restoration purposes as part of the project Federal Standard.
- 4) If the proposed project has not been constructed within 1 year or if changes are made to the proposed project, the USACE should re-initiate Endangered Species Act consultation with the USFWS.
- 5) The area in and around the total closure structure and key locations from the total closure structure and north as far as Lake Maurepas, if possible, should be monitored to sufficiently determine the hydrologic effects of the closure and to document the changes in circulation patterns, salinity changes, and changes to the hypoxic-anoxic (H-A) zone, which is about 100 square miles in Lake Pontchartrain with the Industrial Canal as the focal point. The Service and NMFS should be involved in the development of a monitoring plan and in review of the data.
  - a. It should be noted that the USACE concurred with our fourth recommendation requesting monitoring of the project. However, the USACE states that concurrence would be accomplished through existing monitoring programs rather than through project specific monitoring. The Service would like to further recommend the USACE to reconsider including monitoring as part of this project even if for a short time and limited area in and around the closure structure. As an alternative, the USACE could supplement an existing agencies monitoring program. For example, Louisiana Department of Environmental Quality's quarterly

samples (e.g., Bayou Dupre, IHNC, Causeway, and Rigolets) could be sampled every two months for two years following the total structure closure. The gathered data would be extremely useful for addressing assumptions about the system response to the closure structure and identifying any potential adverse impacts.

- 6) The Corps should investigate and seek legislative approval (e.g., project specific, Continuing Authority Program Section 206, etc.) to maintain the existing 9.9 miles of bank stabilization features and jetties that provide erosion protection benefits.
  - a. It should be noted that the USACE concurred with this fifth recommendation. However, the USACE states concurrence may be accomplished through investigations under other authorities. The Service encourages the USACE to reconsider modifying the TSP to include maintenance for the shoreline protection features for at least 1 more maintenance cycle, especially on the north bank of the MRGO at the MRGO/Lake Borgne interface. Even though the total closure structure will greatly reduce vessel traffic erosion, wind, and small boat wave erosion are still expected to occur from both the MRGO and Lake Borgne. The shoreline protection features are beneficial to protecting the critical wetlands between the MRGO and Lake Borgne. Protecting those wetlands is not only beneficial to fish and wildlife resources of the area but the 4<sup>th</sup> supplemental Congressional mandate for the MRGO bank stabilization project are to repair, construct, or provide measures or structures necessary to protect, restore, or increase wetlands, to prevent saltwater intrusion or storm surge in the MRGO area. If shoreline protection features are not maintained at least until other authorities can assume the responsibility, sustainability of those critical wetlands and the protection they provide to the Greater New Orleans area would be at risk. If the stabilization features will not be maintained, then indicators to aid navigation should be installed.

The USACE would concur with these recommendations were the project to be approved by Congress. In considering Recommendation 3, the USACE would not be able to retain authority to dredge between MRGO mile 3.4 and mile -2 for restoration purposes. However, such dredging and disposal could be pursued under another restoration authority, perhaps CWPPRA. Concurrence with Recommendation 5 could be achieved via the CWPPRA CRMS monitoring program as well as existing water quality sampling programs of various agencies. The shoreline protection features mentioned in Recommendation 6 are slated to remain in place. It is estimated that they should stay above the water for 10 years. During that time, another authority to maintain them can be sought.

Other environmental commitments include:

- Removal of aids to navigation and channel markers at the discretion of the United States Coast Guard.

- An effort would be made to construct the total closure structure during the April 1 through October 31 window recommended by the USFWS. Existing detailed contract specifications which protect sea turtles, manatees and Gulf sturgeon would continue, as would coordination with USFWS and NMFS..
- Full integration of the MRGO Deep-Draft De-authorization Recommended Plan into the LACPR Final Report to Congress.

## **5.2 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS**

This section documents compliance with statutory authorities, including environmental laws, regulations, Executive Orders, policies, rules and guidelines. Relevant statutory authorities are listed in Table 5.1

### **5.2.1 EO 11988, Floodplain Management**

The Recommended Plan would be located within the 100-year floodplain because there are no non-floodplain alternatives. The Recommended Plan could reduce harm to people or property in the floodplain because it could provide protection in small surge events where the surrounding marsh areas are not completely inundated.

### **5.2.2 EO 11990, Protection of Wetlands**

Of the alternatives considered, the Recommended Plan would provide the most extensive protection of wetlands.

### **5.2.3 EO 12898, Environmental Justice (EJ)**

On February 11, 1994, President Clinton issued EO 12898 directing Federal agencies “To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States...” Additionally, the U.S. Environmental Protection Agency defines EJ as the “fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations, and policies.” While recognizing EJ as a potentially significant issue, the location and impacts of the proposed legislative action are not expected to expose any segment of the public disproportionately to any adverse environmental effects as outlined by EO 12898. Furthermore, the general public has been provided multiple opportunities to be made knowledgeable of and participate in public meetings on the proposed legislative action. However, a concurrent study is being conducted to verify whether or not further action under the purview of EJ is warranted.

### **5.2.4 Endangered Species Act of 1973**

The USACE has determined, based on letters that are contained in Appendix J, that the Recommended Plan would not adversely affect any endangered or threatened species or their critical habitat. Concurrence with the USFWS and NMFS will be accomplished

through their review of the letters, included in Appendix F. The NMFS letter requests that the USACE comply with the Sea Turtle and Smalltooth Sawfish Construction Conditions below.

- a. “The Contractor shall instruct all personnel associated with the project of the potential presence of these species in the area, and the need to avoid collisions with these sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- c. If siltation barriers are used, they will be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement National Marine Fisheries Service’s Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow deep water routes (e.g. marked channel) whenever possible.
- e. If a sea turtle or smalltooth sawfish is sighted within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include the cessation of operation of all moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-foot radius of the equipment. Activities may not resume until the protected species has departed project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service’s Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.”

The above conditions will be added to the other endangered species conditions in any contracts for the project. Nearly all of the restrictions above are already in the USACE letter applying to the West Indian manatee. It should be noted that the smalltooth sawfish has been extirpated from the project area and there is no critical habitat in Louisiana or this species.

### **5.2.5 Clean Water Act Section 404(b)(1) Evaluation**

A Section 404(b)(1) Evaluation has been prepared for the Recommended Plan for MRGO Deep-draft De-authorization and is contained in Appendix I. The USACE has determined that the sites and methods for dredged or fill material disposal comply with Section 404(b)(1) Guidelines for water quality.

The Recommended Plan meets the Clean Water Act Section 404(r) criteria for an exemption from the requirement to obtain a State water quality certificate. (Criteria 1 - information on the effects of the discharge of fill material into waters of the United States, including the application of the Section 404(b)(1) Guidelines, is included in the Integrated Final Report and LEIS. Criteria 2 - the Integrated Final Report and LEIS will be submitted to Congress before the actual discharge takes place and prior to authorization of the Recommended Plan.) However, the Section 404(r) exemption was not invoked and a State water quality certificate has been obtained.

### **5.2.6 Clean Water Act Section 401 State Water Quality Certification**

Clean Water Act Section 401 State Water Quality Certification was accomplished by issuance of state water quality certificate DH 070806-01 on October 9, 2007, which is found in Appendix N.

### **5.2.7 Coastal Zone Management Act.**

A Coastal Zone Management Program Consistency Determination has been prepared and is found in Appendix K. The USACE has determined, based on the Coastal Use Guidelines, that the Recommended Plan is consistent to the maximum extent practicable, with the State of Louisiana's approved Coastal Management Program.

In a letter dated October 15, 2007, the Louisiana Department of Natural Resources made the following determination: "...to the extent that the proposed activity will be carried out and the impacts and results are all as described in the Draft Plan, the Tentatively Selected Plan meets the minimum qualifications for consistency with the State's federally approved Coastal Zone Management Program."

### **5.2.8 Hazardous, Toxic, and Radioactive Waste**

The USACE is obligated under Engineering Regulation 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of the Recommended Plan project area. HTRW Land Use History and HTRW Initial Site Assessments (ISA) have been completed in the project area and are on file with the USACE. Based on the existing ISAs, the probability of encountering HTRW in the project area is low. Continued implementation of the Recommended Plan would be warranted, based on these findings.

Addressing future HTRW concerns would require a review of site-specific, as well as project specific, information and plans. As strategies become more defined, a more detailed HTRW analysis would be performed to further evaluate and avoid potential HTRW problems. This detailed analysis would be accomplished by conducting

additional, site-specific HTRW site assessments. Should an HTRW concern be discovered during the investigation or after initiation of project and the development of a response action be required, the USACE would coordinate with the appropriate Federal and state authorities to develop an approved response action.

All plans will be investigated for potential HTRW. The general direct, indirect, and cumulative impacts will be dependent on site specific HTRW discovery. Based on existing HTRW studies in the project action area, there is reason to believe that the potential to encounter HTRW problems will be low, and therefore without cumulative impact.

For the project area, the following are HTRW investigations on file with the USACE:

- 078 Creef 31 Jul 95 Preliminary HTRW Screening, FY 95 Maintenance Dredging, Mississippi River-Gulf Outlet, Louisiana
- Michoud Canal and Inland MR-GO, MRGO 60.4 - 49; Michoud 0.1 - 1.7
- 117 Brown 22 May 97 MR-GO Wetland Creation
- 124 Brown 22 Sept. 97 Upper MR-GO Wetland Creation
- 136 Brown 10 July 98 MR-GO Hopedale Marshes Disposal Area, Mile 38
- 157 Creef/Brown MRGO Mile 43-41 Bank Stabilization
- 229 C. Rowe 25 May 04 Lake Borgne and MRGO Shoreline Protection Project
- 235 C. Rowe 20 June 04 MRGO ACM, Hopedale, La
- 251 A. Bennett 31 Oct 2005 HTRW checklist, MR-GO Foreshore Protection Project, Miles 60-47, St. Bernard Parish, LA
- 282 MMG, Inc. 20 Oct 06 GIWW and MRGO Option 1 Corridor (HPO)
- 283 MMG, Inc. 20 Oct 06 GIWW and MRGO Option 2 Corridor (HPO)

### **5.2.9 National Historic Preservation Act**

The State Historic Preservation Officer was contacted and has determined by a statement dated September 6, 2007 that no known archaeological sites or historic properties will be affected by this undertaking. See Appendix M.

Section 106 consultation for the proposed de-authorization of the Mississippi River Gulf Outlet was carried out with the tribes which have historically shown an interest in MVN projects in the area of the proposed action. The Alabama-Coushatta Tribe of Texas, the Choctaw Nation of Oklahoma, the Coushatta Tribe of Louisiana, the Jena Band of the Choctaw Indians, the Seminole Tribe of Florida, and the Tunica-Biloxi Tribe of Louisiana were contacted by e-mail. The Chitimacha Tribe of Louisiana and the Mississippi Band of Choctaw Indians were contacted by phone. The tribes contacted by e-mailed either did not respond or agreed to allow the Chitimacha to act as the lead for Native American consultation. The Mississippi Band of Choctaw Indians also agreed to let the Chitimacha act as the lead tribe for consultation. The USACE coordinated with the Chitimacha Tribe throughout the planning process for this project. See Appendix M.

### **5.3 ISSUES TO BE RESOLVED UNDER RECOMMENDED PLAN**

Implementing the Recommended Plan would result in the abandonment of channel features constructed for purposes of shoreline protection, levee protection, and channel protection. These features include jetties in the offshore segments of the channel in Breton and Chandeleur Sounds, and foreshore protection segments along the portion of the Chalmette Loop Levee fronting the MRGO, and foreshore protection in various locations on the north bank of the channel fronting wetlands areas. Due to geologic conditions and the elimination of maintenance authority, these features are predicted to subside below the water line resulting in diminished functional performance against wave energies.

### **5.4 ENVIRONMENTAL CONSIDERATIONS UNDER THE RECOMMENDED PLAN**

#### **5.4.1 Environmental Impacts of the Recommended Plan**

The Recommended Plan is estimated to prevent the potential loss of a significant percent of the 2,343 net acres of marsh estimated to be lost under the future without de-authorization. It could change salinity toward historic conditions. There are likely to be no large-scale changes in marsh habitat type, but there could be local changes toward historic conditions. More intermediate marsh and swamp are expected to return to areas within the Central Wetlands. There could be more brackish marsh within the Lake Borgne/MRGO land bridge. Estuarine dependent fisheries and wildlife associated with wetlands should increase compared to the future without scenario, as should fishing and hunting opportunities.

Salinity stratification would be reduced north of the total closure structure, which is anticipated to reduce salinity stratification in Lake Pontchartrain. This is expected to shrink the “H-A zone,” which could allow large *Rangia* clams and other benthos to populate the center of the lake. Turbidity could be reduced and submerged aquatic vegetation (SAV) would probably increase. These factors could significantly improve the aquatic ecosystem in portions of Lake Pontchartrain.

#### **5.4.2 Compliance with Environmental Regulations**

The Recommended Plan is in full compliance with the Fish and Wildlife Coordination Act, the Endangered Species Act, the Clean Water Act, the Coastal Zone Management Act, EO 11988, EO 11990, EO 12898 and other environmental laws and regulations listed in Section 5. The Recommended Plan is not likely to adversely impact any endangered or threatened species. It complies with the requirements of the Section 404(b)(1) Guidelines for water quality. It is consistent to the maximum extent practicable with the State of Louisiana’s approved Coastal Zone Management Program.

**Table 5.1 Relevant Federal Statutory Authorities and Executive Orders**

<b>Relevant Federal Statutory Authorities and Executive Orders</b> (Note: this list is not complete or exhaustive.)	
Abandoned Shipwreck Act of 1987 American Indian Religious Freedom Act Antiquities Act of 1906 Archeological Resources Protection Act of 1979 Archeological and Historical Preservation Act Bald Eagle Protection Act of 1940, Clean Air Act Clean Water Act Coastal Barrier Improvement Act of 1990 Coastal Barrier Resources Act of 1982 Coastal Wetlands Planning, Protection, and Restoration Act Coastal Zone Management Act of 1972 Comprehensive Environmental Response, Compensation, and Liability Act Consultation and Coordination with Indian Tribal Governments (EO 13175) Emergency Planning and Community Right-to-Know Act of 1986 Emergency Wetlands Restoration Act of 1986 Endangered Species Act of 1973 Environmental Quality Improvement Act of 1970 Estuary Protection Act Farmland Protection Policy Act Federal Actions to Address Environmental Justice in Minority Populations & Low-Income Populations (EO 12898) Federal Facilities Compliance Act Federal Land Policy and Management Act of 1976 Federal Water Pollution Control Act of 1972 Federal Water Project Recreation Act of 1965 Fish and Wildlife Conservation Act of 1980 Fish and Wildlife Coordination Act Flood Control Act of 1944 Floodplain Management (EO 11988) Food Security Act of 1985 Greening of the Government Through Efficient Energy Management (EO 13123) Greening of the Government Through Leadership in Environmental Management (EO 12148) Greening of Government Through Waste Prevention, Recycling, and Federal Acquisition (EO 13101) Historic Sites Act of 1935 Historical and Archeological Data-Preservation Invasive Species (EO 13112)	Land & Water Conservation Fund Act of 1965 Magnuson-Stevens Fishery Conservation and Management Act of 1996 Magnuson-Stevens Act Reauthorization of 2006 Marine Mammal Protection Act of 1972 Marine Protection, Research, and Sanctuaries Act of 1972 Migratory Bird Conservation Act Migratory Bird Treaty Act Migratory Bird Habitat Protection (EO 13186) National Environmental Policy Act of 1969 National Historic Preservation Act of 1966 Native American Graves Protection and Repatriation Act Noise Control Act of 1972 North American Wetlands Conservation Act Pollution Prevention Act of 1990 Prime and Unique Farmlands, 1980 CEQ Memorandum Protection and Enhancement of the Cultural Environment, 1971 (EO 11593) Protection and Enhancement of Environmental Quality (EO 11991) Protection of Children from Environmental Health Risks and Safety Issues (EO 13045) Federal Compliance with Pollution Control Standards (EO 12088) Protection of Cultural Property (EO 12555) Protection of Wetlands (EO 11990) Recreational Fisheries (EO 12962) Resource Conservation and Recovery Act of 1976 Rivers and Harbors Act of 1899 River and Harbor and Flood Control Act of 1970 Safe Drinking Water Act Submerged Land Act Toxic Substances Control Act Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) Water Resources Development Acts of 1976, 1986, 1990, and 1992 Water Resources Planning Act Watershed Protection & Flood Prevention Act Water Pollution Control Act Amendments of 1961 Wild and Scenic River Act Wilderness Act

## **SECTION 6 RECOMMENDATION**

As the District Engineer I have considered the environmental, social, and economic effects, the engineering and technical elements, and the comments received from other resource agencies and the public during this Mississippi River Gulf Outlet Deep Draft De-authorization study effort and plan formulation. Based upon the sum of this information, I am recommending the de-authorization of the MRGO Project from Mile 60 to Mile -9.4 as described in Section 6.1. The Recommended Plan minimized cost associated with the disposition of the de-authorized project while meeting the criteria of completeness, effectiveness, efficiency and acceptability.

I am recommending a De-authorization Plan that is comprised of a total closure structure at Bayou La Loutre and channel de-authorization from Mile 60 to Mile -9.4, with such modifications thereof as in the discretion of the Commander, HQUSACE, may be advisable.

Note: The project delivery team has developed detailed design and cost information for the recommended plan. Cost information presented for the Recommended Plan is based on advanced design and therefore differs from the costs presented for Alternative 1 which were based on preliminary design information. Advanced design has been generated through the analysis of field engineering data recently collected at the proposed closure structure location. Field data includes bathymetric surveys and subsurface geotechnical borings. Engineering analysis of the information was used to develop design and cost information to a feasibility level of detail. This level of information was developed only for the recommended plan not the entire array of alternatives. This section of the report provides the feasibility level design and cost information. The team has not updated information in earlier parts of the report because the added information does not change plan selection. This assessment is based upon the initial screening of navigation alternatives and subsequent assessment that remaining alternatives involving rock would change proportionally with the recommended plan.

### **6.1 DESCRIPTION OF THE RECOMMENDED PLAN**

Under the Recommended Plan, that portion of the MRGO channel from mile 60 at the southern bank of the GIWW to the Gulf of Mexico would be de-authorized for all navigation use. The MRGO channel (mile 66 – 60), the Michoud Canal Project, and the IHNC Lock Replacement Project would remain authorized. As part of the Plan, a total closure structure would be built of rock downstream of the south ridge of Bayou La Loutre in St. Bernard Parish, Louisiana. The structure would connect the two sides of the ridge, a distance of approximately 950 feet. The top width of the structure would be 12 feet and the elevation would be + 7 feet NAVD 88. Following completion of construction, the elevation of the structure will not be less than +4 feet NAVD 88. The side slopes of the structure would be 1 V to 2 H and the bottom width would be 450 feet. Quarry run “A” stone would be used to increase fines in the mix and minimize voids and water exchange. The structure would cover nearly 10 acres of water bottoms. Overbank extensions would be necessary on either side of the structure to constrict flow during high water events and prevent flanking of the channel closure. These overbank tie-ins would

be approximately 50 feet wide and 7 feet high and extend inshore approximately 150 feet on the south bank and approximately 250 feet on the north bank. Construction of these overbank extensions will impact 0.5 acres of marsh on the north bank and 0.3 acres of scrub shrub on the south bank. Approximately 391,500 tons of stone would be used. A barge-mounted dragline would be used to place the rock. Construction would take approximately 210 days. Every effort would be made to construct the total closure structure during the May through September window when Gulf sturgeon are in the rivers and not the estuaries.

The Federal government would construct the total closure structure. Navigation aids and channel markers would be considered for removal at the discretion of the United States Coast Guard. Existing bank stabilization features and jetties would be de-authorized but remain in place. Maintenance of the existing bank stabilization features and possible reapplication or realignment of the jetties could be investigated under LACPR or other appropriate authorities. Disposal easements and perpetual channel easements not required for continued operation and maintenance of authorized segments of the MRGO Project would be released. Other property not required for continued operation and maintenance of authorized segments of the MRGO Project would be disposed of in accordance with the Federal Property and Administrative Services Act of 1949, as amended, 40 U.S.C. § 471 et seq. A non-Federal sponsor would be required to acquire any real estate necessary to implement the Recommended Plan and for operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) of the total closure structure. In addition, the non-Federal Sponsor would be required to hold and save the Government free from all damages arising from the construction, operation, maintenance, repair and replacement of the total closure structure, except for damages due to the fault or negligence of the Government or its contractors.

The construction costs of the total closure structure would be 100% Federal (except real estate) and the OMRR&R costs of the total closure structure would be 100% non-Federal. The estimated total project construction cost of the rock total closure structure is \$24,684,150 based on October 2006 price levels. Total average annual costs for the Recommended Plan (including OMRR&R costs and the costs to navigation) are estimated to be approximately \$5.1 million and total average annual benefits are estimated to be \$12.5 million (savings derived from not dredging the authorized channel). This results in an estimated total average annual net benefit of \$7.4 million. Estimated total project construction costs, annual costs and benefits, and Federal/non-Federal cost breakdown are presented in Tables 6.1 through 6.4. Costs presented in these tables are based on advanced design of the Recommended Plan.

Additionally, the Recommended Plan contemplates that measures undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234 will be implemented conditioned on the non-Federal sponsor for those measures assuming responsibility of OMRR&R of those measures at 100% non-Federal cost. Table 6.5 lists the features of the existing MRGO Project and explains the status of those features as contemplated under the Recommended Plan.

**Table 6.1 Project First Costs**

<b>Project First Costs</b> <b>MRGO Deep-Draft De-authorization Study</b> <b>Closure Structure</b> <b>(October 2006 Price Levels,</b> <b>Based on Advanced Design of Recommended Plan)</b>	
<b>Construction Items</b>	<b>Cost (\$)</b>
Mobilization and Demobilization	85,000
Stone Placement - Channel Proper	11,773,000
Stone Placement - Overbank Tie-Ins	403,650
Crushed Stone Blanket	3,400,000
Geotextile Separator Fabric	31,500
Clearing and Grubbing (Overbank)	11,000
Engineering and Design	863,700
Construction Management	1,256,300
Real Estate*	1,401,000
Removal of Aids to Navigation	700,000
Contingencies	4,759,000
<b>Total Project Construction Costs</b>	<b>24,684,150</b>

\*Of the total Real Estate costs, \$21,000 are associated with acquisition of real estate rights necessary for the construction of the closure structure. For an explanation of additional costs, see Appendix E.

## **6.2 MRGO ECOSYSTEM RESTORATION PLAN**

Consistent with Public Law 109-234, which authorized the development of a comprehensive plan to de-authorize the deep draft navigation on the MRGO from the GIWW to the Gulf of Mexico, the plan formulation contained in this report (see Section 2) focused on measures that were attributed directly to the de-authorization of the MRGO channel. At the time this report was being released for State and Agency review, Section 7013 of the WRDA 2007 became law and expanded the scope of the study and report authorized by Public Law 109-234. In addition, pursuant to section 7013, upon submission of the final report to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives, the MRGO from the Gulf of Mexico to Mile 60 at the southern bank of the Gulf Intracoastal Waterway is no longer authorized. Section 7013 also authorizes the Secretary of the Army to carry out a plan to close the MRGO and to restore and protect the ecosystem substantially in accordance with the final report subject to the Secretary's determination that the plan is cost-effective, environmentally acceptable, and technically feasible. The full text of Section 7013 is provided below:

*SEC. 7013. MISSISSIPPI RIVER-GULF OUTLET.*

*(a) DEAUTHORIZATION.—*

*(1) IN GENERAL.—Effective beginning on the date of submission of the plan required under paragraph (3), the navigation channel portion of the Mississippi River-Gulf Outlet element of the project for navigation, Mississippi River, Baton Rouge to the Gulf of Mexico, authorized by the Act entitled “An Act to authorize construction of the Mississippi River-Gulf outlet”, approved*

*March 29, 1956 (70 Stat. 65) and modified by section 844 of the Water Resources Development Act of 1986 (100 Stat. 4177) and section 326 of the Water Resources Development Act of 1996 (110 Stat. 3717), which extends from the Gulf of Mexico to Mile 60 at the southern bank of the Gulf Intracoastal Waterway, is not authorized.*

*(2) SCOPE.—Nothing in this paragraph modifies or deauthorizes the Inner Harbor navigation canal replacement project authorized by that Act of March 29, 1956.*

*(3) CLOSURE AND RESTORATION PLAN.—*

*(A) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a final report on the deauthorization of the Mississippi River-Gulf outlet, as described under the heading “INVESTIGATIONS” under chapter 3 of title II of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 (120 Stat. 453).*

*(B) INCLUSIONS.—At a minimum, the report under subparagraph (A) shall include—*

*(i) a plan to physically modify the Mississippi River-Gulf Outlet and restore the areas affected by the navigation channel;*

*(ii) a plan to restore natural features of the ecosystem that will reduce or prevent damage from storm surge;*

*(iii) a plan to prevent the intrusion of saltwater into the waterway;*

*(iv) efforts to integrate the recommendations of the report with the program authorized under section 7003 and the analysis and design authorized by title I of the Energy and Water Development Appropriations Act, 2006 (119 Stat. 2247); and*

*(v) consideration of—*

*(I) use of native vegetation; and*

*(II) diversions of fresh water to restore the Lake Borgne ecosystem.*

*(4) CONSTRUCTION.—The Secretary shall carry out a plan to close the Mississippi River-Gulf Outlet and restore and protect the ecosystem substantially in accordance with the plan required under paragraph (3), if the Secretary determines that the project is cost-effective, environmentally acceptable, and technically feasible.*

Section 7013 of WRDA 2007 expanded the requirements for the study previously authorized by Public Law 109-234 to include development of a plan for ecosystem restoration and required that a final report on the de-authorization of the MRGO be submitted to the Senate Committee on Environment and Public Works and to the House of Representatives Committee on Transportation and Infrastructure within 180 days of enactment of WRDA 2007. Expanding the report originally required by Public Law 109-234 to include the new requirements imposed by section 7013 of WRDA 2007 will require additional analysis and National Environmental Policy Act (NEPA) documentation, which would significantly delay completion of the report, de-authorization of the MRGO navigation channel, and implementation of the closure structure.

Therefore, the plan for ecosystem restoration, inclusive of the considerations set forth in Section 7013, is preliminarily addressed in this report and will be fully addressed in a supplemental report to be provided to Congress at a later date. The ecosystem restoration plan to be presented in the supplement will be formulated to focus on systematic ecosystem restoration measures for the MRGO area and will include considerations of measures to reduce or prevent damage from storm surge. The formulation process will consider a full range of restoration alternatives. The supplement will be fully compliant with NEPA and will provide sufficient detail to ensure that the recommended ecosystem

plan is consistent with Section 7013, implementable, and supported by a non-Federal sponsor.

Although information regarding ecosystem restoration efforts was gathered and presented as part of this report, ecosystem restoration measures that were not inherent to the direct de-authorization of the MRGO channel were determined to be outside the scope of the study as originally authorized by Public Law 109-234. The formulation of the ecosystem restoration plan will use the information discussed in section 4 of this report and information from other ongoing ecosystem restoration projects in the area, including those discussed below, to develop an ecosystem restoration plan which can be implemented within the authority provided by Section 7013. Additional ecosystem restoration measures will be considered consistent with the requirements of NEPA and USACE policy.

The following provides an overview of ongoing programs, projects, authorities, and studies related to ecosystem restoration in the vicinity of the MRGO channel.

- a) The Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act of 2006 (Public Law 109-148) appropriated \$75,000,000 for “authorized operation and maintenance activities along the Mississippi River-Gulf Outlet channel” and Public Law 109-234 clarified that the funds are to be used for “the repair, construction or provision of measures or structures necessary to protect, restore or increase wetlands, to prevent saltwater intrusion or storm surge.” The U.S. Army Corps of Engineers is currently implementing or developing plans to execute this authority. Two shoreline protection projects along the north bank of the MRGO and the south shore of Lake Borgne are under construction. Additional measures under consideration include:
- Shoreline protection along Lake Borgne flanking the opening of Bayou Bienvenue
  - Shoreline protection along Lake Borgne flanking the opening of Bayou Dupre
  - Shoreline protection along Lake Borgne west of Shell Beach
  - Marsh creation through dedicated dredging within the Golden Triangle
  - Marsh creation through dedicated dredging at Shell Beach

These actions and modifications or enhancements to these measures will be included in the ecosystem restoration plan.

- b) The Corps is currently developing a Louisiana Coastal Protection and Restoration (LACPR) report and Programmatic Environmental Impact Statement for submittal to Congress covering the integration of a plan for flood control, coastal restoration and hurricane protection in south Louisiana. As part of the overall LACPR team, a Habitat Evaluation Team, consisting of USACE, State of Louisiana, and various Federal resource agency members, is developing a suite of coastal restoration alternatives. The Habitat Evaluation Team is evaluating multiple restoration alternatives in addition to the future without project condition to achieve coastal

restoration goals to the maximum extent practical. Each of the alternatives under evaluation is contemplated to include restoration and protection in the vicinity of the MRGO. These ecosystem restoration alternatives are being developed and refined as part of LACPR and will be considered as part of the MRGO ecosystem restoration plan. Examples of ecosystem restoration features being considered as part of the LACPR effort that will be considered in the ecosystem restoration plan include:

- Bayou Bienvenue Diversion
- Bayou LaLoutre Diversion
- Biloxi Marshes Shore Protection
- Bayou Terre aux Boeufs Diversion
- Lake Borgne Marsh Creation
- Mississippi River Gulf Outlet Shoreline Protection
- Bayou LaLoutre Ridge Restoration
- New Orleans East land bridge Marsh Creation
- Central Wetlands Marsh Creation
- South Lake Borgne Marsh Creation
- Biloxi Marsh Creation
- Golden Triangle Marsh Creation
- Violet Diversion
- Breton Landbridge Marsh Creation

The above and other features will be considered in the formulation of the MRGO ecosystem restoration plan. The most up to date information developed as part of the ongoing LACPR study will be used to increase the efficiency of the MRGO ecosystem restoration plan formulation process. The consideration of features developed under LACPR is in compliance with the authority for the MRGO de-authorization study which requires that the plan be consistent with LACPR.

- c) The Louisiana Coastal Area (LCA) report recommended plan includes construction of rock breakwaters along the southern shoreline of Lake Borgne for an approximate distance of 15 miles which would protect about 1,350 acres. Breakwaters along the north bank of the MRGO for an approximate distance of 23 miles could protect about 5,000 acres of marsh if deep and shallow draft navigation were to continue on the waterway. In light of the Recommended Plan contained in this report to de-authorize the MRGO channel from the GIWW to the Gulf of Mexico and construct a rock closure structure, the ecosystem restoration plan will need to examine the LCA recommendations and reformulate them if necessary to meet the goals of the MRGO ecosystem restoration plan.
- d) The Violet Diversion project is authorized by WRDA 2007 and is intended to divert freshwater from the Mississippi River at or near Violet, Louisiana, for the purposes of reducing salinity in the western Mississippi Sound, enhancing oyster production, and promoting the sustainability of coastal wetlands. The Violet Diversion is expected to protect and restore a significant number of acres. This project is also mentioned in a number of other plans provided by the State and other agencies. There is a potential to

analyze the outputs of the Violet Diversion so as to meet both the salinity and ecosystem restoration goals of the MRGO ecosystem restoration plan.

In addition to the initiatives listed above, the following efforts are ongoing in the MRGO area. They will also be considered as part of the ecosystem restoration plan and the plan will be closely coordinated with the State and other agencies to ensure that the best systematic plan is implemented in the area.

- a) The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) was enacted in 1990, and this authority established a Federal-State Task Force to work to restore and protect Louisiana's coastal wetlands. The program is implemented using Federal dollars matched with funds from the State of Louisiana. In 1993, the program produced the Louisiana Coastal Wetlands Restoration Plan that outlined the causes of wetlands erosion and identified broad solutions and specific projects to address the problems. The CWPPRA projects within the MRGO area will be considered, reviewed, evaluated, and integrated into the MRGO ecosystem restoration plan.
- b) The State of Louisiana also is a Coastal Impact Assistance Program (CIAP) recipient and recently had its initial project implementation plan approved. The initial round of program funding contemplates four projects in the MRGO vicinity. The projects include shoreline protection, marsh creation, wastewater assimilation in wetlands, and fresh water introduction from the Mississippi River.

Existing programs, projects, authorities, and studies provide a strong framework for the development of a systematic ecosystem restoration plan. The items listed above will be considered during the plan formulation process and will ultimately contribute to the final ecosystem restoration plan, which will fully address the requirements set forth in section 7013 of WRDA 2007.

### **6.3 MRGO PLAN INTEGRATION INTO LACPR**

Congressional direction to prepare a deep-draft de-authorization plan for the MRGO also requires that the plan be fully consistent and integrated with the LACPR plan. Development of the LACPR plan focuses on identifying a comprehensive strategy for flood control, coastal restoration, and hurricane protection in south Louisiana. The future of the MRGO navigation channel is a key decision impacting direction on related projects in the area such as hurricane protection, ecosystem restoration and navigation. The Recommended Plan for MRGO de-authorization is being integrated into ongoing work to develop and evaluate measures for the LACPR plan. These measures currently include shoreline protection, marsh creation, freshwater diversions, and levees and storm gates. Specific work to integrate the components of the MRGO plan with the LACPR plan will include storm surge modeling, environmental planning, and prioritization. The Recommended Plan is consistent with all alternatives being evaluated under the on-going LACPR effort and does not conflict with any decisions being considered under LACPR. Every effort has been made to accelerate completion of the MRGO Final Report and LEIS in accordance with the Congressional direction found in Title IV, Chapter 3, Section 4304 of the "U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq

Accountability Appropriations Act, 2007" (Public Law 110-28). The MRGO Final Report and LEIS will be transmitted to the Congress as soon as is practicable. The MRGO Final Report and LEIS will also be included in the LACPR Final Report.

**Table 6.2 Equivalent Annual Benefits and Costs**

<b>Equivalent Annual Benefits And Costs</b> <b>MRGO Deep-Draft De-Authorization Study</b> <b>Closure Structure</b> <b>(October 2006 Price Level, 50-Year Period of Analysis, 4.875 Percent Discount Rate,</b> <b>Based on Advanced Design of Recommended Plan)</b>		
<u>Investment Costs:</u>		
Total Project Construction Costs	\$24,684,150	
Interest During Construction	452,000	
Total Investment Cost	\$25,136,150	
 <u>Average Annual Costs:</u>		
Interest and Amortization of Initial Investment	\$ 1,264,000	
Deep-Draft Transportation Cost	2,500,000	
Shallow-Draft Transportation Cost	1,200,000	
OMRR&R	172,000	
Total Average Annual Costs	\$5,136,000	
 Average Annual Benefits	 \$12,500,000	
Net Annual Benefits	\$ 7,364,000	
Benefit-Cost Ratio		2.4 to 1
Benefit-Cost Ratio (computed at 7%)**		2.3 to 1

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\*\*Per Executive Order 12893

## **6.4 VIEWS OF THE NON-FEDERAL SPONSOR**

Alternative 1 is the most satisfactory to the State of Louisiana. The State of Louisiana has taken a number of significant actions related to the future of the MRGO and clearly identified its position on the de-authorization of the channel. Key pieces of information highlighting the state's position include:

1. A letter from the Governor calling for immediate closure of the MRGO. In a June 2006 letter Governor Blanco wrote General Riley regarding the MRGO stating "I write to unequivocally express the policy of this State regarding the future of the Mississippi River Gulf Outlet (MRGO) ... my Advisory Commission on Coastal Protection, Restoration and Conservation has recommended the immediate closure of this channel." (see Appendix A).
2. The completion of a Master Plan for Coastal Protection and Restoration highlighting total closure of the MRGO. The State Master Plan calls for the immediate closure of the MRGO. To quote, "Immediately construct a closure dam

**Table 6.3 Economic Costs And Benefits of Recommended Plan**

**MRGO Deep-Draft De-Authorization Study  
Economic Costs And Benefits of Recommended Plan  
(October 2006 Price Level, 50-Year Period of Analysis, 4.875 Percent Discount Rate,  
Based on Advanced Design of Recommended Plan)**

<u>Item</u>	<u>Navigation</u>		<u>Total Costs</u>	
	Allocated	Benefits	Allocated	Benefits
	Costs		Costs	
<u>Investment Costs:</u>				
Total Project Construction Costs	\$24,684,150		\$24,684,150	
Interest During Construction	452,000		452,000	
Total Investment Cost	\$ 25,136,150		\$ 25,136,150	
<u>Average Annual Costs:</u>				
Interest and Amortization of Initial Investment	\$1,264,000		\$1,264,000	
Transportation Cost Shallow-Draft	2,500,000		2,500,000	
Transportation Cost OMRR&R	1,200,000		1,200,000	
	172,000		172,000	
Total Average Annual Costs	\$ 5,136,000		\$ 5,136,000	
Average Annual Benefits		\$ 12,500,000		\$ 12,500,000
Net Annual Benefits		\$ 7,364,000		\$ 7,364,000
Benefit-Cost Ratio		2.4 to 1		2.4 to 1
Benefit-Cost Ratio (computed at 7%)*		2.3 to 1		2.3 to 1

\*Per Executive Order 12893

at Bayou LaLoutre ...” The Master Plan was developed with intensive public input and was unanimously adopted by the Louisiana Legislature.

3. Passage of state appropriations in the current fiscal year dedicated to co-sponsoring MRGO closure. The Fiscal Year 08 State Annual Plan includes funds for the LERRDs associated with the proposed total closure structure.
4. Provision of a letter of interest in serving as the non-Federal sponsor. The State of Louisiana has expressed an understanding of the current law and administration policy regarding implementation of Federal water resources projects. In a letter of intent dated September 25, 2007, the Chair of the Coastal Protection and Restoration Authority of Louisiana (CPRA) expressed the State of Louisiana’s interest in sharing the costs of implementing the recommendations of this report “.

. . . dependent upon the nature of the local cooperation requirements and their specific costs” (see Appendix O).

5. Self-certification of the non-Federal sponsor's financial capability. The state certified its financial capability to serve as the local cost share sponsor for the MRGO closure plan. (see Attachment 1).
6. Participation in the project Civil Works Review Board and expression of strong commitment and support for the recommended plan.

The State of Louisiana has committed to provide a revised letter of assurance that clearly articulates their desire to serve as the non-Federal sponsor. A letter meeting this requirement is anticipated from the state in November 2007.

## **6.5 NON-FEDERAL RESPONSIBILITIES**

The recommendations are made with the provision that, prior to implementation, the non-Federal sponsor agrees with responsibilities and cost sharing requirements as set forth below.

The plan recommended in the report requires the provision of LERRDs for and OMRR&R of the closure structure at full non-Federal expense. Costs of the recommended plan are shown in summary and in detail in Table 6.4.

In addition, the plan recommends that any measures undertaken or to be undertaken pursuant to the authorization provided under the heading “Operation and Maintenance” in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 of Title II, Chapter 3 of Public Law 109-234 will be implemented conditioned on the non-Federal sponsor for those measures assuming responsibility of OMRR&R of those measures at 100% non-Federal cost. Currently, the Port of New Orleans is the non-Federal sponsor for these measures. The plan recommends that the State of Louisiana assume responsibility for any operation, maintenance, repair, replacement, and rehabilitation associated with these measures.

The Port of New Orleans will continue to serve as the non-Federal sponsor for the MRGO Navigation Project (existing portion of the Mississippi River-Gulf Outlet, Louisiana Project that will remain authorized, from mile 66-60). The required assurances granted by the Port of New Orleans to the United States on April 4, 1957, and March 3, 1975, will remain in full force and effect for the portion of the existing MRGO Navigation Project that will remain authorized. De-authorization of the MRGO channel from mile 60 on the southern bank of the GIWW to the Gulf of Mexico (Mile -9.4) will not affect the Port's assurance, granted to the United States on April 4, 1957, to hold and save the United States free from all claims for damages due to construction, maintenance, and operation of original project.

The Port of New Orleans will continue to serve as the non-Federal sponsor for the Mississippi River-Gulf Outlet, Michoud Canal Project. The required assurances granted

by the Port of New Orleans to the United States on February 3, 1969, and January 10, 1974, will remain in full force and effect and will not be affected by de-authorization of the MRGO channel from mile 60 on the southern bank of the GIWW to the Gulf of Mexico (Mile -9.4).

The Port of New Orleans will continue to serve as the non-Federal sponsor for the Inner Harbor Navigation Canal Lock Replacement Project. The non-Federal obligations agreed to by the Port of New Orleans in the Project Cooperation Agreement for Construction of the Deep Draft Increment of the Inner Harbor Navigation Canal Lock Replacement, executed on September 27, 2001, will remain in full force and effect and will not be affected by de-authorization of the MRGO channel from mile 60 on the southern bank of the GIWW to the Gulf of Mexico (Mile -9.4).

Prior to the Federal Government initiating construction of the closure structure, the non-Federal sponsor shall execute an agreement with the Department of the Army agreeing to comply with applicable laws and policies, including but not limited to:

- a. Provide all lands, easements, and rights-of-way (LERRDs), including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations determined by the Federal Government, in consultation with the non-Federal sponsor, to be necessary for the construction, operation, maintenance, repair, replacement and rehabilitation (OMRR&R) of the closure structure, all at no cost to the Federal Government.
- b. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the closure structure, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act
- c. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the construction, operation, and maintenance of the closure structure. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction.

- d. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, or maintenance of the closure structure.
- e. Operate, maintain, repair, rehabilitate, and replace the closure structure at no cost to the Federal Government, in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government.
- f. Operate, maintain, repair, replace and rehabilitate any measures undertaken or to be undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234 (3<sup>rd</sup> Supplemental work) at no cost to the Federal Government in accordance with applicable Federal and State Laws and regulations and specific directions prescribed by the Federal Government.
- g. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the closure structure or 3<sup>rd</sup> Supplemental work, except for damages due to the fault or negligence of the United States or its contractors.
- h. Agree, as between the Federal Government and the non-Federal sponsor, that the non-Federal sponsor shall be considered the operator of the closure structure and 3<sup>rd</sup> Supplemental work for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the closure structure and 3<sup>rd</sup> Supplemental work in a manner that will not cause liability to arise under CERCLA.
- i. Prevent obstructions or encroachments on the closure structure and 3<sup>rd</sup> Supplemental work (including prescribing and enforcing regulations to prevent such obstructions or encroachments), such as any new developments on lands, easements, and rights-of-way or the addition of facilities which might hinder operation and maintenance of the closure structure and 3<sup>rd</sup> Supplemental work or interfere with their proper function.
- j. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*).

k. Not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal obligations for the Recommended Plan unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized.

**Table 6.4 Federal and Non-Federal Cost Breakdown**

<b>MRGO Deep-Draft De-Authorization Study</b>				
<b>Federal and Non-Federal Cost Breakdown</b>				
<b>(October 2006 Price Level, 50-Year Period of Analysis, Based on Advanced Design of Recommended Plan)</b>				
	<b>Responsibility</b>	<b>Federal</b>	<b>Non-Federal</b>	<b>Total</b>
<b>Project First Costs (Construction)</b>				
Mobilization and Demobilization	100% Federal	\$85,000		\$85,000
Stone Placement - Channel Proper	100% Federal	\$11,773,000		\$11,773,000
Stone Placement - Overbank Tie-Ins	100% Federal	\$403,650		\$403,650
Crushed Stone Blanket	100% Federal	\$3,400,000	-	\$3,400,000
Geotextile Separator Fabric	100% Federal	\$31,500	-	\$31,500
Clearing and Grubbing (Overbank)	100% Federal	\$11,000		\$11,000
Engineering and Design	100% Federal	\$863,700		\$863,700
Construction Management	100% Federal	\$1,256,300		\$1,256,300
Real Estate*	100% Non-Federal	\$125,000	\$1,276,000	\$1,401,000
Removal of Aids to Navigation	100% Federal	\$700,000		\$700,000
Contingencies	100% Federal	\$4,759,000		\$4,759,000
<b>Total Project First Costs</b>		<b>\$23,408,150</b>	<b>\$1,276,000</b>	<b>\$24,684,150</b>
<b>OMRR&amp;R</b>	100% Non-Federal		<b>\$7,860,000</b>	<b>\$7,860,000</b>
<b>Total Cost Share</b>		<b>\$23,408,150</b>	<b>\$9,136,000</b>	<b>\$32,544,150</b>

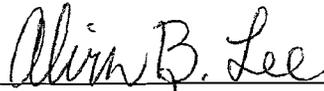
\*Of the total Real Estate costs, \$21,000 are associated with acquisition of real estate rights necessary for the construction of the closure structure. For an explanation of additional costs, see Appendix E.

**Table 6.5 Existing MRGO Project Features Under Recommended Plan**

<b>Existing MRGO Project Features and Authorized O&amp;M Activities</b>	<b>Status under the Recommended Plan (RP)</b>
<b>GIWW Reach (mile 66-60)</b>	
36-ft deep x 500-ft bottom width navigation channel	Not modified or de-authorized under the RP; Remains authorized.
Maintenance dredging of the GIWW Reach of MRGO navigation channel, the turning basin, & Michoud Canal Project	Not modified or de-authorized under the RP; Remains authorized.
Dredge disposal sites adjacent to the MRGO navigation channel and the Michoud Canal Project	Not de-authorized under the RP if required for the operation and maintenance of the GIWW reach of the MRGO navigation channel, the turning basin, the Michoud Canal Project, or the IHNC Lock Replacement Project.
Turning Basin	Not modified or de-authorized under the RP; Remains authorized.
Michoud Canal Project	Not modified or de-authorized under the RP; Remains authorized.
IHNC Lock Replacement Project	Not modified or de-authorized under the RP; Remains authorized.
Existing bank stabilization/foreshore protection along GIWW Reach of MRGO navigation channel	Not modified or de-authorized under the RP; Remains authorized.
Aids to navigation and channel markers	Not modified or de-authorized under the RP; Remain authorized.
Real-estate interests	Retain if required for the operation and maintenance of the GIWW reach of MRGO navigation channel, the turning basin, the Michoud Canal Project, or the IHNC Lock Replacement Project.
<b>Inland Reach (mile 60-23)</b>	
36-ft deep x 500-ft bottom width navigation channel	De-authorized under the RP.
Maintenance dredging of Inland Reach of MRGO navigation channel	De-authorized under the RP.
Dredge disposal sites adjacent to navigation channel	Not de-authorized under the RP if required for the operation and maintenance of the GIWW reach of the MRGO navigation channel, the turning basin, the Michoud Canal Project, or the IHNC Lock Replacement Project.
Existing bank stabilization/foreshore protection along Inland Reach of MRGO navigation channel	De-authorized under the RP but will remain in place; future maintenance of these features will be considered under LACPR or other appropriate authorities.

Measures undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234	OMRR&R becomes a 100% non-Federal responsibility and cost.
Aids to navigation and channel markers	Removed under the RP at the discretion of the United States Coast Guard.
Real-estate interests	Retain if required for the operation and maintenance of the GIWW reach of the MRGO navigation channel, the turning basin, the Michoud Canal Project, the IHNC Lock Replacement Project, or measures undertaken pursuant to the authorization provided under the heading "Operation and Maintenance" in Title I, Chapter 3 of Division B of Public Law 109-148, as modified by Section 2304 in Title II, Chapter 3 of Public Law 109-234.
<b>Sound Reach (mile 23-0)</b>	
36-ft deep x 500-ft bottom width navigation channel	De-authorized under the RP.
Maintenance dredging of Sound Reach of MRGO navigation channel	De-authorized under the RP.
Dredge disposal sites adjacent to navigation channel (including south jetty and Breton Sound point disposal sites)	De-authorized under the RP.
Jetties	De-authorized under the RP but will remain in place; possible reapplication or realignment of these features will be considered under LACPR or other appropriate authorities.
Aids to navigation and channel markers	Removed under the RP at the discretion of the United States Coast Guard.
Real-estate interests	Released or disposed of under the RP.
<b>Bar Channel (mile 0 to -9.4)</b>	
38-ft deep x 600-ft bottom width navigation channel	De-authorized under the RP.
Maintenance dredging of Bar Channel of MRGO navigation channel	De-authorized under the RP.
Dredge disposal sites adjacent to navigation channel (including the ODMDS)	De-authorized under the RP.
Aids to navigation and channel markers	Removed under the RP at the discretion of the United States Coast Guard.
Real-estate interests	Released or disposed of under the RP.

The recommendations contained herein reflect the information available at this time and current Departmental policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of a National Civil Works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to the Congress as proposals for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsor, the state, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity for further comment.



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Alvin B. Lee  
Colonel, U.S. Army  
District Engineer – New Orleans

## SECTION 7 LIST OF PREPARERS

The following persons were primarily responsible for preparation of this LEIS:

NAME	EXPERTISE/ DISCIPLINE	EXPERIENCE	ROLE IN PREPARING LEIS
Sean Mickal	Biology	12 years Environmental Compliance and Planning, Corps of Engineers, New Orleans District	Environmental Project Manager
Suzanne Hawes	Botany/Fishery Biology	35 years Environmental Resources Specialist, Corps of Engineers, New Orleans District	Principle Scientist, Significant Resources, Document Preparation
Gregory Miller	Coastal Restoration Planning, Project Management	7 years Fisheries Biologist National Marine Fisheries Service, 7 years Project Management, Corps of Engineers, New Orleans District	Project Manager, Plan formulation leader, Public involvement strategy and execution
Richard Broussard	Civil Engineering; dredging, beneficial use and shoreline protection	30 years Technical Manager, Engineering Division, Waterways Section, Corps of Engineers, New Orleans District	Engineering, project design
Michelle Daigle	Civil Engineering	17 years navigation experience with the Corps of Engineers (dredge estimating, hydramodeling, operations)	MRGO Operations Manager
Gary Demarcay	Archaeology	31 years of governmental and contract archaeology	Cultural Resources
Mark Haab	Economics	20 years Navigation Economist, Corps of Engineers, New Orleans District	Navigation
Keith O'Cain	Civil Engineering; dredging, beneficial use and shoreline protection	28 years Functional Team Lead, Engineering Division, Civil Branch, Corps of Engineers, New Orleans District	Engineering, Project design
Andrew Perez	Recreation Impacts Analysis	3 yrs economist, Corps of Engineers, Honolulu District, 1 yr. economist, New Orleans	Recreation Resources

		District, 3 years recreation planner, New Orleans District	
Richard Radford	Visual Resource Management/Landscape Architect	5 years Landscape Architectural Services, Corps of Engineers, New Orleans District	Aesthetics
Richard Gatewood	Natural Res. & Env. Science MS	15 years Environmental Management, New Mexico National Guard, 3 years Corps of Engineers, New Orleans District	HTRW
Joseph Mann	Economics	12 years experience, Deep-Draft Navigation	Socio-economic
Angela Minton	Planning and Project Management	11 years planning experience, government and contract	Asst. Project Manager, Public Involvement, Document review and editing
Mayely Boyce	Environmental Law	7 months Assistant District Counsel, Corps of Engineers, New Orleans District	Legal review
Robert Northey	Environmental Law	13 years Assistant District Counsel, Corps of Engineers, New Orleans	Legal Review
Nicholas Meis	Technical Writing / Editing	15 years technical writing experience, corporate and contract	Document Production

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## SECTION 9 ACRONYMS AND ABBREVIATIONS

ADCIRC	Advanced Circulation Model
cfs	cubic feet per second
CHL	Coastal and Hydraulics Laboratory
CIAP	Coastal Impact Assistance Program
Coast 2050 Plan	Coast 2050: Toward a Sustainable Coastal Louisiana Report
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
EPA	U.S. Environmental Protection Agency
ERDC	Engineer Research and Development Center
ESA	Environmental Site Assessment
ft	feet
GIWW	Gulf Intracoastal Waterway
IHNC	Inner Harbor Navigation Canal
IWR	Institute for Water Resources
LACPR	Louisiana Coastal Protection and Restoration
LCA	Louisiana Coastal Area
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
MLG	Mean Low Gulf
mph	miles per hour
MRGO	Mississippi River-Gulf Outlet
NED	National Economic Development
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
O & M	Operations and Maintenance
OCS	Outer Continental Shelf
OSA	Office of the Secretary of the Army
PEIS	Programmatic Environmental Impact Statement
ppt	parts per thousand
RP	Recommended Plan
SAV	Submerged Aquatic Vegetation
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WCSC	Waterborne Commerce Statistics Center

## SECTION 10 COMMON AND SCIENTIFIC NAMES OF PLANTS AND ANIMALS

### PLANTS

Cane - *Phragmites*  
Roseau - *Phragmites australis*  
Big cordgrass - *Spartina cynosuroides*  
Sea oxeye - *Borrchia frutescens*  
Wax myrtle - *Myrica cerifera*  
Marsh elder - *Iva frutescens*  
Palmetto - *Sabal minor*  
Live oak - *Quercus virginiana*  
Sweetgum - *Liquidambar styraciflua*  
Hackberry - *Celtis laevigata*  
Elm - *Ulmus americana*  
Ash - *Fraxinus*

### INVERTEBRATES

American oyster - *Crassostrea virginica*  
Brown shrimp - *Farfantepenaeus aztecus*  
White shrimp - *Litopenaeus setiferus*  
Blue crab - *Callinectes sapidus*

### FISH

Gulf sturgeon - *Ancipenser oxyrinchus desotei*  
Anchovy - *Anchoa mitchilli*  
Gulf menhaden - *Brevoortia patronus*  
Gray snapper - *Lutjanus griseus*  
Atlantic croaker - *Micropogonias undulatus*  
Sea trout - *Cynoscion*  
Spotted sea trout - *Cynoscion nebulosus*  
Sand seatrout - *Cynoscion arenarius*  
Black drum - *Pogonias cromis*  
Red drum - *Sciaenops ocellatus*  
Spot - *Leiostomus xanthurus*  
Gulf sheepshead - *Archosargus probatocephalus*  
Spanish mackerel - *Scomberomorus maculatus*  
Southern flounder - *Paralichthys lethostigma*  
Blue catfish - *Ictalurus furcatus*

### REPTILES

Hawksbill sea turtle - *Eretmochelys imbricate*  
Leatherback - *Dermochelys coriacea*  
Loggerhead - *Caretta caretta*  
Kemp's ridley - *Lepidichelys Kempii*  
Alligator - *Alligator mississippiensis*

## BIRDS

Brown pelican - *Pelecanus occidentalis*

Mallard - *Anas platyrhynchos*

Green-winged teal - *Anas crecca*

Bald eagle - *Haliaeetus leucocephalus*

Piping plover - *Charadrius melodus*

## MAMMALS

Opossum - *Didelphis virginiana*

Nine banded armadillo - *Dasypus novemcinctus*

Rabbit - *Sylvilagus*

Fox squirrel - *Sciurus niger*

Gray squirrel - *Sciurus carolinensis*

Muskrat - *Ondatra zibethicus*

Nutria - *Myocaster coypus*

Raccoon - *Procyon lotor*

Mink - *Mustela vison*

River otter - *Lutra canadensis*

Manatee - *Trichechus manatus*

## **SECTION 11 DISTRIBUTION LIST**

The Integrated Final Report to Congress and Legislative Environmental Impact Statement was distributed to Federal, state, parish, and local agencies; tribes; businesses; libraries; museums; universities; environmental organizations, groups, and individuals. The complete distribution list for the Integrated Final Report to Congress and Legislative Environmental Impact Statement is provided in Attachment 2.

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**Attachment 1**

**NON-FEDERAL SPONSOR'S  
SELF CERTIFICATION OF FINANCIAL CAPABILITY  
FOR DECISION DOCUMENTS**

**NON-FEDERAL SPONSOR'S  
SELF-CERTIFICATION OF FINANCIAL CAPABILITY  
FOR DECISION DOCUMENTS**

I, Robert D. Harper, do hereby certify that I am the Undersecretary of the Louisiana Department of Natural Resources (the "Non-Federal Sponsor"); that I am aware of the financial obligations of the Non-Federal Sponsor for the Mississippi River-Gulf Outlet Deep-Draft De-authorization Project, and that the Non-Federal Sponsor will have the financial capability to satisfy the Non-Federal Sponsor's obligations for that project. I understand that the Government's acceptance of this self-certification shall not be constructed as obligating either the Government or the Non-Federal Sponsor to implement a project.

IN WITNESS WHEREOF, I have made and executed this certification this 16th  
day of October, 2007.

BY:  \_\_\_\_\_

TITLE: Undersecretary

DATE: October 16, 2007

**Attachment 2**

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2100 HAPPY CREEK ROAD  
SEYMOUR, TN 37865-5406

I - BETH FRANKS  
418 CHISHOLM TRL  
CINCINNATI, OH 45215-2516

I - BETH GEHMAN  
141 MARKED TREE RD  
NEEDHAM, MA 02492-1624

I - BETH RICHMAN  
PO BOX 912  
CRESTONE, CO 81131-0912

I - BETH ROCKWELL  
132 W 23RD ST APT 313  
ERIE, PA 16502-2851

I - BETSY LAMBERT  
355 CORONADO AVE  
LONG BEACH, CA 90814-2671

I - BETTE GROTEGUT  
5824 SW ARNOLD ST  
PLATTSBURG, MO 64477-9326

I - BETTINA BOWERS SCHWAN  
4905 TANGLEWOOD DRIVE  
NASHVILLE, TN 37216-1419

I - BETTINA LAMBERT  
355 CORONADO AVENUE #16  
LONG BEACH, CA 90814-8179

I - BETTY BENSON  
2950 INDIAN HILL DRIVE  
JACKSONVILLE, FL 32257-5723

I - BETTY FELDT  
618 W LAKESIDE ST  
MADISON, WI 53715-1730

I - BETTY J. VAN WICKLEN  
41 LAKE SHORE DRIVE  
WATERVLIET, NY 12189-2915

I - BETTY SHIPLEY  
9620 W MARLASUE ST  
CRYSTAL RIVER, FL 34428-0000

I - BETTY YOUNG  
608 MEADOW TOP  
CONVERSE, TX 78109-1636

I - BEVERLEE GOYNES  
466 BRANCHVILLE RD  
RIDGEFIELD, CT 06877-6029

I - BEVERLY LONGNECKER  
1524 JUPITER ROAD  
VENICE, FL 34293-0000

I - BEVERLY NELMES  
6100 12TH ST. S APT. 315  
SAINT PETERSBURG, FL 33705-5661

I - BIANCA CONSTANCE  
384 W HUDSON AVE  
ENGLEWOOD, NJ 07631-1407

I - BILL & MARILYN VOORHIES  
38 CLARK POINT RD PO BOX 231  
WEST TREMONT, ME 04612-0231

I - BILL CRETEN  
INFRASTRUCTURE ALT  
960 W. RIVERCENTER, SUITE B  
COMSTOCK PARK, MI 49321

I - BILL ERICKSON  
5913 SE HOLGATE BLVD  
PORTLAND, OR 97206-3831

I - BILL GRANT  
1500 DUVAL DR  
GODFREY, IL 62035-1608

I - BILL HUTTO  
PO BOX 424  
BAY SPRINGS, MS 39422-0000

I - BILL KARNOFSKY  
1439 GRAND CAYMAN CIR  
1439 GRAND CAYMAN CIR, FL 33884-0000

I - BILL MCPHERSON  
5721 MAGAZINE ST # 145  
NEW ORLEANS, LA 70115-3209

I - BILL RANKINE  
MANAGER MARINE TECHNICAL SERVICES  
CITGO PETROLEUM CORPORATION  
1293 ELDRIDGE PARKWAY  
HOUSTON, TX 77077

I - BILL ROSENTHAL  
3705 PERDEW DRIVE  
LAND O' LAKES, FL 34638-0000

I - BILL STOKES  
301 2ND ST. N. #18  
ST. PETERSBURG, FL 33701-0000

I - BILLIE OZERENGIN  
215 E 80TH ST  
NEW YORK, NY 10021-0531

I - BILLY MARCHAL  
BRING NO BACK COMMISSION  
279 AUDUBON BLVD.  
NEW ORLEANS, LA 70125

I - BITSA BURGER  
PO BOX 2514  
GUERNEVILLE, CA 95446-2514

I - BJ BILINSKY  
7040 HARBOR VIEW DR.  
LEESBURG, FL 34788-0000

I - BK GARDNER,LMT  
4021 SOUTHWEST 124TH COURT  
MIAMI, FL 33175-2941

I - BO BAGGS  
3565 LAKE ARTHUR DR  
PORT ARTHUR, TX 77642-7601

I - BOB AMOS  
PORT SOLUTIONS  
2 CANAL STREET, SUITE 2344  
NEW ORLEANS, LA 70130

I - BOB BRISTER  
1102 S 800 E # A  
SALT LAKE CITY, UT 84105-1206

I - BOB JOHNSTON  
PO BOX 1126  
COOKE CITY, MT 59020-1126

I - BOB MEISSLER  
331 TEQUESTA DR UNIT 222  
TEQUESTA, FL 33469-3401

I - BOB ROSENBERG  
32 TOUSSIN AVE  
KENTFIELD, CA 94904-1421

I - BOB SEGAL  
315 E LESTER ST  
TUCSON, AZ 85705-8921

I - BOB THOMAS  
2001 WEAVER RD  
MYRTLE CREEK, OR 97457-8704

I - BOB VILLERS  
9109 PEMBROKE CT  
SHERRILLS FORD, NC 28673-5003

I - BOBBIE FLOWERS  
418 W 17TH ST APT 22A  
NEW YORK, NY 10011-5826

I - BOBBY & MARLENE CROWE  
225 ISAIAH TRAIL  
BELGRADE, MT 59714-0000

I - BOBBY MOORE  
32 GPS APT 14B  
NEW YORK, NY 10003-0000

I - BOBBY WYNN  
122 BAG END RD  
HENDERSONVILLE, NC 28739-2286

I - BONNIE JOHNSON  
4429 JASPER STREET  
METAIRIE, LA 70006-2825

I - BONNIE LEIGH  
47 W MALLARD CREEK DRIVE  
FREEPORT, FL 32439-4177

I - BONNIE MCCUNE  
7841 SW 103 PLACE  
MIAMI, FL 33173-2928

I - BONNIE MCGILL  
807 COLLEGE AVE APT 10  
CLEMSON, SC 29631-1057

I - BONNY MILLER  
5523 ENGLISHMAN PL  
ROCKVILLE, MD 20852-0000

I - BRADLEY A HARRIS  
PO BOX 11875  
FORT SMITH, AR 72917-1875

I - BRADLEY GORDON  
PO BOX 113  
SEBASTOPOL, CA 95473-0113

I - BRADLEY WAGSTAFF  
3203 MAUREPAS ST.  
NEW ORLEANS, LA 70119-0000

I - BRAND SHELTON  
2922 E CALLE RABIDA  
TUCSON, AZ 85706-2778

I - BRANDY CORDOVA  
2841 W 65TH AVE  
DENVER, CO 80221-2313

I - BRANWEN GREGORY  
1766 N LAS PALMAS AVE  
LOS ANGELES, CA 90028-4810

I - BRENDA BROWN  
5 PAJARO AZUL DR  
PLACITAS, NM 87043-8834

I - BRENDA MABBITT  
2750 PIERCE STREET  
HOLLYWOOD, FL 33020-3887

I - BRENDA RASHLEIGH  
568 CASTALIA AVE  
ATHENS, GA 30606-4302

I - BRENDA THOMPSON  
4564 OLIVE AVENUE  
LA MESA, CA 91941-4829

I - BRENDAN HUGHES  
316 MESQUITE AVE  
RIDGECREST, CA 93555-2618

I - BRETT CLOUD  
929 MARION ST APT 104  
DENVER, CO 80218-3056

I - BRIAN & RITA COHEN  
3852 E ALAMOS AVE APT 125  
FRESNO, CA 93726-0874

I - BRIAN BODAH  
PO BOX 4  
OLEMA, CA 94950-0004

I - BRIAN BROWN  
87 HENRY B LN  
LEWISBURG, PA 17837-7067

I - BRIAN FINK  
440 W SEDGWICK ST # D322  
PHILADELPHIA, PA 19119-3045

I - BRIAN GIBBONS  
9133 EDMONSTON TER APT 304  
GREENBELT, MD 20770-4568

I - BRIAN SUTPHIN  
1056 SLATE RD  
KING, NC 27021-8020

I - BRIAN WEATHERBY  
9747 PHILLIPS RD SE  
PORT ORCHARD, WA 98367-8744

I - BRIDGET ALLEN  
PO BOX 48406  
LOS ANGELES, CA 90048-0406

I - BRIDGET O'NEILL  
609 W CHURCH ST APT 32  
CHAMPAIGN, IL 61820-3390

I - BRIGETTE CARLSON  
465 ENTRADA DR  
GOLDEN, CO 80401-4873

I - BRITTIN LOEWY  
8 SAINT JAMES PL  
GLEN COVE, NY 11542-2225

I - BROOK & LINDA HALL  
9462 LIME AVE  
FONTANA, CA 92335-5356

I - BROOKE BRYANT  
109 N MANSFIELD AVE  
LOS ANGELES, CA 90036-3020

I - BRUCE COHEN  
7 WARE ST  
WORCESTER, MA 01602-2823

I - BRUCE REED  
801 PINE ST APT 11G  
SEATTLE, WA 98101-1807

I - BRYANT HAMMETT, JR.  
SECRETARY-STATE OF LOUISIANA  
DEPARTMENT OF WILDLIFE AND  
P.O. BOX 9800  
BATON ROUGE, LA 70898

I - BRYCE SMITH  
6379 SCENIC DR  
SAULT S MARIE, MI 49783-9026

I - BRYCE SMITH  
3 HURD POINT RD  
DEDHAM, ME 04429-4222

I - BRYNA GALLAGHER  
426 E. 4TH ST  
TUCSON, AZ 85705-7800

I - BURKETT NEELY  
582 SW BLUFF DRIVE  
FORT WHITE, FL 32038-0000

I - C. HALL  
220 WHISPERING OAKS CT  
SARASOTA, FL 34232-1728

I - C.KEITH BECK  
2704 LAUREL AVE  
MANHATTAN BEACH, CA 90266-2314

I - CAITLIN TOLLAND  
167 BEAMAN ROAD  
STERLING, MA 01564-0000

I - CALLIE RILEY  
8054 OAK AVE  
CITRUS HEIGHTS, CA 95610-2514

I - CAMERON KARSTEN  
3390 CRYSTAL SPRINGS DR NE  
BAINBRIDGE ISLAND, WA 98110-2039

I - CANDACE KAUTZER  
106 STRATHMORE GARDENS  
ABERDEEN, NJ 07747-2250

I - CANDICE MILLHOLLEN  
7969 WINCHESTER CIR  
GOLETA, CA 93117-1094

I - CANDY BOWMAN  
2674 WOODRIDGE CT APT 1  
PLACERVILLE, CA 95667-4036

I - CAPPY HANSON  
4900 W TWIN BUTTES LOOP  
DOUGLAS, AZ 85607-6320

I - CARILYN CRONIN DONOVAN  
117 NORTH STREET  
ANDOVER, MA 01810-0000

I - CARL ABRAHAMSON  
608 S 4TH AVE  
ROCK RAPIDS, IA 51246-1314

I - CARL RITZ  
7 COACHLIGHT CIR  
FARMINGTON, NY 14425-9317

I - CARLA ALZURO  
9256 INTERLAKE AVE N APT B  
SEATTLE, WA 98103-3398

I - CARLA HAIM  
2706 IRVINGTON AVE  
SAN BERNARDINO, CA 92407-2114

I - CARLA HAMMAR  
5843 5TH AVE NW  
SEATTLE, WA 98107-2118

I - CARLO POPOLIZIO  
160 9TH AVE  
ESTELL MANOR, NJ 08319-1704

I - CARMEL CUCINOTTA  
1303 CONCERT ST.  
HATTIESBURG, MS 39401-0000

I - CARMEN KLUCSOR  
663 E MCKINLEY AVE  
SUNNYVALE, CA 94086-6451

I - CAROL CARSON  
4404 6TH AVE APT 1B  
BROOKLYN, NY 11220-1333

I - CAROL DUNAWAY  
1016 MORGAN AVE  
CHATTAHOOCHEE, FL 32324-1915

I - CAROL EDGERTON  
2539 E JOHNSON ST  
MADISON, WI 53704-4910

I - CAROL EVANS  
63 MONTEBELLO COMMONS DRIVE  
SUFFERN, NY 10901-4250

I - CAROL KEMMERER  
9601 N 42ND DR  
PHOENIX, AZ 85051-1021

I - CAROL KENT  
7 CROCUS ST  
LAKEWOOD, NJ 08701-0000

I - CAROL MCCORKLE  
351 W LESTER RD  
APOPKA, FL 32712-0000

I - CAROL MCWHIRTER  
480 W ROSEDALE RD  
DONIPHAN, NE 68832-9623

I - CAROL PETERSON  
1016 SUCCESS AVENUE  
LAKELAND, FL 33803-1356

I - CAROL SCHAMING  
720 STYPMANN BVLD  
STUART, FL 34994-0000

I - CAROL STOECKMANN  
2685 MAPLE DRIVE  
MC FARLAND, WI 53558-0279

I - CAROL TAGGART  
1705 VALPARAISO AVENUE  
MENLO PARK, CA 94025-5560

I - CAROL THOMPSON  
2874 AMY DR  
SOUTH PARK, PA 15129-8955

I - CAROL WAGNER  
403 SUGARBUSH ROAD  
WILLISTON, VT 05495-9507

I - CAROL WATTS  
6247 26TH AVE NE  
SEATTLE, WA 98115-7109

I - CAROLANN MELORA  
800 COLLEGE DRIVE UNIT 10  
VINELAND, NJ 08360-7437

I - CAROLE A. ADAMS  
7473 CARRIAGE SIDE COURT  
JACKSONVILLE, FL 32256-0000

I - CAROLE GOODYEAR  
1214 N LAKESHORE DR  
NICEVILLE, FL 32578-0000

I - CAROLE TANTE  
3 FINO LN  
HOT SPRINGS VILLAGE, AR 71909-3805

I - CAROLINE KANE  
4664 VANTAGE AVENUE  
NORTH HOLLYWOOD, CA 91607-3814

I - CAROLINE LEWIS  
6755 ANGELES RD  
MELBOURNE BEACH, FL 32951-0000

I - CAROLYN BEEKMAN  
HARBOR OAKS 49 CEDAR ST  
PORT ORANGE, FL 32127-6405

I - CAROLYN BUHL  
4609 SE MITCHELL ST  
PORTLAND, OR 97206-5077

I - CAROLYN HIRNING  
3134 REYNOLDSBURG NEW ALBAN RD  
NEW ALBANY, OH 43054-8539

I - CAROLYN KIRBERG  
5811 BERTA CIRCLE  
TAMPA, FL 33617-0000

I - CAROLYN MCDADE  
25 WOODRIDGE RD  
ORLEANS, MA 02653-4806

I - CAROLYN TONAHILL  
VILLA ST. FRANCIS  
7575 BISHOP OTT DRIVE, APT. 209  
BATON ROUGE, LA 70806-0000

I - CARRIE JOHNSON  
1601 S MARY ST  
EUSTIS, FL 32726-5691

I - CATHERINE CRITZ  
122 AVALON AVE  
CREVE COEUR, IL 61610-4013

I - CATHERINE CUSHING  
1045 25TH AVE N  
ST PETERSBURG, FL 33704-2729

I - CATHERINE FRISCHMANN  
9576 SNOWBERRY CIR  
POCATELLO, ID 83204-7280

I - CATHERINE HENDRICKS  
22 SUNNY BEACH DRIVE  
ORMOND BEACH, FL 32176-2323

I - CATHERINE LACEY  
802 SPRUCE ST  
TRUTH OR CONSEQUENCES, NM 87901-

I - CATHERINE WILLIAMSON  
723 GERSHWIN DRIVE  
LARGO, FL 33771-1512

I - CATHLEEN CARLSON  
18029 GLENBURN AVE  
TORRANCE, CA 90504-4033

I - CATHLEEN CONNOR  
12655 SW 128TH AVE  
TIGARD, OR 97223-1814

I - CATHY BRUNICK  
14133 WALKERS CROSSING DR  
CHARLOTTE, NC 28273-9119

I - CATHY COATES  
665 URSULINE DR  
BATON ROUGE, LA 70808-4771

I - CATHY HOPE  
HC 81 BOX 640  
QUESTA, NM 87556-9706

I - CATHY REYNOLDS  
RR 2 BOX 48D  
WALTERS, OK 73572-9608

I - CATHY STARNES  
1213 DONNA LANE  
BEDFORD, TX 76022-6711

I - CATHY THREADGILL  
12181 MCCULLA DRIVE  
TUSTIN, CA 92782-1177

I - CELENA CHALKLEY  
2 CROMPTON PLACE  
PALM COAST, FL 32137-8123

I - CELIA MCINTOSH  
16570 SW 146TH CT  
16570 SW 146TH CT, FL 33177-1782

I - CERISSA MCFARLANE  
4915 SW PASADENA ST  
PORTLAND, OR 97219-8625

I - CHAD FETROW  
1924 FLEISCHMANN ROAD  
TALLAHASSEE, FL 32308-0000

I - CHAILLEY GOSS-GARNER  
4306 LAUREL CANYON BLVD. UNIT A  
STUDIO CITY, FL 91604-1709

I - CHANDRA ZEISSLER  
406 BRAMBLEWOOD DR  
CEDAR CITY, UT 84720-9708

I - CHARLENE KERCHEVALL  
533 S NEVADA ST  
OCEANSIDE, CA 92054-4040

I - CHARLENE ROOT  
8634 FRIENDS AVE  
WHITTIER, CA 90602-3321

I - CHARLENE RUSH  
100 ANDERSON ST APT 541  
100 ANDERSON ST APT 541, PA 15212-

I - CHARLES ANDERSON  
PO BOX 1804  
SAN MARCOS, TX 78667-1804

I - CHARLES BOYLE  
9 DAIRY DRIVE  
UPTON, MA 01568-0000

I - CHARLES CALHOUN  
331 SAN FERNANDO WAY  
SAN FRANCISCO, CA 94127-1913

I - CHARLES CLUSEN  
4761 24TH RD N  
ARLINGTON, VA 22207-3553

I - CHARLES HIGDON  
4114 W SIMMONS AVE  
ORANGE, CA 92868-1512

I - CHARLES JENKINS  
86 VINCENNES ST  
NEW ALBANY, IN 47150-0000

I - CHARLES KIMPSTON  
720 LAKEVIEW AVE  
POLK CITY, IA 50226-2256

I - CHARLES ROCKER III  
4003 WESTSHORE BLVD APT 4803  
TAMPA, FL 33611-0000

I - CHARLES SHELLY  
5008 INSPIRATION DR SE  
ALBUQUERQUE, NM 87108-3560

I - CHARLES WINTERWOOD  
1555 MONTROSE TER  
DUBUQUE, IA 52001-0329

I - CHARLIE HOGUE  
1721 CHESTNUT LN NE  
CEDAR RAPIDS, IA 52402-3761

I - CHARLOTTE KAPLAN  
12001 NW 1ST STREET  
CORAL SPRINGS, FL 33071-0000

I - CHARLOTTE STAHL  
605 EMPIRE ST  
MONTPELIER, OH 43543-1414

I - CHARLOTTE STAHL  
1167 NW WALLULA AVE  
GRESHAM, OR 97030-3666

I - CHARLOTTE SUMROW-PIRCH  
9826 LEWIS AVE  
FOUNTAIN VALLEY, CA 92708-5818

I - CHERI NEWMAN  
2245 E GEDDES AVE  
DECATUR, IL 62526-5126

I - CHERRIE FELDER  
LOWER MISSISSIPPI RIVER WATERWAYS  
ASSN.  
3801 CAUSEWAY BLVD., SUITE 310  
METAIRIE, LA 70002

I - CHERYL BOISSY  
85 WALL STREET  
FITCHBURG, MA 01420-4181

I - CHERYL CORNETTE  
17 FIDDLERS LN  
BREWSTER, MA 02631-1244

I - CHERYL DARE  
1081 COURT AVE APT 810A  
MEMPHIS, TN 38104-2126

I - CHERYL JANISZEWSKI  
1601 BRIDEWELLS COURT  
JOPPA, MD 21085-5435

I - CHERYL ROSENFELD  
4340 ROEMER RD  
COLUMBIA, MO 65202-7059

I - CHERYL VALLONE  
14 FOX HILL RD  
FAIRFIELD, NJ 07004-2305

I - CHERYL VARONA  
4980 SE 47 TERR RD  
OCALA, FL 34480-4965

I - CHET HEPBURN  
1445 N LONGFELLOW ST  
ARLINGTON, VA 22205-2322

I - CHRIS ANDRY  
ST. BERNARD PARISH  
8201 W. JUDGE PEREZ DRIVE  
CHALMETTE, LA 70043

I - CHRIS CROWHURST  
17190 SE 130TH AVE  
WEIRSDALE, FL 32195-0000

I - CHRIS MANIS  
3628 OOLTEWAH RINGGOLD RD  
OOLTEWAH, TN 37363-8045

I - CHRIS MCGEE  
PO BOX 72  
ROCHEPORT, MO 65279-0072

I - CHRIS RICE  
832 11TH ST  
SANTA MONICA, CA 90403-1642

I - CHRIS SCHULZE  
PO BOX 290184  
PHELAN, CA 92329-0184

I - CHRIS SOUTHWICK  
16376 28TH PL NE  
SHORELINE, WA 98155-6417

I - CHRISTA CAPE  
1527 MAMMOTH PLACE  
ROHNERT PARK, CA 94928-8181

I - CHRISTIN WASSON  
2626 SE 33RD TER  
TOPEKA, KS 66605-2304

I - CHRISTINA BABST  
728 N DOHENY DRIVE  
WEST HOLLYWOOD, CA 90069-5525

I - CHRISTINA BEGLEY  
7429 SOUTHWEST 14TH COURT  
NORTH LAUDERDALE, FL 33068-3622

I - CHRISTINA FONG  
52 MONROE CENTER ST NW # 304  
GRAND RAPIDS, MI 49503-2932

I - CHRISTINE BRAZIS  
10 APPLETON AVE., APT A  
SAN FRANCISCO, CA 94110-5805

I - CHRISTINE CARLSON  
8164 MAYWOOD DR  
CINCINNATI, OH 45241-0000

I - CHRISTINE ELLIS  
1270 ATLANTIC AVE  
CONWAY, SC 29526-8222

I - CHRISTINE JOHNSON  
, AZ 85014-0000

I - CHRISTINE OSZAK  
228 E VERMONT ST  
VILLA PARK, IL 60181-2262

I - CHRISTINE PASMORE  
14032 VICTORIA DRIVE  
VICTORVILLE, CA 92395-5610

I - CHRISTOPHER GALTON  
106 BLACK RIVER RD  
MYRTLE BEACH, SC 29588-7413

I - CHRISTOPHER SEGO  
1070 SHIMMERING SAND DRIVE  
OCOOEE, FL 34761-9138

I - CHRISTOPHER SEKULSKI  
1438 N MERIDIAN RD #3  
TALLAHASSEE, FL 32303-0000

I - CHRSTINE ANDREWS  
743 MARTHAS LANE  
SANIBEL, FL 33957-0000

I - CHRYS HULBERT  
1010 JAMES RD  
ASHLAND CITY, TN 37015-4131

I - CHUCK FINKLE  
60 E 9TH ST APT 622  
NEW YORK, NY 10003-6453

I - CHUCK HERROLD  
3023 13TH AVE S  
BIRMINGHAM, AL 35205-0000

I - CHUCK MITCHELL  
3820 COLONY OAKS DR  
EUGENE, OR 97405-1224

I - CHUCK WHITE  
18550 CITRONIA ST APT 27  
NORTHRIDGE, CA 91324-2235

I - CINDY ANDERS  
PO BOX 1923  
MIDDLEBURG, FL 32050-1923

I - CINDY HALE  
2823 REGENT CRESCENT  
SOUTH DAYTONA, FL 32119-8557

I - CINDY LOWRY  
6109 IRIS WAY  
ARVADA, CO 80004-5154

I - CINDY RANKIN  
107 TROY RANKIN ROAD  
MENDENHALL, MS 39114-4615

I - CINDY WALKER  
P.O. BOX 453  
MCCAYSVILLE, GA 30555-0000

I - CINDY WITT  
2541 COTTAGE PL  
GREENSBORO, NC 27455-2916

I - CLAIRE FLEWITT  
975 SOTO DRIVE  
SAN LORENZO, CA 94580-1554

I - CLARA BEELER  
2202 N COUNTY ROAD 275 E  
LOGANSPOUT, IN 46947-8069

I - CLARA BLAIR  
1206 BRITT DR  
ARLINGTON, TX 76013-3617

I - CLARA HAMILL  
5944 FINKMAN ST  
SAINT LOUIS, MO 63109-3433

I - CLAUDE WILLIAMSON  
24 MILNE COVE RD  
CARLISLE, MA 01741-1226

I - CLAUDETTE PICKLESIMER  
183 FARM ST.  
MILLIS, MA 02054-0000

I - CLAUDIA CARTY  
4060 1ST AVENUE N  
ST. PETERSBURG, FL 33713-8302

I - CLAUDIA SCHLEFSTEIN  
3831 SOUTHWEST BIMINI CIRCLE N  
PALM CITY, FL 34990-1307

I - CLAUDIA THOMPSON  
15525 MOUNTAIN VIEW RD SPC 101  
DESERT HOT SPRINGS, CA 92240-7038

I - CLAUDY ASSALIT  
PO BOX 3082  
MONTEREY, CA 93942-3082

I - CLIFFORD PAULIN  
PO BOX 1204  
UKIAH, CA 95482-1204

I - CLYDE ANDERSON  
7020 BURT ST  
OMAHA, NE 68132-2600

I - CLYDE MARTIN  
LADOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804-9245

I - CLYDE MARTIN, JR.  
DIRECTOR, FLOOD PROTECTION  
PROGRAMS  
STATE OF LOUISIANA DOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804

I - COLE WOLF  
13205 BUCKSKIN RD NE  
ALBUQUERQUE, NM 87111-8226

I - COLETTE JACQUET  
122 BEDFORD RD  
GREENWICH, CT 06831-2536

I - COLIN FISKE  
333 7TH ST S APT 3  
ST PETERSBURG, FL 33701-4445

I - COLLEEN ADOMAITIS  
13820 TAHOE STREET  
HUDSON, FL 34667-6411

I - COLLEEN BROWN  
704 WELLINGTON CIR  
ROCHESTER HILLS, MI 48309-1551

I - COLLEEN GRAY  
4475 S LOWELL BLVD  
DENVER, CO 80236-3602

I - COLLEEN RODGER  
3450 MARKET STREET APT. 401  
SAN FRANCISCO, CA 94114-2770

I - CONNELL MORRISON  
1922 DUKER AVE  
LOUISVILLE, KY 40205-1002

I - CONNIE GOLDEN  
1712 FRANKLIN ST  
BELLEVUE, NE 68005-3454

I - CONNIE LIVINGSTON-DUNN  
467 CRATTIE DR  
SPRINGVILLE, TN 38256-4823

I - CONNIE RAPER  
2614 WOODMONT DR  
DURHAM, NC 27705-2760

I - CONOR SORAGHAN  
4366 SARATOGA AVE  
SAN DIEGO, CA 92107-2336

I - CONSTANCE ANDERSON  
2180 NEWT HUFF LN  
SEVIERVILLE, TN 37862-7404

I - CONSTANCE KOSUDA  
5303 E TWAIN AVE  
LAS VEGAS, NV 89122-4646

I - CORALIE BENTON  
1549 NORTHWEST NORTH HEIGHTS DRIVE  
ALBANY, OR 97321-1157

I - COREY FUHRER  
310 FISHER DR.  
YORK, PA 17404-8282

I - COURTNEY GARTIN  
5250 AREZZO DR  
SAN JOSE, CA 95138-2203

I - COURTNEY KOSNIK  
2549 OTTER ST  
WARREN, MI 48092-1355

I - COURTNEY LAVES-MEARINI  
901 E 16TH ST  
901 E 16TH ST, OH 44004-3642

I - CR REBBERT.  
23 DEPINEDO AVE  
STAMFORD, CT 06902-4607

I - CRAIG CONN  
1200 TERMON AVE  
PITTSBURGH, PA 15212-1900

I - CRAIG LEE ASBURY  
3731 S GLENSTONE AVE LOT 112  
SPRINGFIELD, MO 65804-4469

I - CRAIG ZANDSTRA  
2429 WALNUT DR  
HIGHLAND, IN 46322-1028

I - CRISTA WORTHY  
16664 CALLE BRITTANY  
PACIFIC PALISADES, CA 90272-1966

I - CRYSTAL PIERCE  
1007 N BROADWAY AVE  
SPRINGFIELD, MO 65802-4155

I - CURTIS INOUE  
925 UNION ST  
BROOKLYN, NY 11215-1658

I - CURTIS KENDALL  
3750 WHITE LANE  
KELSEYVILLE, CA 95451-0000

I - CYNDI FRITZLER  
1512 S OWENS ST APT 127  
LAKEWOOD, CO 80232-6009

I - CYNTHIA HANNA  
3738 E MAIN ST  
HILLSBORO, OR 97123-6848

I - CYNTHIA MARRS  
P O BOX 575  
JUNCTION CITY, OR 97448-0000

I - CYNTHIA MARSHALL  
9 FOX TRAIL  
FAIRFIELD, PA 17320-8053

I - CYNTHIA SARTHOU  
EXECUTIVE DIRECTOR  
GULF RESTORATION NETWORK  
P.O. BOX 2245  
NEW ORLEANS, LA 70176

I - D. BROWN  
PO BOX 98964  
RALEIGH, NC 27624-8964

I - D. BRYAN  
CAPAY CIRCLE  
SAN FRANCISCO, CA 94080-0000

I - D. FULLERTON  
1901 OLATHE BLVD  
KANSAS CITY, KS 66103-3326

I - D. MEIER  
924 W 12TH ST  
CEDAR FALLS, IA 50613-2418

I - D. PARR  
513 BRANCH HILL LOVELAND RD  
LOVELAND, OH 45140-6802

I - D. RANDALL  
PO BOX 98  
EAST SETAUKET, NY 11733-0098

I - D.M. GORE  
2710 GOLIAD RD APT 302  
SAN ANTONIO, TX 78223-3917

I - D.S. POWELL  
4511 MIAMI ST  
CLAIREMONT, CA 92177-8695

I - DALE BENJAMIN  
408 NE 4TH ST  
BATTLE GROUND, WA 98604-8514

I - DALE BIGGERS  
BOH BROS CONSTRUCTION CO  
P. O. DRAWER 53266  
NEW ORLEANS, LA 70153

I - DALE LACOGNATA  
6244 DOVER CT  
FISHERS, IN 46038-4707

I - DAN AND JACKIE ARCENEUX  
2712 TOURNEFORT STREET  
CHALMETTE, LA 70043

I - DANA DRISCOLL  
179 MAPLE PARK ST  
WINDBER, PA 15963-8281

I - DANIEL CARNAGEY  
636 WESTWOOD DR  
LEXINGTON, SC 29073-8037

I - DANIEL FEWSTER  
4 SADDLETOP CT APT D  
COCKEYSVILLE, MD 21030-4042

I - DANIEL FISHER  
1205 HENRY ST  
ANN ARBOR, MI 48104-4340

I - DANIEL HARRIS  
8618 N. BELTON AVE  
KANSAS CITY, MO 64155-0000

I - DANIEL HERNANDEZ  
4512 SAINT ANN ST  
NEW ORLEANS, LA 70119-3610

I - DANIEL SILVER  
1422 N SWEETZER AVE APT 401  
LOS ANGELES, CA 90069-1536

I - DANIEL VALLERO  
12101 W KIRK LANE  
TUCSON, AZ 85743-0000

I - DANIEL VICE  
2141 P ST NW APT 203  
WASHINGTON, DC 20037-1031

I - DANIELLE DERN  
2711 MARS LN APT 1  
MARYLAND HEIGHTS, MO 63043-1940

I - DANNY DETORA  
7747 GREENBACK LN  
CITRUS HEIGHTS, CA 95610-5852

I - DANNY REICH  
38507 FERM CIRCLE  
ZEPHYRHILLS, FL 33540-3039

I - DANUTA BOCZAR  
3000 SPOUT RUN PKWY APT A411  
ARLINGTON, VA 22201-4218

I - DARIA DECOOMAN  
3089 CLAIREMONT DR. SUITE C  
SAN DIEGO, CA 92117-6892

I - DARLEEN MIPRO  
4120 ANNUNCIATION ST  
NEW ORLEANS, LA 70115-1405

I - DARLENE MARLEY  
420 28TH ST  
WEST PALM BEACH, FL 33407-5138

I - DARLENE TAYLOR  
P.O. BOX 367  
MEDFORD, OR 97501-0000

I - DARLENE WOLF  
1705 GORDON DR  
NAPLES, FL 34102-7553

I - DARRELL DAVIS  
RR 4 BOX 560  
LINTON, IN 47441-9349

I - DARREN FRALE  
728 N DETROIT ST  
LOS ANGELES, CA 90046-7606

I - DARRYL MALEK-WILEY  
SIERRA CLUB  
618 ADAMS STREET  
NEW ORLEANS, LA 70118-3929

I - DARWIN FIELDS  
204 E PENNSYLVANIA AVE  
URBANA, IL 61801-5031

I - DASSI MCCURDY  
635 CHESHIRE AVENUE  
EUGENE, OR 97402-5060

I - DAVE BONTA  
PO BOX 68 PLUMMER'S HOLLOW RD.  
TYRONE, PA 16686-0068

I - DAVE BOTT  
124 OHIO AVE  
WESTOVER, WV 26501-4039

I - DAVE MCKEE  
9582 TORTOISE LN  
MICCO, FL 32976-3329

I - DAVE WHITE  
6807 CAMINO ROJO  
SANTA FE, NM 87507-3455

I - DAVID & PAULA BARDSLEY  
31400 JAMES IS  
DRUMMOND ISLAND, MI 49726-9647

I - DAVID BROWN  
LA ENVIRONMENTAL ACTION NETWORK  
P. O. BOX 66323  
BATON ROUGE, LA 70804

I - DAVID C. STEARNS  
2639 W WHITNEY ST  
OLATHE, KS 66061-6011

I - DAVID DEPUE  
2333 N GENEVA TER APT 4D  
CHICAGO, IL 60614-3388

I - DAVID DUNKLEBERGER  
1290 ALMSHOUSE RD APT 628  
DOYLESTOWN, PA 18901-2898

I - DAVID DUTTWEILER  
6105 BANNOCKS DR  
SAN ANTONIO, TX 78239-3065

I - DAVID EHRENSPERGER  
339 E BROAD ST  
NANTICOKE, PA 18634-2513

I - DAVID ENEVOLDSEN  
2285 ROYALTREE CIR  
SAN JOSE, CA 95131-1949

I - DAVID FALLOW  
102 LEON ST  
MADISON, WI 53714-2237

I - DAVID FELIX  
344 S 3RD AVE  
TUCSON, AZ 85701-2102

I - DAVID FOSDICK  
4538 BROOKVIEW DR  
DALLAS, TX 75220-6404

I - DAVID GOODLIN  
34 CHALLENGER CT  
WALKERSVILLE, MD 21793-8127

I - DAVID HOPKINS  
166 MARINA DEL REY CT  
CLEARWATER, FL 33767-0000

I - DAVID HOWENSTEIN  
723 HAVENWOOD CIRCLE DR  
SAINT LOUIS, MO 63122-1424

I - DAVID HROBUCHAK  
4110 LISA DR  
HARRISBURG, PA 17112-1028

I - DAVID HULTGREN  
4402 W CATHY CIR  
PEORIA, IL 61615-2311

I - DAVID JAFFE  
8410 34TH AVE APT 115  
JACKSON HEIGHTS, NY 11372-3135

I - DAVID KEARNEY  
KEARNEY COMPANIES  
4000 FRANCE ROAD PARKWAY  
NEW ORLEANS, LA 70126

I - DAVID KEMMERER  
9601 N 42ND DR  
PHOENIX, AZ 85051-1021

I - DAVID LAIRD  
1130 W 9TH ST  
ALTON, IL 62002-2320

I - DAVID LIEN  
430 E CHEYENNE MOUNTAIN BLVD APT  
COLORADO SPRINGS, CO 80906-8502

I - DAVID MARSHALL  
3931 PASADENA DR  
LAFAYETTE, IN 47905-4134

I - DAVID MILLER  
LADOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804-9245

I - DAVID MOORE  
69 HARBOR AVE APT B3  
BRIDGEPORT, CT 06605-3177

I - DAVID NERAL  
444 ISLAND VIEW CIRCLE  
SAINT AUGUSTINE, FL 32095-9631

I - DAVID NETTLETON  
2719 WOODGATE WAY  
ROSEVILLE, CA 95747-0000

I - DAVID PARRETT  
167 DAYTONA AVENUE  
DAYTONA BEACH, FL 32117-5036

I - DAVID PEDERSEN  
550 1ST AVE S. APT 715  
ST. PETERSBURG, FL 33701-0000

I - DAVID REED  
16383 CULLEN RD  
DEFIANCE, OH 43512-8836

I - DAVID RIECKMANN  
W3268 BUFFALO HILLS RD  
PARDEEVILLE, WI 53954-9628

I - DAVID ROSENBERG  
8930 N REGENT RD  
BAYSIDE, WI 53217-1750

I - DAVID ROSENSTEIN  
302 AMALFI DR  
SANTA MONICA, CA 90402-1128

I - DAVID ROTH  
1303 S WALTER REED DR APT 201  
ARLINGTON, VA 22204-4932

I - DAVID RUCH II  
208 NE MONROE CIRCLE N  
ST. PETERSBURG, FL 33702-0000

I - DAVID SORENSEN  
6804 138TH ST  
KEW GARDENS HILLS, NY 11367-1630

I - DAVID WILCOX  
440 LORRAINE ST APT 1N  
GLEN ELLYN, IL 60137-4358

I - DAWN CREIGHTON  
8529 N 61ST AVE APT 25  
GLENDALE, AZ 85302-5466

I - DAWNHEATHER SIMMONS  
PO BOX 872198  
VANCOUVER, WA 98687-2198

I - DAWOOD ZWINK  
31 SWALLOWTAIL RD  
SCARBOROUGH, ON M1B 6B4

I - DEAN PETTIT  
1666 PRIVATEER DRIVE  
TITUSVILLE, FL 32796-1567

I - DEANE ROSEN  
904 S 46TH ST APT 1  
PHILADELPHIA, PA 19143-3729

I - DEANN ALEX  
670 WHARTON  
YPSILANTI, MI 48198-0000

I - DEANN MCTAVISH  
4715 NW 90TH STREET  
KANSAS CITY, MO 64154-0000

I - DEB MERCHANT  
5415 SW 149TH AVE  
BEAVERTON, OR 97007-7727

I - DEBBIE BORGONO  
40 THE PLACE  
GLEN COVE, NY 11542-0000

I - DEBBIE BROWN  
133 HIGHVIEW DR  
LANCASTER, PA 17602-2623

I - DEBBIE BURACK  
350 E 52ND ST  
NEW YORK, NY 10022-6727

I - DEBBIE GINIEWICZ  
28 THAYER POND DR UNIT 16  
NORTH OXFORD, MA 01537-1124

I - DEBBIE HARE  
12554 WATERHAVEN CR.  
ORLANDO, FL 32828-0000

I - DEBBIE HUFFMAN  
PO BOX 130461  
HOUSTON, TX 77219-0461

I - DEBBIE HUTCHERSON  
3739 BOGNER DRIVE  
WOODBIDGE, VA 22193-0000

I - DEBBIE IRELAND  
148 1/2 W WATER ST APT 3  
OAK HARBOR, OH 43449-1371

I - DEBBIE SANDERS  
1213 ELBERON AVENUE  
SALEM, OH 44460-3564

I - DEBBIE SLACK  
418 JEFFERSON DR  
LYNCHBURG, VA 24502-3057

I - DEBBIE SPAHN  
1240 BEL AIRE DR. W.  
PEMBROKE PINES, FL 33027-0000

I - DEBBIE WOODS  
226 ENVIRONS ROAD  
POTOMAC FALLS, VA 20165-0000

I - DEBORAH LANCMAN  
3040 BRANT ST  
3040 BRANT ST, CA 92103-5532

I - DEBORAH LANDOWNE  
108 BELLE AVE  
SAN RAFAEL, CA 94901-3408

I - DEBORAH MEDENICA  
2300 PEACOCK LN  
BIRMINGHAM, AL 35223-1712

I - DEBORAH PETERSEN  
2532 ISLAND DR NW  
OLYMPIA, WA 98502-9749

I - DEBORAH SMITH  
3044 NW 30TH ST  
OKLAHOMA CITY, OK 73112-6908

I - DEBORAH STEPHENSON  
1925 STATE HIGHWAY M  
CEDARCREEK, MO 65627-8415

I - DEBORAH WISSMAN  
800 DIANE DR  
CINCINNATI, OH 45245-1106

I - DEBRA EADES  
2254 STANDING SPRINGS RD  
GREENVILLE, SC 29605-6048

I - DEBRA GABLE  
618 WALNUT AVE  
SANTA CRUZ, CA 95060-3638

I - DEBRA HULSE  
7638 LODGE POLE TRAIL  
WINTER PARK, FL 32792-0000

I - DEBRA REHN  
5130 SE 30TH AVE APT 9  
PORTLAND, OR 97202-4557

I - DEBRA SAUDE  
1050 PLEASANT VALLEY RD  
SWEET HOME, OR 97386-1033

I - DEBRA TAYLOR  
93 JOHNSON DR.  
EMPIRE, AL 35063-0000

I - DEBRA TOMIM  
18950 E. STATE HWY 94  
COLORADO SPRINGS, CO 80930-0000

I - DEBRA VEEDER  
103 FOX HOLLOW BND  
BRANDON, MS 39047-9053

I - DEDE HARRIS  
350 N 102ND ST  
SEATTLE, WA 98133-9118

I - DELL BROOKE  
3204 FERNWAY RD  
BIRMINGHAM, AL 35223-1326

I - DELLA CASEY  
2592 LAKEVIEW CT.  
COOPER CITY, FL 33026-0000

I - DEMELZA COSTA  
28626 RIDGEWAY RD  
SWEET HOME, OR 97386-9523

I - DENA GARCIA  
4805 CITRUS OAK LANE  
SAINT CLOUD, FL 34771-8900

I - DENIS BRENNAN  
2561 S BELLFORD STREET  
PHILADELPHIA, PA 19153-1410

I - DENISE FARRELL  
789 DEMARRAIS PLACE  
ORADELL, NJ 07649-0000

I - DENISE GAULT  
PO BOX 5747  
CARMEL, CA 93921-5747

I - DENISE PONCE  
1 WILLOW DRIVE  
GRETNA, LA 70053-4837

I - DENISE SPENCER  
619 ADAMS ST  
QUINCY, IL 62301-5336

I - DENNIS DAVIE  
PO BOX 651  
CAPITOLA, CA 95010-0651

I - DENNIS FEICHTINGER  
2711 RIVERSIDE DR APT 4  
TRENTON, MI 48183-2830

I - DENNIS HAMMETT  
HC 33 BOX 80  
ROLLA, MO 65401-8810

I - DENNIS HUBER  
1466 WILLOWBROOK DRIVE  
BOALSBURG, PA 16827-1670

I - DENNIS J. LENZ  
3 IVORY CT  
EAST NORTHPORT, NY 11731-6331

I - DENNIS LEDDEN  
14941 TRINIDAD DR  
RANCHO MURIETA, CA 95683-9451

I - DENNIS MCKINSTRY  
49 WESTWOOD DR  
STURBRIDGE, MA 01566-1350

I - DENNIS MORLEY  
104 THROCKMORTON LN  
OLD BRIDGE, NJ 08857-2221

I - DENNIS RUTKOWSKI  
200 N EL CAMINO REAL SPACE 166  
OCEANSIDE, CA 92054-0809

I - DEREK CS BURR  
14400 CEMETERY ROAD  
FORT MYERS, FL 33905-7329

I - DIANA ALLARD  
8453 GRAND AVE  
OMAHA, NE 68134-3107

I - DIANA GROB  
PO BOX 2274  
GRESHAM, OR 97030-0635

I - DIANA HARTLEY  
125 CHAPS LN  
WEST CHESTER, PA 19382-6156

I - DIANA PERRY  
78 BRADSTREET AVENUE  
LOWELL, MA 01851-4121

I - DIANA SHOLTZ  
PO BOX 525  
SAXTONS RIVER, VT 05154-0525

I - DIANA SMITH  
1521 NE 100TH ST  
SEATTLE, WA 98125-7617

I - DIANA WINER  
E10421 LOMBARD RD  
WESTBY, WI 54667-8366

I - DIANE AMAN  
17120 MOUNT VERNON ST  
SOUTHFIELD, MI 48075-8004

I - DIANE AMES  
6708 WALDO AVE.  
EL CERRITO, CA 94530-2936

I - DIANE BARABY  
PO BOX 9  
HILL, NH 03243-0009

I - DIANE CAMPION  
1602 ALTON RD 92  
MIAMI BEACH, FL 33139-2421

I - DIANE CLARK  
PO BOX 64  
WOOLWINE, VA 24185-0064

I - DIANE MOELLER  
3913 W SAN NICHOLAS ST  
TAMPA, FL 33629-6309

I - DIANE SALLINGER  
26 GWEN PARKWAY  
BOYCE, LA 71409-0000

I - DIANE SCHRIER  
5111 NORTHEAST 4TH ST  
OCALA, FL 34470-0000

I - DIANE SHOMO  
1435 DUFF LN  
MILFORD, MI 48381-2614

I - DIANE VOGELMAN  
PO BOX 806  
EDWARDS, CO 81632-0806

I - DIANNE DOUGLAS  
2723 E. VALENCIA DRIVE  
PHOENIX, AZ 85042-8072

I - DIANNE HINCH  
152 S. BUDDING AVE. #201  
VIRGINIA BEACH, VA 23452-1353

I - DIANNE WARREN  
2344 CAMBRIDGE DRIVE  
SARASOTA, FL 34232-3818

I - DINA GRASSO  
2850 S SHERIDAN ST  
PHILADELPHIA, PA 19148-4827

I - DINDA EVANS  
PO BOX 178695  
SAN DIEGO, CA 92177-8695

I - DINENE MCCLURE  
4014 CHICO AVE  
SANTA ROSA, CA 95407-6504

I - DINI SCHUT  
2355 HEMPSTEAD ROAD  
TOLEDO, OH 43606-2447

I - DIXIE GRUBBS  
5416 36TH ST E.  
BRADENTON, FL 34203-0000

I - DOLORES MAULOFF  
6842 W HIGGINS AVE  
CHICAGO, IL 60656-2036

I - DON BROCKWAY  
255 ROLLINGWOOD DR  
ATHENS, GA 30605-3329

I - DON MARGESON  
439 TENNESSEE AVE. NE  
ST. PETERSBURG, FL 33702-0000

I - DON MCKEE  
PO BOX 2040  
PASCAGOULA, MS 39569-2040

I - DON MCKELVEY  
765 E 236TH ST  
EUCLID, OH 44123-2515

I - DON RICHARDSON  
577 WINDOVER DRIVE  
BREVARD, NC 28712-9383

I - DONALD BRYANT  
11612 BLUEWATER HIGHWAY  
LOWELL, MI 49331-9254

I - DONALD CHAMPAGNE  
974 BAYOU DULARGE RD  
HOUMA, LA 70363-7613

I - DONALD COX  
207 MOUND ST  
THE PLAINS, OH 45780-1076

I - DONALD DODGE  
300 CASELLI AVE  
SAN FRANCISCO, CA 94114-2325

I - DONALD GARLIT  
49651 SHENANDOAH CIR  
CANTON, MI 48187-1163

I - DONALD HYATT  
4773 HAYDEN BLVD  
COLUMBUS, OH 43221-5518

I - DONALD KURZ  
6107 ELSTON RD  
JEFFERSON CITY, MO 65109-3186

I - DONALD MUNN  
432 158TH ST SE  
BOTHHELL, WA 98012-1205

I - DONALD STEVENS  
2725 ABBEY ROAD  
WINTER PARK, FL 32792-0000

I - DONALD W. WOOD  
2102 COACH DR  
NAPERVILLE, IL 60565-2473

I - DONLON MCGOVERN  
4107 NE 24TH AVE  
PORTLAND, OR 97211-6411

I - DONNA BAILEY  
46 N OAK AVE  
UMATILLA, FL 32784-8603

I - DONNA BOLLENBACH  
2108 BUTCH CASSIDY TRL  
WIMAUMA, FL 33598-0000

I - DONNA BORTHWICK  
3423 BARABOO LN  
DEKALB, IL 60115-8281

I - DONNA BRUNET  
3009 LYNNWOOD DRIVE  
COLUMBIA, MO 65203-2944

I - DONNA BUSH  
404 JENNIFER LANE  
PEARL RIVER, LA 70452-3255

I - DONNA CARLSI  
15930 INDIAN FLAT RD  
NEVADA CITY, CA 95959-8754

I - DONNA CASSIDY-HANLEY  
151 BAKER HILL RD  
FREEVILLE, NY 13068-5614

I - DONNA COHEN  
1 PARTRIDGE RD  
1 PARTRIDGE RD, MA 01748-2639

I - DONNA FUNK-SMITH  
633 TREYS DR  
WINCHESTER, VA 22601-3231

I - DONNA HODSDON  
PO BOX 518 5043 HIGHWAY 72  
NEW PLYMOUTH, ID 83655-5238

I - DONNA JAGGARD  
5455 N SHERIDAN RD APT 602  
CHICAGO, IL 60640-1921

I - DONNA LEWIS  
12921 OXNARD ST  
VAN NUYS, CA 91401-4106

I - DONNA MALKKI  
, FL 34957-0000

I - DONNA MANDERS  
7727 12TH AV NW  
SEATTLE, WA 98117-4136

I - DONNA MARKS  
250 JENNY LIND DR  
HARPERS FERRY, WV 25425-3139

I - DONNA PEMBERTON  
2512 COCONUT DR  
COCOA, FL 32926-4309

I - DONNA PLUTSCHUCK  
439 S QUAY ST  
LAKEWOOD, CO 80226-3323

I - DONNA SCHLOSSBERG  
960 DIVISION STREET  
BAYPORT, NY 11705-1007

I - DONNA SEYMOUR  
8 CEDAR ST  
POTSDAM,, NY 13676-2019

I - DONNA SMITH-REMICK  
3041 CENTURY LN  
BENSALEM, PA 19020-2003

I - DOREEN TIGNANELLI  
29 COLBURN DR  
POUGHKEEPSIE, NY 12603-5103

I - DORIS CAREY  
11NORTH RIDING DRIVE  
CHERRY HILL, NJ 08003-0000

I - DOROTHY BIRCH  
6601 RIDGE CREST DRIVE  
MILTON, FL 32570-3670

I - DOROTHY CINQUEMANI  
400 LAKE AV NE S210  
LARGO, FL 33771-0000

I - DOROTHY FOSTER  
3522 SW 33RD TER  
TOPEKA, KS 66614-3341

I - DOROTHY GREEN  
115 CONCORD PL APT 4  
THIENSVILLE, WI 53092-1244

I - DOROTHY JONES  
285 W MAIN ST  
MUNFORD, TN 38058-6067

I - DOROTHY OURS  
70 DUNKARD CHURCH RD  
STOCKTON, NJ 08559-1405

I - DOROTHY RIDDLE  
2647 N MILLER RD UNIT 12  
SCOTTSDALE, AZ 85257-1628

I - DOROTHY WELLS  
4104 BAKER LN  
NOTTINGHAM, MD 21236-1053

I - DOROTHY WILLINGHAM  
P.O. BOX 516  
NEWBERRY, FL 32669-0000

I - DORTHA MARQUIS  
124 MARSH CR WDSVL ROAD  
HOPEWELL, NJ 08525-2819

I - DOTTIE EDDIS  
PO BOX 88  
AUGUSTA, WV 26704-0088

I - DOUG LA FOLLETTE  
PO BOX 7848  
MADISON, WI 53707-7848

I - DOUG REINEKE  
1500 GILBERT RD  
KENNESAW, GA 30152-4808

I - DOUG RIEL  
PO BOX 577  
MOLINE, IL 61266-0577

I - DOUG SHOHAN  
95 VIA MARIA  
LEE, MA 01238-9354

I - DOUGLAS ESTES  
629 ARGUELLO BLVD APT 303  
SAN FRANCISCO, CA 94118-4063

I - DOUGLAS MCNEILL  
33T RIDGE RD  
GREENBELT, MD 20770-0718

I - DOUGLAS PARKER  
2817 CROSS LANE  
MARIANNA, FL 32446-6741

I - DOUGLAS POWLESS  
248 EAST LANIKAULA ST  
HILO, HI 96720-0000

I - DREW MARTIN  
500 LAKE AVENUE # 102  
LAKE WORTH, FL 33460-0000

I - DUANE VEON  
6816-AWINI STREET  
DIAMONDHEAD, MS 39525-3523

I - DUANE WICKLUND  
23 SUNRISE TRL  
FRUITLAND PARK, FL 34731-6469

I - DUSTIN CLARK  
355 E TAYLOR AVE  
SUNNYVALE, CA 94085-4336

I - DUSTIN WHITE  
LADOTD  
9800 JIMMY WEDDELL DRIVE  
BATON ROUGE, LA 70807

I - DUSTIN WHITE  
DESIGN ENGINEER  
STATE OF LOUISIANA DOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804

I - DUSTY WASHBURN  
6090 TERRY RD. #1208  
JACKSONVILLE, FL 32216-4989

I - DWIGHT ADAMS  
2507 NW 24 TERRACE  
GAINESVILLE, FL 32605-0000

I - E SMITH  
61 FAYETTE AVE  
OAKDALE, PA 15071-1277

I - EBEN FUTRAL  
150 EAGLE LN  
SEDONA, AZ 86336-7131

I - ED KRAYNAK  
1563 S ROSLYN ST  
DENVER, CO 80231-2614

I - ED MCDADE  
2581 S MOUNTAIN RD  
PORT MATILDA, PA 16870-9222

I - ED PREAU  
LADOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804-9245

I - ED QUIGLEY  
110 RICKY DR  
MUSCLE SHOALS, AL 35661-5426

I - ED SCERBO  
3602 HOMESTEAD CT.  
PEEKSKILL, NY 10566-0000

I - EDITH HANEY  
626 GORDON DR. SE  
DECATUR, AL 35601-0000

I - EDMOND LAREAU  
281 4TH AV  
REDWOOD CITY, CA 94063-3721

I - EDWARD DERY  
1715 MAPLE ST  
BETHLEHEM, PA 18017-5128

I - EDWARD HECK  
7068 LANTANA LANE  
TAMARAC, FL 33321-0000

I - EDWARD OLSON  
590 COTTONWOOD ROAD  
SEBASTIAN, FL 32958-3936

I - EDWARD SLANEY  
2981 NOVA SCOTIA LANE  
MELBOURNE, FL 32935-0000

I - EDWARD WALWORTH  
8 MANNING AVE  
LEWISTON, ME 04240-5921

I - EDWARD WAXMAN  
3646 PLEASANT VALLEY RD  
YORK, PA 17406-7035

I - EILEEN FRETZ  
RR 6 BOX 6238B  
STROUDSBURG, PA 18360-8542

I - EILEEN LUNDBERG  
9850 SE VANDALIA DR  
9850 SE VANDALIA DR, IA 50237-2075

I - EILEEN TRAINOR  
503 PICASSO DR  
SAN MARCOS, TX 78666-9531

I - EILZABETH UNGAR  
101 W END AVE APT 28B  
NEW YORK, NY 10023-6377

I - ELAINE FISCHER  
2710 HOLLY HALL ST APT L  
HOUSTON, TX 77054-4196

I - ELAINE HOWES  
3705 PERDEW DR.  
3705 PERDEW DR., FL 34538-0000

I - ELAINE MCCALL  
2988 VINE CIR  
DECATUR, GA 30033-5107

I - ELAINE SLOAN  
10 MITCHELL PL  
NEW YORK, NY 10017-1801

I - ELAINE YOUNG  
7347 196TH STREET  
FLUSHING, NY 11366-1810

I - ELDON FRANCIS  
6609 MILANO COURT SOUTHEAST  
OLYMPIA, WA 98513-4978

I - ELEANOR BECHER  
39 RAINBOW TER  
ORCHARD PARK, NY 14127-2516

I - ELEANOR BYERS  
1058 FAIRBROOK CT  
SAN JOSE, CA 95132-2911

I - ELEANOR CALTABIANO  
950 CHESTERFIELD RD  
HADDONFIELD, NJ 08033-3903

I - ELENA PEREZ  
428 J ST STE 280  
SACRAMENTO, CA 95814-2303

I - ELGIN LEE BAKER  
819 N BUCKNELL ST  
PHILADELPHIA, PA 19130-1919

I - ELIANA ARDILA  
9880 SOUTHWEST 166TH COURT  
MIAMI, FL 33196-5802

I - ELISABETH BRACKNEY  
838 S LYNN ST  
MOSCOW, ID 83843-3519

I - ELISE MALLOVE  
999 GREENLEAF CANYON RD  
TOPANGA, CA 90290-4112

I - ELIZABETH DANIEL  
339 GOLDEN GATE AVE  
BELVEDERE, CA 94920-2483

I - ELIZABETH FLOWER  
1245 N PALETHORP ST  
PHILADELPHIA, PA 19122-4509

I - ELIZABETH MCSWEENEY  
844 PLANDOME RD  
MANHASSET, NY 11030-1302

I - ELIZABETH MIRANTI  
926 S ELM ST  
PALATINE, IL 60067-7106

I - ELIZABETH RAMSEY  
1626 COLUSA AV  
DAVIS, CA 95616-3131

I - ELIZABETH RUCH  
700 MELROSE AVE J34  
WINTERPARK, FL 32789-0000

I - ELIZABETH S. PUTNAM  
PO BOX 717  
DAYVILLE, CT 06241-0717

I - ELIZABETH SHULMAN  
377 N. LAKE WAY  
PALM BEACH, FL 33480-3639

I - ELIZABETH VIGIL  
208 1900 CENTRE POINTE BLVD  
TALLAHASSEE, FL 32308-0000

I - ELIZABETH WALKER  
958 CHAMBERS SPRING RD  
WAVERLY, TN 37185-2952

I - ELIZABETH ZIMMERMAN  
7017 AMHERST AVE APT B  
SAINT LOUIS, MO 63130-2331

I - ELLEN FOOSE  
1004 LARCHMONT PLACE  
MOUNT LAUREL, NJ 08054-0000

I - ELLEN JUSTICE  
1221 N BAYSHORE DRIVE  
VALPARAISO, FL 32580-1339

I - ELLEN MCNULTY  
7809 CROSS RD  
PINE BLUFF, AR 71603-9152

I - ELLEN PODOLSKY  
83 ANDREWS ST.  
MEDFORD, MA 02155-0000

I - ELLEN PODOLSKY  
33 MAGOUN AVE  
MEDFORD, MA 02155-4853

I - ELLEN WHITE  
323 MONTGOMERY ST  
HIGHLAND PARK, NJ 08904-2713

I - ELLYN SUTTON  
PO BOX 18754  
SPOKANE, WA 99228-0754

I - ELSY HADDAD  
17294 37TH PLACE N  
LOXAHATCHEE, FL 33470-3627

I - EMIL SCHELLER  
1530 PALISADE AVE APT 18B  
FORT LEE, NJ 07024-5401

I - EMILIA HERNANDO  
ZAMAKOLA 130  
BILBAO, ID 48003-0000

I - EMILY ALPERT  
45 HOLLY LN  
BROWNSVILLE, TX 78520-8320

I - EMILY BLOSS  
17317 LAURA LEE DR #AUDUBON  
SPRING HILL, FL 34610-0000

I - EMILY CURD  
PO BOX 303  
BELCHERTOWN, MA 01007-0303

I - EMILY LIU-ELIZABETH  
4775 ATHERTON AVE APT 12  
SAN JOSE, CA 95130-1015

I - EMILY WADDELL  
618 N NOYES BLVD  
SAINT JOSEPH, MO 64506-2811

I - ENID BREAKSTONE  
164 WETHERELL ST  
MANCHESTER, CT 06040-6408

I - ERIC D'ALESSANDRO  
319 HURST ST.  
BRIDGEPORT, PA 19405-0000

I - ERIC PRADELSKI  
737 E 156TH ST  
SOUTH HOLLAND, IL 60473-1520

I - ERIC SALINAS  
13264 SW 50TH ST  
HOLLYWOOD, FL 33027-5526

I - ERIC WELLS  
1118 BRUSSELS ST  
SAN FRANCISCO, CA 94134-2106

I - ERIC WEST  
119 PINE TREE DRIVE  
ORMOND BEACH, FL 32174-2644

I - ERICA ROYER  
3110 HILLSVIEW RD  
SPEARFISH, SD 57783-6013

I - ERICH W LARISCH  
334 8TH ST NE  
WASHINGTON, DC 20002-6108

I - ERIK HANEY  
1015 14TH AVENUE N  
SAINT PETERSBURG, FL 33705-1045

I - ERIK JANSSON  
PO BOX 76  
VALLEY LEE, MD 20692-0076

I - ERIKA SCULL  
275 NORTHWEST 92ND AVENUE  
CORAL SPRINGS, FL 33071-6916

I - ERNEST HARBEN  
2380 MIDVALE CIR  
TUCKER, GA 30084-4219

I - ESTELLA FRAZER  
232 2ND ST  
LEWES, DE 19958-1326

I - ESTER FUCHS  
PO BOX 502  
LAPEER, MI 48446-0502

I - ESTHER CASANOVAS  
5900 NW 2ND ST.  
MIAMI, FL 33126-0000

I - ESTHER FRANCES  
941 SAMSONVILLE RD  
KERHONKSON, NY 12446-1518

I - ETHEL LEIDER  
5187 ROBINO CIRCLE  
WEST PALM BEACH, FL 33417-3306

I - ETHEL TARANTINO  
72 PARK AVE  
FLEMINGTON, NJ 08822-1171

I - EUGENE DUMAS  
244 BA WOOD LN  
JANESVILLE, WI 53545-0705

I - EUGENE GORRIN  
2607 FREDERICK TER  
UNION, NJ 07083-5603

I - EUGENE PUMPHREY  
1804 BAYVIEW AVE PO BOX 1000  
BARNEGAT LGT, NJ 08006-1000

I - EVA HOFBERG  
824 W 15TH ST TRLR 27  
NEWPORT BEACH, CA 92663-6112

I - EVAN AND ELAINE HAZARD  
3119 APPLETREE CT NW  
BEMIDJI, MN 56601-2107

I - EVELYN & JAY JOSEPH  
17 OAK BROOK LANE  
MERRICK, NY 11566-3256

I - EVELYN BRANDT  
15480 ADMIRALTY CIRCLE  
NORTH FORT MYERS, FL 33917-3264

I - EVELYN DYMKOWSKI  
2113 ROOSEVELT ST  
CLINTON, IA 52732-2416

I - EVON RODGERS  
16019 NE 145TH AVE  
BRUSH PRAIRIE, WA 98606-3406

I - EZRA MANN  
1273 S 9TH ST  
LAS VEGAS, NV 89104-1524

I - F. CORR  
128 E CHESTNUT HILL RD  
MONTAGUE, MA 01351-9558

I - F. STANDEFORD  
3686 JOHNSON LAKE RD  
CEDARTOWN, GA 30125-5773

I - FAY HUANG  
1612 75TH STREET NORTHWEST  
BRADENTON, FL 34209-1069

I - FAY STONE  
2099 FOUNTAIN BLUFF LN  
PLATTEVILLE, WI 53818-9502

I - FELICITY DORSETT  
2701 SPRING ST  
FORT WAYNE, IN 46808-3939

I - FLORENCE KRYCH  
214 E TRAUBE AVE  
WESTMONT, IL 60559-1543

I - FLORENCE SULLIVAN  
4911 N CENTRAL AVE  
CHICAGO, IL 60630-2031

I - FLORENCE THOMPSON  
3 SUTTON PL APT 14  
CINCINNATI, OH 45230-1343

I - FOREST BURKS  
6249 SORTER ROAD  
GUNTERSVILLE, AL 35976-2931

I - FOREST SHOMER  
PO BOX 639  
PORT TOWNSEND, WA 98368-0639

I - FRANCES & SUMNER PATCH  
7112 SYCAMORE AVE  
TAKOMA PARK, MD 20912-4639

I - FRANCES CHRISTEN  
PO BOX 605  
FOREST CITY, NC 28043-0000

I - FRANCES CONE  
183 BOBCAT DR  
PAWLEYS ISLAND, SC 29585-7526

I - FRANCES CONE  
909 8TH AVENUE SW  
RUSKIN, FL 33570-4515

I - FRANCES DUGGAN  
102 ILFORD AVE  
NORTH ARLINGTON, NJ 07031-5916

I - FRANCES FREITAG  
1610 S 11TH ST  
SHEBOYGAN, WI 53081-0000

I - FRANCES HODGES  
PO BOX 1764  
DAVIDSON, NC 28036-0000

I - FRANCES STEWART  
3309 NOYES AVE  
CHARLESTON, WV 25304-1320

I - FRANCES TAN  
2300 W 26TH ST APT E30  
LAWRENCE, KS 66047-3137

I - FRANCISCO COSTA  
67665 ONTINA RD  
CATHEDRAL CITY, CA 92234-5545

I - FRANK BELCASTRO  
285 N GRANDVIEW AVENUE  
DUBUQUE, IA 52001-6327

I - FRANK BROWN  
4648 WILLOW RD PO BOX 293  
PINE LAKE, GA 30072-0000

I - FRANK COLLETO  
4207 GERTRUDE STREET  
SIMI VALLEY, CA 93063-2927

I - FRANK FISCHER  
123 WALNUT STREET, APT #702  
NEW ORLEANS, LA 70118-4845

I - FRANK MASTRI  
PO BOX 10  
BRIDGEPORT, CT 06601-0010

I - FRANK MILLIN  
2637 E. ATLANTIC BLVD  
POMPANO BEACH, FL 33062-0000

I - FRANK X. KLESHINSKI  
209 NORTH DR  
JEANNETTE, PA 15644-9629

I - FRANKLIN PLATIZKY  
3117 CEDAR HL  
DENTON, TX 76209-8350

I - FRED FALL  
106 UXBRIDGE  
CHERRY HILL, NJ 08034-3724

I - FRED HAY  
261 EASTVIEW DR  
BOONE, NC 28607-3660

I - FRED KINKAID  
PO BOX 198  
CHARLOTTE, IA 52731-0198

I - FREDERIC GRIEST  
6944 E VILLANOVA PL  
DENVER, CO 80224-2648

I - FREDERIC MICHALSKI  
27 PLACE CHAPOU  
CAHORS, 46000-0000

I - FREDERICK BRENNER  
12700 SW 69TH AVE  
MIAMI, FL 33156-6221

I - G. A. HOWARD  
10 SHERIDAN SQUARE APARTMENT 4D  
NEW YORK, NY 10014-0000

I - G. WINTERS  
113 E 3RD ST  
NEWKIRK, OK 74647-1204

I - G.C. JANETT  
730 W OAK ST  
FORT COLLINS, CO 80521-2512

I - GABRIELA SEOANE  
557 E WALNUT ST  
LONG BEACH, NY 11561-3737

I - GABRIELLE LYNCH  
7612 HUEY COURT  
RALEIGH, NC 27615-5025

I - GAIL LEWIS  
47 RAINBOW RDG  
IRVINE, CA 92603-3728

I - GAIL MC MAHON  
1702 14TH TER S  
BIRMINGHAM, AL 35205-6265

I - GAIL RAINS  
PO BOX 662022  
SACRAMENTO, CA 95866-2022

I - GAILE CARR  
1821 EDDY DR  
MOUNT SHASTA, CA 96067-9617

I - GARETH WYNN  
122 BAG END RD  
HENDERSONVILLE, NC 28739-2286

I - GARY BEARD  
8522 FAIRBURN DR  
SPRINGFIELD, VA 22152-3224

I - GARY KINKLEY  
3 CLARK RD  
ANNVILLE, PA 17003-9540

I - GARY LEGG  
979 ALPINE WAY  
INDIAN SPRINGS, AL 35124-0000

I - GARY LUDI  
2035 AZALEA DR  
ROSWELL, GA 30075-4750

I - GARY MIERAU  
1766 HOLLY ST  
DENVER, CO 80220-1445

I - GARY MONTOYA  
875 WEST 9TH ST.  
TRUTH OR CONSEQUENCES, NM 87901-

I - GARY NEU  
11868 S GATE RD  
ROSCOE, IL 61073-9674

I - GARY ROULSTON  
1150 S LEFEVER DR  
LITITZ, PA 17543-9373

I - GEOFFREY PRUITT  
2344 BLUE HERON DR  
FLORISSANT, MO 63031-5505

I - GEORGE BODDIE  
LNNR/ COASTAL ENGINEERING  
2045 LAKESHORE DR, STE. 309, CERM  
NEW ORLEANS, LA 70122

I - GEORGE CHIANESE  
4902 BRISTLE CONE CIR  
ABERDEEN, MD 21001-2604

I - GEORGE MAHR  
9020 SOUTHEAST YACHT CLUB CI  
HOBE SOUND, FL 33455-0000

I - GEORGE OLLEN  
4926 O SULLIVAN DR  
LOS ANGELES, CA 90032-4021

I - GEORGE ROBINSON  
116 PINEHURST AVE  
NEW YORK, NY 10033-1755

I - GEORGE SEAMAN  
PO BOX 242  
PRESCOTT, AZ 86302-0242

I - GEORGE TOLLESON  
26 CHATEAU PL  
ASHEVILLE, NC 28805-1713

I - GEORGE WILDER  
990 8TH ST S  
NAPLES, FL 34102-8215

I - GEORGIA MATTINGLY  
412 VERDANT CIR  
LONGMONT, CO 80501-3908

I - GERALD BROOKMAN  
715 MUIR AVENUE  
KENAI, AK 99611-8816

I - GERALD FISHER  
432 GRASSLAND CT  
BLUFFTON, IN 46714-9277

I - GERALD LAIRD  
65 ENFIELD RD  
LINCOLN, ME 04457-1171

I - GERALD ORCHOLSKI  
2400 BRIGDEN RD  
PASADENA, CA 91104-3427

I - GERALDINE BASSETT  
916 POLK ST  
HOLLYWOOD, FL 33019-0000

I - GERI LAWRENCE  
3 LOOKOUT TRL  
WESTPORT, CT 06880-5143

I - GEROLYN JENKINS  
10697 OAK BEND WAY  
WELLINGTON, FL 33414-6175

I - GERRI REAVES  
16442 TIMBERLAKES DR #204  
FORT MYERS, FL 33908-0000

I - GERRY KNAM  
7547 SOUTHEAST BAY CEDAR CIRCLE  
HOBE SOUND, FL 33455-7877

I - GERRY MILLIKEN  
PO BOX 1880  
OROVILLE, WA 98844-1880

I - GIDEON BANNER  
222 E 87TH ST  
NEW YORK, NY 10128-3138

I - GINA SALAZAR  
516 W 91ST CIR  
DENVER, CO 80260-6894

I - GINA VENTOLA  
8617 PARK HIGHLAND DRIVE  
ORLANDO, FL 32818-5773

I - GINGER IGLESIAS  
5428 EVELYN WAY  
LIVERMORE, CA 94550-2325

I - GINNY & BOB FREEMAN  
2650 PORTLAND ST  
EUGENE, OR 97405-3129

I - GIOVANNI MASTRACCHIO  
169 CHURCH ST  
WHITE PLAINS, NY 10601-1210

I - GLEN BANKS  
PO BOX 333  
PLACITAS, NM 87043-0333

I - GORDON BARRETT  
13591 BEAUMONT AVENUE  
SARATOGA, CA 95070-0000

I - GORDON SCHOCHET  
89 GEORGE STREET  
89 GEORGE STREET, NJ 08903-0000

I - GORDON SHEILL  
4291 EASTGATE DRIVE  
ANN ARBOR, MI 48103-9412

I - GRACE BURSON  
160 NICOLL ST  
NEW HAVEN, CT 06511-2624

I - GRACE TRUAX  
2303 GREGG RD SW  
SOUTH BOARDMAN, MI 49680-9647

I - GREG DINNSEN  
9012 WAGGONEER CIR  
CHARLOTTE, NC 28270-0844

I - GREG JACKSON  
2220 BANE BERRY DRIVE  
BIRMINGHAM, AL 35244-1403

I - GREG RITTCHEN  
278 MUNGERTOWN RD  
MADISON, CT 06443-1933

I - GREG SCHNEIDER  
540 EDGAR RD  
WESTFIELD, NJ 07090-4119

I - GREG SWICK  
1503 E BINGHAM ST  
OZARK, MO 65721-9503

I - GREG WILSON  
861 BALLSTOWN RD  
LITITZ, PA 17543-8551

I - GREGG ROGERS  
1752 SW OLD WIRE ROAD  
LAKE CITY, FL 32024-0000

I - GREGORY ESTEVE  
3655 N SCENIC HIGHWAY  
LAKE WALES, FL 33898-6608

I - GREGORY J HARBER  
2906 HIGHLAND AVENUE S APT. 5  
BIRMINGHAM, AL 35205-1911

I - GREGORY TAYLOR  
13086 52ND CT N  
ROYAL PALM BEACH, FL 33411-0000

I - GRETCHEN HART-VONKELLER  
306 S ANIMAS ST  
TRINIDAD, CO 81082-3231

I - GRISELDA SLOAN  
118 LEDGERWOOD LN  
ROCKWOOD, TN 37854-5714

I - GUNN HONICAN  
316\_LAKEVIEW LN  
WINTER HAVEN, FL 33884-2630

I - GUNTER WENDLAND  
7985 SW 187TH AVE  
DUNNELLON, FL 34432-2424

I - GUY WINIG  
2766 NY ROUTE 23 PO BOX 780  
HILLSDALE, NY 12529-0780

I - GUY ZALLER  
146 CREEK DR UNIT C  
APTOS, CA 95003-4577

I - GWYNNETH BAUER  
8410 N PINEWOOD DR  
CASTLE ROCK, CO 80108-9247

I - HANITA ROSENBOIM  
17 CLOVER DR  
GREAT NECK, NY 11021-1029

I - HAROLD A SAMUELS  
5659 RAMARA AVE  
WOODLAND HILLS, CA 91367-4057

I - HAROLD BOSWELL  
4614 3RD AVE NW  
SEATTLE, WA 98107-4405

I - HAROLD PIGGOTT  
211 N MERIDIAN RD  
GLEN CARBON, IL 62034-1333

I - HAROLD SALWEN  
703 RIVERVIEW AVE  
TEANECK, NJ 07666-2268

I - HAROLD STEWART  
PO BOX 86  
GRANGEVILLE, ID 83530-0086

I - HARRIET HELMAN  
70 JUNIPER AVE  
RONKONKOMA, NY 11779-5926

I - HARRIET HIRSCH  
1903 MEMORY CT  
VIENNA, VA 22182-3327

I - HARRIET JERNQUIST  
195 MAIN ST APT 5C  
MILLBURN, NJ 07041-1153

I - HARRIET MCCLEARY  
2440 STEVENS AVE # 2  
MINNEAPOLIS, MN 55404-3529

I - HARRIETTE FRANK  
3603 WESTOVER RD  
DURHAM, NC 27707-5032

I - HARRISON HILBERT  
PO BOX 714  
POCATELLO, ID 83204-0714

I - HARVEY BUCHBINDER  
2301 EL CONTENTO DR BLDG 34  
LOS ANGELES, CA 90068-2815

I - HEATHER CROSS  
18500 GARFIELD  
REDFORD, MI 48240-1716

I - HEATHER DUPUY  
2015 S OSCEOLA AVE  
ORLANDO, FL 32806-4036

I - HEATHER HALVORSON  
1213 GILSON ST # 2F  
MADISON, WI 53715-2119

I - HEATHER LANDIS  
7425 DAKOTA AVE  
CHESAPEAKE BEACH, MD 20732-9335

I - HEATHER PENNINGTON  
546 SHOTWELL ST  
SAN FRANCISCO, CA 94110-1916

I - HEATHER TUCKER  
201 W SOUTHWEST PKWY APT 10112  
LEWISVILLE, TX 75067-7738

I - HEIDI HARTMAN  
72097 HWY 74  
IONE, OR 97843-0000

I - HEIDI SMITH  
10723 EDITH BLVD NE  
ALBUQUERQUE, NM 87113-2503

I - HEIDI WELTE  
18880 SW HART RD  
BEAVERTON, OR 97007-5623

I - HELAINE MOYSE  
2974 REYMOND  
BATON ROUGE, LA 70808-1575

I - HELEN GREER  
1170 W WABASH ST LOT 32  
TUCSON, AZ 85705-1465

I - HELEN KOPP  
12521 INDIAN HOLLOW RD  
GRAFTON, OH 44044-9190

I - HELEN MALINAUSKAS  
W2702 FOX LN  
MONTELO, WI 53949-9027

I - HELEN SCOTT  
210 WALNUT AVENUE NORTHWEST  
PORT CHARLOTTE, FL 33952-7945

I - HELEN TORRES  
5624 SOUTHWEST 60TH AVENUE  
MIAMI, FL 33143-2232

I - HELEN WARBINGTON  
3814 N ALASKA ST  
PORTLAND, OR 97217-7306

I - HELEN WARNICK  
2830 ARMADILLO TRL  
TITUSVILLE, FL 32780-0000

I - HELGA SABLE  
1105 WHITEHALL AVE.  
TAHOE VISTA, CA 96148-0000

I - HENRY MITCHELL  
94 CENTER POINT RD  
BOWDOINHAM, ME 04008-4825

I - HENRY MULLER  
265 VILLA DEL MAR WAY  
SATELLITE BEACH, FL 32937-3448

I - HENRY SMOKE  
130 HAGUE DR  
COLUMBUS, NC 28722-6412

I - HETY BROST  
1613B  
MEDANALES, NM 87548-0091

I - HILARY HOTT  
PO BOX 88  
AUGUSTA, WV 26704-0088

I - HILDA KIDWELL  
1900 RED OAK WAY NW  
KENNESAW, GA 30152-3312

I - HOLLY CHISHOLM  
183 ORA RD  
OXFORD, MI 48371-3229

I - HOLLY EATON  
12407 SHADOWVISTA DR  
HOUSTON, TX 77082-7308

I - HOLLY MOORE  
1454 SEMINOLE ST  
MOUNT PLEASANT, SC 29464-4825

I - HOPE ASHLEY  
312 ELM ST  
PALO ALTO, CA 90210-4916

I - HOPE SHEPPARD  
319 E KIMBROUGH ST  
MESQUITE, TX 75149-4401

I - HOWARD HOLDEN  
204 BARRY ST  
DECATUR, GA 30030-3424

I - HOWARD STEFFENS  
11023 TUJUNGA CANYON BLVD  
TUJUNGA, CA 91042-1243

I - HOWARD WOO  
7748 HOSFORD AVE  
LOS ANGELES, CA 90045-1145

I - HUGH CAROLA  
30 MAPLE AVE  
HACKENSACK, NJ 07601-4502

I - HYGI WAETERMANS  
303 BLAZING STAR CT  
WINDSOR, CA 95492-8615

I - I GAC  
424 BROOKVIEW DR  
ROCHESTER, NY 14617-4313

I - IAN NOAH  
939 S. DUNSMUIR AVE  
LOS ANGELES, CA 90230-7529

I - IAN NOAH  
5109 SHOWBOAT LN  
CULVER CITY, CA 90230-7529

I - IAN SHELLEY  
9158 SW WILSHIRE ST  
PORTLAND, OR 97225-4058

I - IKE WENNIHAN  
PO BOX 1446  
DOLORES, CO 81323-1446

I - INGRID STEPHEN  
11646 SIR WINSTON WAY  
ORLANDO, FL 32824-6008

I - INTERNATURAL ALINEMENT  
PO BOX 641  
WOOD RIVER, IL 62095-0641

I - IRENE ABBOTT  
1902 NEW BEDFORD DR.  
SUN CITY CENTER, FL 33573-6101

I - IRENE DRISS  
629 CAROLINE ST APT 4  
KEY WEST, FL 33040-6650

I - IRVING SPOKONY  
PO BOX 201  
LAKE ALFRED, FL 33850-0201

I - IRWIN LEVY  
161 W 61ST ST #20C  
NEW YORK, NY 10023-7460

I - ISAAC LUDWIG  
16669 STEUBENVILLE PIKE  
SALINEVILLE, OH 43945-9735

I - J. CAPOZZELLI  
315 W 90TH ST  
NEW YORK, NY 10024-1646

I - J. HOLLEY TAYLOR  
5745 SW 75TH ST # 362  
GAINESVILLE, FL 32608-5504

I - J. PERRYMAN  
95 CLIFTON DR  
DALY CITY, CA 94015-3436

I - J. STEPHEN ADAMS  
646 LEONARD ST APT 1R  
BROOKLYN, NY 11222-2950

I - J.B. COLEMAN  
201 GINGER LN  
EASLEY, SC 29642-1319

I - J.B. SCHWALLER, P.E.  
2550 EVERGREEN ROAD  
MINDEN, LA 71055-6081

I - JACK BALCH  
3303 CUSTER AVENUE  
LAKE WORTH, FL 33467-1003

I - JACK BROWN  
334 3RD AVE N  
PAYETTE, ID 83661-2308

I - JACK M. HIRSHON  
P.O. BOX 3845  
HOLIDAY, FL 34692-0000

I - JACK SAYLOR  
4933 YORK RD  
SOUTH BEND, IN 46614-3442

I - JACK STEINBERG  
3506 WEST AZEELE STREET APT. 109  
TAMPA, FL 33609-2947

I - JACK STEVENS  
1158 26TH STREET #333  
SANTA MONICA, CA 90403-0000

I - JACKIE MILLER  
632 BRECKENRIDGE ST UPPR  
BUFFALO, NY 14222-1508

I - JACKIE SEMIT  
23 DAYTON PLACE  
HERKIMER, NY 13350-1030

I - JACKIE TUCKER  
13430 SUMMER RAIN DR.  
ORLANDO, FL 32828-0000

I - JACKIE YUNG  
590 W HILLS WAY NW  
SALEM, OR 97304-4327

I - JACQUELINE SCOTT  
553 HAWKINS CIRCLE  
APOPKA, FL 32703-3323

I - JACQUELYN SMITHERS  
2906 SHARON DR  
ANN ARBOR, MI 48108-1861

I - JAIME HISEL  
236 N WOOD ST  
SPRING GREEN, WI 53588-9236

I - JAMES & GINA ROSS  
3116 PLAZA DR NE APT C7  
GRAND RAPIDS, MI 49525-2931

I - JAMES AND ELLEN HURST  
7207 LUNAR DR  
AUSTIN, TX 78745-6454

I - JAMES CARPENTER  
1831 BLAKE ST  
BERKELEY, CA 94703-1903

I - JAMES DENISON  
6931 E 11TH ST  
LONG BEACH, CA 90815-4937

I - JAMES EVANS  
PO BOX 994  
CLEARLAKE OAKS, CA 95423-0994

I - JAMES GEYER  
6162 MCCUE RD  
HOLT, MI 48842-9658

I - JAMES GILLAND  
1600 N WILMOT RD UNIT 130  
TUCSON, AZ 85712-4415

I - JAMES H JORGENSEN  
4207 WESTBROOK DR  
AMES, IA 50014-3472

I - JAMES KIRKS  
11 HEMMING LANE  
CHICO, CA 95973-1076

I - JAMES MARTIN  
16039 S LEXINGTON DR  
PLAINFIELD, IL 60586-8026

I - JAMES MCCARTHY  
3972 LORA STREET  
FORT MYERS, FL 33916-1316

I - JAMES MORMAN  
26 PEVETTY DR  
EAST HAVEN, CT 06512-4815

I - JAMES MOSS  
PO BOX 16743  
GOLDEN, CO 80402-6012

I - JAMES MOSS  
7000 MONUMENT DR # A  
GRANTS PASS, OR 97526-8516

I - JAMES MURPHY  
MARAD  
500 POYDRAS STREET, #1223  
NEW ORLEANS, LA 70130

I - JAMES R. HILL  
13258 UNION ROAD  
WATERFORD, PA 16441-0000

I - JAMES ROBERTS  
215 S ELLIS ST  
PALOUSE, WA 99161-8700

I - JAMES SALTER  
1725 YORK AVENUE N  
GOLDEN VALLEY, MN 55422-4233

I - JAMES TORNATORE  
4881 VERMILION DR  
SAINT LOUIS, MO 63128-2353

I - JAMES WELMS  
2601 BRADWELL CT  
PARKVILLE, MD 21234-1518

I - JAMES WILDER  
10 MANHATTAN SQUARE DRIVE APT 6E  
ROCHESTER, NY 14607-3951

I - JAMIE MIERAU  
2480 16TH ST NW APT 843  
WASHINGTON, DC 20009-6707

I - JAN BROWN  
2626 SHRIVER DRIVE  
FORT MYERS, FL 33901-5836

I - JAN NOVOTNY  
401 15TH AVENUE N  
401 15TH AVENUE N, FL 32250-4710

I - JAN RAHM  
1073 MADISON ST  
DENVER, CO 80206-3435

I - JANE BOREN  
9911 GERONIMO DRIVE  
NORMAN, OK 73026-5919

I - JANE BRYANT  
214 ASHMORE BRIDGE RD  
MAULDIN, SC 29662-2841

I - JANE CHISCHILLY  
420A TOMBSTONE CANYON  
BISBEE, AZ 85603-2285

I - JANE CHISCHILLY  
2017 CIR. 4114  
ATLANTA, TX 75551-0000

I - JANE CONE  
909 8TH AVENUE SW  
RUSKIN, FL 33570-4515

I - JANE MACCRI  
207 GRANADA BLVD.  
207 GRANADA BLVD., FL 33905-0000

I - JANE MCRAE  
63 BAGDAD RD  
DURHAM, NH 03824-3220

I - JANE O'CONNOR  
817 FAY ROAD APT# 07  
SYRACUSE, NY 13219-0000

I - JANE VALERY  
10 BROOKVIEW DRIVE  
ATCO, NJ 08004-2930

I - JANE WINN  
27 HIGHLAND AVE  
PITTSFIELD, MA 01201-0000

I - JANET BARBER  
5583 NEWLAND RD  
PARADISE, CA 95969-5224

I - JANET CLEMENSON  
3130 E. WEBBER DR.  
PEARLAND, TX 77584-0000

I - JANET FOTOS  
26 TRUELL RD  
HOLLIS, NH 03049-6271

I - JANET HALLE  
311 GERMAN STREET  
WEST NEWTON, PA 15089-1215

I - JANET PEITAVINO  
156 CORNELL ST  
NEW BEDFORD, MA 02740-1714

I - JANET RAFFERTY  
407 MYRTLE ST  
STARKVILLE, MS 39759-2607

I - JANET SEARS  
1632 POWDER RIDGE DR  
PALM HARBOR, FL 34683-4844

I - JANET WEISBERG  
820 MEADOWLAND DR APT J  
NAPLES, FL 34108-2546

I - JANET WILLIAMS  
1200 DON GASPAR AVE  
SANTA FE, NM 87505-0626

I - JANET ZEHR  
971 SWEENEY ST  
NORTH TONAWANDA, NY 14120-4807

I - JANICE BORDELON  
1121 E. WINDWOOD WAY  
1121 E. WINDWOOD WAY, FL 32311-0000

I - JANICE BURGI  
950 DANIEL ST  
SUN PRAIRIE, WI 53590-1031

I - JANICE DLUGOSZ  
409 COMPASS AVENUE  
BEACHWOOD, NJ 08722-4119

I - JANICE FOSS  
622 RICHMOND ST  
EL CERRITO, CA 94530-3213

I - JANICE GLOE  
3100 GUIDO ST  
OAKLAND, CA 94602-3521

I - JARIAN WESTFALL  
8623 EVERGLADE DR  
SACRAMENTO, CA 95826-3618

I - JASON BERRY  
3206 23RD ST N  
ARLINGTON, VA 22201-4309

I - JASON HAMPTON  
107 THORAIN  
SAN ANTONIO, TX 78212-0000

I - JASON J GREEN  
4 RICK CT  
FREDERICKSBURG, VA 22407-0000

I - JASON TILLEY  
1217 27TH ST  
GULFPORT, MS 39501-5222

I - JAY BEYERSDORF  
13407 106TH AVENUE  
LARGO, FL 33774-5515

I - JAY DRAKE  
1536 GREAT HWY APT 31  
SAN FRANCISCO, CA 94122-2815

I - JAY GASSMAN  
1919 MIDDLE COUNTRY RD  
CENTEREACH, NY 11720-5600

I - JAY HUMPHREY  
2373 NW 185TH AVE # 195  
HILLSBORO, OR 97124-7076

I - JAY ROZNER  
74 VENTNOR D  
DEERFIELD BEACH, FL 33442-2445

I - JAYNE REED  
450 S FORK RD  
GARDEN VALLEY, ID 83622-1028

I - JC FINCH  
299 ALLEN HOLLOW ROAD  
COOKEVILLE, TN 38501-5774

I - JEAN JENKS  
250 HILLSIDE AVENUE  
SEDONA, AZ 86336-4136

I - JEAN LEWANDOWSKI  
35485 COUNTY 39  
LAPORTE, MN 56461-4049

I - JEAN WOODMAN  
1501 ASHLAND AVE  
EVANSTON, IL 60201-4089

I - JEANETTE HOBBS  
11399 OVERSEAS HGWY, SUITE 4E  
MARATHON, FL 33050-0000

I - JEANIE WILLIAMS-WEST  
956 WYLIE  
BATON ROUGE, LA 70808-5885

I - JEANINE ISHII  
752 N LIVERMORE AVE APT 201  
LIVERMORE, CA 94551-4392

I - JEANNE MORLON  
8648 CLUB ESTATES WAY  
LAKE WORTH, FL 33467-0000

I - JEANNE PANELL  
27839 21ST ST  
HIGHLAND, CA 92346-2646

I - JEANNE PLACE  
204 N MACKINAW RD  
LINWOOD, MI 48634-9444

I - JEANNE RUBENSTEIN  
9937 ROSIER CREEK WAY  
GLEN ALLEN, VA 23060-0000

I - JEANNIE PARK  
2601 NW 57TH ST  
SEATTLE, WA 98107-3246

I - JEANNINE BREWER  
10340 ARMADILLO CT  
NEW PORT RICHEY, FL 34654-2602

I - JEANNINE BREWER  
P.O. BOX 640029  
BEVERLY HILLS, FL 34464-0029

I - JEB BROWN  
509 UNIVERSITY AVE APT 804  
HONOLULU, HI 96826-5008

I - JEFFERY GARCIA  
PO BOX 1166  
MENDOCINO, CA 95460-1166

I - JEFFERY K. MCGONAGILL  
280 SW TUNISON AVE  
CORVALLIS, OR 97333-1624

I - JEFFREY BEDRICK  
908 WOOTTON RD  
BRYN MAWR, PA 19010-2228

I - JEFFREY DUBINSKY  
16944 APACHE DRIVE  
GREENWELL SPRINGS, LA 70739-6201

I - JEFFREY STREED  
1200 N QUAKER LN  
ALEXANDRIA, VA 22302-3004

I - JEFFREY WILES  
921 11TH AVE S APT 3  
HOPKINS, MN 55343-7941

I - JEFFREY WOMBLE  
11277 N HIGHWAY 99  
LODI, CA 95240-6810

I - JEN ECKER  
8740 MANAHAN DR  
ELLCOTT CITY, MD 21043-5461

I - JENNA RYTINA  
106 TROUT CREEK CT  
LAS VEGAS, NV 89123-3456

I - JENNI MORIAN  
33 WILSON AVE #1  
BELMONT, MA 02478-2233

I - JENNIE LANGHAM  
16 TWISTED OAK TRAIL  
SHALIMAR, FL 32579-0000

I - JENNIFER APKARIAN  
7600 DUBLIN BLVD STE 105  
DUBLIN, CA 94568-2944

I - JENNIFER BAGOZZI  
2206 V ST APT 5  
SACRAMENTO, CA 95818-1747

I - JENNIFER BANOCZY  
5408 KINCHELOE DR  
LOS ANGELES, CA 90041-1415

I - JENNIFER BIRENBACH  
103 SWISS STONE CT  
CARY, NC 27513-4753

I - JENNIFER CHARRON  
422 RIDGEHILL RD  
SCHENECTADY, NY 12303-0000

I - JENNIFER FLECK  
451 W SAINT JAMES PL # 3  
CHICAGO, IL 60614-2756

I - JENNIFER FOGARTY  
36 HIGH MEADOW RD  
CAMPBELL HALL, NY 10916-2632

I - JENNIFER FOSTER  
13068 W ARKANSAS PL  
LAKEWOOD, CO 80228-3767

I - JENNIFER GAUSMAN  
19 COLLEGE DR APT 5  
VENTURA, CA 93003-3430

I - JENNIFER GRIFFITH  
748 RIDGE AVE  
STONE MOUNTAIN, GA 30083-3629

I - JENNIFER HARRIS  
3047B PINE ST  
SAN FRANCISCO, CA 94115-2485

I - JENNIFER HOYT  
482 MT EVANS RD  
GOLDEN, CO 80401-9626

I - JENNIFER HUNTER  
PO BOX 32  
JEWETT, NY 12444-0032

I - JENNIFER LANCE  
PO BOX 139  
HYAMPOM, CA 96046-0139

I - JENNIFER THERRIEN  
2790 PINE LILY LN  
COCOA, FL 32926-3620

I - JENNIFER TOMLINSON  
123 CHALLEDON CIR SW  
PATASKALA, OH 43062-8507

I - JENNY HAYES  
7038 26TH AVE NW  
SEATTLE, WA 98117-5850

I - JENNY HOFFNER  
501 DANCING FOX RD  
DECATUR, GA 30032-3977

I - JERE WILKERSON  
1680 LINDEN COURT  
CAMBRIA, CA 93428-5327

I - JEREMY CHRUPKA  
14 W CHESTNUT ST  
CHICAGO, IL 60610-0000

I - JEREMY SOHN  
1508 PARKSIDE DR  
PLAINFIELD, IL 60586-6870

I - JEREMY YATES  
3401 NE 65TH ST APT 104  
SEATTLE, WA 98115-7353

I - JEROLD KAPPEL  
1 SAN RAMON DR  
IRVINE, CA 92612-2900

I - JEROME SHEITELMAN  
62 DRYDEN ROAD  
BASKING RIDGE, NJ 07920-1946

I - JERRY ARCHIE  
4575 HALEY'S POINT RD  
VICKSBURG, MS 39183-0000

I - JERRY BOHMANN  
575 SENECA OAKS CIRCLE  
MOUNT DORA, FL 32757-0000

I - JERRY DAVIES  
1506 CRESTMONT DR  
HARRISBURG, PA 17112-2002

I - JERRY FLACH  
4 HARRISON AVENUE  
HALEDON, NJ 07508-2323

I - JERRY JOVANOVIH  
19528 SUN AIR COURT  
NORTH FORT MYERS, FL 33903-9076

I - JERRY THOMAS  
13075 NE 251 TERR  
SALT SPRINGS, FL 32134-0000

I - JESSE RITROVATO  
1161 KINGSWAY RD APT 4  
WEST CHESTER, PA 19382-5100

I - JESSEA GREENMAN  
62ND ST.  
OAKLAND, CA 94609-1245

I - JESSICA CRESSEVEUR  
2834 CHARLESTOWN RD APT 6  
NEW ALBANY, IN 47150-2593

I - JESSICA EVANS  
921 SEASIDE ST  
SANTA CRUZ, CA 95060-4227

I - JESSICA GERMANY  
3991 8TH COURT S  
BIRMINGHAM, AL 35222-3614

I - JESSICA KIRK  
5 TUDOR CITY PLACE APT. 211  
NEW YORK, NY 10017-6853

I - JESSICA KRONIKA  
227 SOUTH BLVD APT 2E  
OAK PARK, IL 60302-2750

I - JESSICA MATTOX  
128 MATTOX RD  
LEXINGTON, SC 29072-9424

I - JESSICA WHEELER  
6038 CASON WAY  
LAKELAND, FL 33813-3888

I - JESSIE SCRIBNER  
122 PINE ST  
FROSTBURG, MD 21532-2124

I - JILL DAVINE  
4047 LA SALLE AVE  
CULVER CITY, CA 90232-3207

I - JILL LEARY  
5410 SE MILWAUKIE AVE  
PORTLAND, OR 97202-4914

I - JILL RANSOM  
2161 VALE ST  
RENO, NV 89509-1839

I - JIM & MOLLY DAVIS  
2004 PHOEBE DR  
BILLINGS, MT 59105-3743

I - JIM BUSH  
803 CANTRELL ST  
WAXAHACHIE, TX 75165-3101

I - JIM DARRAR  
710 FREEHOLD RD  
JACKSON, NJ 08527-4660

I - JIM KING  
BUZZI UNICEM  
14900 INTRACOASTAL DRIVE  
NEW ORLEANS, LA 70129

I - JIM KRAUS  
202 HIGH COUNTRY RD  
BOZEMAN, MT 59718-8353

I - JIM LAROCHELLE  
2104 GRANT ST  
EVANSTON, IL 60201-2541

I - JIM REDMOND  
3700 JACKSON STREET  
SIOUX CITY, IA 51104-2042

I - JIM SALKAS  
10924 S KOSTNER AVE  
OAK LAWN, IL 60453-5752

I - JIM SWEENEY  
1773 SELO DR  
SCHERERVILLE, IN 46375-2250

I - JIM WOODWARD  
288 NE 40TH CT  
OAKLAND PARK, FL 33334-0000

I - JJ PRECIADO  
259 SHARP CIR APT 2  
ROSEVILLE, CA 95678-2433

I - JOAN ABRUZZO  
1815 215TH ST APT 4K  
BAYSIDE, NY 11360-2132

I - JOAN BREIDING  
PO BOX 170625  
SAN FRANCISCO, CA 94117-0625

I - JOAN GOLDEN FOX  
6581 HILLSIDE LA  
LAKE WORTH, FL 33462-4029

I - JOAN HEAPS  
PO BOX 68  
WHITEFORD, MD 21160-0068

I - JOAN MILES  
2412 OLD PINE TRAIL  
ORANGE PARK, FL 32003-4918

I - JOAN NAESETH  
100 W 59TH ST  
MINNEAPOLIS, MN 55419-2315

I - JOANIE PATTERSON  
PO BOX 255  
GOSHEN, AR 72735-0255

I - JOANN BOWMAN  
2838 RIVERS END ROAD  
ORLANDO, FL 32817-0000

I - JOANNA HAMIL  
210 CONGRESS ST  
BROOKLYN, NY 11201-6465

I - JOANNA KELLY  
1154 N POINSETTIA PL APT 5  
WEST HOLLYWOOD, CA 90046-5894

I - JOANNE BOLEMON  
1183D PASEO DEL MAR  
CASSELBERRY, FL 32707-0000

I - JOANNE FERGUSON  
370 IRVING PARK BLVD N14  
SHEFFIELD LAKE, OH 44054-1632

I - JOANNE GURA  
828B 96TH AVENUE N  
NAPLES, FL 34108-2466

I - JOANNE MAYER  
7440 ROYAL OAK DR  
SPRING HILL, FL 34607-0000

I - JOANNE NIEBANCK  
342 SIERRA VISTA LANE  
VALLEY COTTAGE, NY 10989-2707

I - JOANNE SCHULZ  
P.O. BOX 314  
MYAKKA, FL 34251-0000

I - JOANNE WILLIAMS  
4236-A BROOK CREEK LANE  
GREENVILLE, NC 27858-9403

I - JOBEKAH TROTTA  
PO BOX 487  
FOLSOM, CA 95763-0487

I - JOCELYN HYERS  
2021 SPARROW LN  
BLACKSHEAR, GA 31516-4677

I - JODI LOWRY  
6308 ARLINGTON AVE  
LAS VEGAS, NV 89107-0101

I - JODY WOLFE  
3931 WARRENDALE RD  
SOUTH EUCLID, OH 44118-2321

I - JODY, GLENDA & CLAIRE CORRERO  
1415 TERRACE ROAD  
CLEVELAND, MS 38732-3035

I - JOE COCO  
9 CLOVERDALE CT  
BUFFALO GROVE, IL 60089-1321

I - JOE SERPICO  
4215 E BAY DR APT 1507A  
CLEARWATER, FL 33764-6972

I - JOE SWIERKOSZ  
633 N MAPLE AVE  
PALATINE, IL 60067-2236

I - JOEL FOGEL  
WATERWATCH INTERNATIONAL  
PO BOX 22  
SOMERS POINT, NJ 08244-0022

I - JOEL JENSEN  
323 W 31ST ST APT 11  
MINNEAPOLIS, MN 55408-3014

I - JOEL PERKINS  
3117 CEDAR HL  
DENTON, TX 76209-8350

I - JOELLA MANG  
SAGEBRUSH DRIVE  
PITTSBURGH, PA 15236-0000

I - JOELYN CARR-FINGERLE  
2519 BISHOP AVE  
FREMONT, CA 94536-3837

I - JOHN & PAT BERAUD  
6 CLEVELAND ST  
HOULTON, ME 04730-0000

I - JOHN A. BURGESS, JR.  
4250 SCENIC DR  
EUGENE, OR 97404-1266

I - JOHN AND BETTY WEBER  
236 MONEE RD PO BOX 794  
PARK FOREST, IL 60466-0794

I - JOHN AND MARY MILLER  
802 CONGRESS CT  
TAMPA, FL 33613-2119

I - JOHN BARFIELD  
1435 DRUID VALLEY DR NE APT B  
ATLANTA, GA 30329-2911

I - JOHN BELL  
1624 ALABAMA AVE S  
MINNEAPOLIS, MN 55416-1424

I - JOHN C & JEWEL H SHENK  
1718 S JEFFERSON AV  
SARASOTA, FL 34239-3011

I - JOHN CARR  
359 BROOKLINE AVE  
DAYTONA BEACH, FL 32118-3311

I - JOHN COVEY  
167 LEE ROAD 103  
MARIANNA, AR 72360-7898

I - JOHN CUROTTO  
621 QUINEBAUG ROAD  
QUINEBAUG, CT 06262-0000

I - JOHN DELUCA  
2360 SW ARCHER RD. #915  
GAINESVILLE, FL 32608-0000

I - JOHN DOYLE, JR.  
SPECIAL COUNSEL  
JONES WALKER  
499 SOUTH CAPITOL STREET, SW, STE.  
WASHINGTON, DC 20003

I - JOHN ESSMAN  
PO BOX 1381  
HEALDSBURG, CA 95448-1381

I - JOHN ESTES  
1207 REGAL AVENUE  
BIRMINGHAM, AL 35213-2127

I - JOHN FARGNOLI, JR.  
1628 SUNSET COURT  
TAVARES, FL 32778-4262

I - JOHN FINORA  
6920 OAKCLIFF RD  
PENSACOLA, FL 32526-2838

I - JOHN GIEZENTANNER  
10551 W 105TH AVENUE  
WESTMINSTER, CO 80021-7326

I - JOHN HARPOLD  
260 N COLUMBUS ST  
ARLINGTON, VA 22203-2649

I - JOHN I. BLAIR  
1206 BRITT DR  
ARLINGTON, TX 76013-3617

I - JOHN KELL  
3854 TIDEWATER RD.  
NEW PORT RICHEY, FL 34655-0000

I - JOHN KOMINOSKI  
377 PRINCE AVE APT E  
ATHENS, GA 30601-2476

I - JOHN L. PETERSON  
519 W TAYLOR ST SPC 251  
SANTA MARIA, CA 93458-1042

I - JOHN LEMAUX  
1404 E 13TH ST  
AUSTIN, TX 78702-1128

I - JOHN LITZ  
11010 W 29TH AVE  
LAKEWOOD, CO 80215-7120

I - JOHN LOPEZ  
LAKE PONTCHARTRAIN BASIN  
31378 RIVER PINES DR.  
SPRINGFIELD, LA 70462

I - JOHN MAINPRIZE  
3606 CALIBRE CREEK PKWY  
ROSWELL, GA 30076-4532

I - JOHN MARCHESE  
3155 LAUREL AVE  
HENDERSON, NV 89014-3139

I - JOHN MASSMAN  
42861 N JANETTE ST  
ANTIOCH, IL 60002-7422

I - JOHN MCKEAN  
4825 SANDSTONE DR  
FORT COLLINS, CO 80526-4564

I - JOHN P. LAGUENS  
9844.CYPRESSWOOD DR., APT. 1404  
HOUSTON, TX 77070

I - JOHN PAPANDREA  
110 W 90TH ST  
NEW YORK, NY 10024-1207

I - JOHN PAYNE  
521 U ST  
BEDFORD, IN 47421-1921

I - JOHN PUBLIC  
266 WASHINGTON AVE. C-18  
BROOKLYN, NY 11205-0000

I - JOHN ROBBERT  
1755 VILLAGE PKWY  
GULF BREEZE, FL 32563-9062

I - JOHN SCOTT  
2488 CRANDALL ELLIJAY RD  
CHATSWORTH, GA 30705-5057

I - JOHN SCOTT  
1592 FRANKLIN STREET  
DENVER, CO 80218-1625

I - JOHN SEFTON  
20462 ROSE CANYON RD  
TRABUCO CANYON, CA 92678-0000

I - JOHN SMITH  
3207 ARLINGTON LOOP  
HATTIESBURG, MS 39401-7202

I - JOHN ST. JOHN  
PO BOX 880407  
STEAMBOAT SPRINGS, CO 80488-0407

I - JOHN T. DIXON  
4520 FIRE PINK TRL  
CHATTANOOGA, TN 37415-2084

I - JOHN TANNER  
2175 TASMAN  
IDAHO FALLS, ID 83404-6232

I - JOHN VARDANIAN  
30 FRANCES WAY  
WALNUT CREEK, CA 94597-0000

I - JOHN W. DAY  
LOUISIANA STATE UNIVERSITY  
11843 PORT HUDSON PRIDE RD.  
ZACHARY, LA 70791

I - JOHNNIE PROSPERIE  
851 COUNTY ROAD 4191  
NACOGDOCHES, TX 75961-7969

I - JOHNNY ASIA  
46 STATE ROUTE 214  
PHOENICIA, NY 12464-5116

I - JOHNNY BRADBERRY  
LADOTD  
P.O. BOX 94245  
BATON ROUGE, LA 70804-9245

I - JON H. CLAYTON  
355 BOWEN BEND  
WETUMPKA, AL 36093-2588

I - JON JENKINS  
177 COUNTY ROAD 48  
HOWARD, CO 81233-9660

I - JON SCOTT  
2488 CRANDALL ELLIJAY RD  
CHATSWORTH, GA 30705-5057

I - JONATHAN FISCH  
12021 WILSHIRE BLVD. SUITE 140  
LOS ANGELES, CA 90025-0000

I - JONATHAN NASH  
500 E 83RD STREET APT. 10B  
NEW YORK, NY 10028-7246

I - JONATHON ALEXANDER  
806 BUCKINGHAM DR  
SILVER SPRING, MD 20901-3615

I - JORDAN HEIMAN  
110 STONEYSIDE LN  
SAINT LOUIS, MO 63132-4124

I - JORDAN WEINER  
182 FOREST DR  
JERICHO, NY 11753-2325

I - JOSE DE ARTEAGA  
1124 6TH ST NW  
WASHINGTON, DC 20001-3629

I - JOSEPH BRAUN  
6 SPRING VALLEY RD  
PARK RIDGE, NJ 07656-1821

I - JOSEPH BUCHBINDER  
16031 LONDELIUS STREET  
16031 LONDELIUS STREET, CA 91343-0000

I - JOSEPH COCO  
9 CLOVERDALE CT  
BUFFALO GROVE, IL 60089-0000

I - JOSEPH FISCH  
6512 MOORE DRIVE  
LOS ANGELES, CA 90048-5326

I - JOSEPH HERZOG  
822 S CLAREMONT AVE  
FRESNO, CA 93727-5512

I - JOSEPH LAMANNA  
2010 RULE AVE  
MARYLAND HEIGHTS, MO 63043-2117

I - JOSEPH LEBLANC  
LDNR  
617 N. 3RD ST., 10TH FLOOR  
BATON ROUGE, LA 70804

I - JOSEPH LITE  
223 NORTHWOOD DR  
YELLOW SPRINGS, OH 45387-1926

I - JOSEPH MERKELBACH  
2050 E MCCORD STREET  
CENTRALIA, IL 62801-6726

I - JOSEPH NEIMAN  
3220 89TH ST  
EAST ELMHURST, NY 11369-2150

I - JOSEPH NERONE  
5290 6 MILE LAKE RD  
EAST JORDAN, MI 49727-9279

I - JOSEPH PAYNE  
5247 S 15TH PL  
MILWAUKEE, WI 53221-3865

I - JOSEPH SCANLAN  
175 PIKE ROAD TRAIL  
PIKE ROAD, AL 36064-2521

I - JOSEPH SEBASTIAN  
4110 EDISON AVE  
SACRAMENTO, CA 95821-2827

I - JOSEPH SHULMAN  
6249 ROMO ST  
SAN DIEGO, CA 92115-6932

I - JOSEPH WERZINSKI  
208 DEERFIELD CT  
NEW HOPE, PA 18938-1075

I - JOSEPH WIESNER  
2005 N COMMERCE ST  
MILWAUKEE, WI 53212-3472

I - JOSHUA FORSTER  
9062 WASHINGTON ST  
SAVAGE, MD 20763-9626

I - JOY LADZINSKI  
1324 E SAN RAFAEL ST  
COLORADO SPRINGS, CO 80909-3716

I - JOYCE CUMMINGS  
1212 S 3RD ST  
AMES, IA 50010-6932

I - JOYCE PLOCH  
1104 N MARSHALL STREET APT. 202  
MILWAUKEE, WI 53202-3302

I - JOYCE RABY  
5624 MURDOCK AVENUE  
SARASOTA, FL 34231-2521

I - JR SUMMERS  
9422 W BRIGHTWAY CIR  
RICHMOND, VA 23294-5562

I - JUANITA ZEINSTRA  
6614 ROGUEVIEW CT NE  
BELMONT, MI 49306-9515

I - JUDITH CANEPA  
716 E 11TH ST # 2P  
NEW YORK, NY 10009-4234

I - JUDITH GREIL  
4121 W TETAKUSIM RD  
TUCSON, AZ 85746-9784

I - JUDITH HINDS  
156 RHODA AVE  
NUTLEY, NJ 07110-1422

I - JUDITH SHEMATEK  
119 CHISMAN LNDG  
SEAFORD, VA 23696-2345

I - JUDITH SMITH  
2712 GRANDE VISTA AVE  
OAKLAND, CA 94601-1320

I - JUDITH VINCENT  
191 PICTURE ST  
INDEPENDENCE, OR 97351-2244

I - JUDITH VOGELSANG  
1730 N. VISTA ST.  
1730 N. VISTA ST., CA 90046-0000

I - JUDY AHERN  
71 OAK ST  
NOVATO, CA 94945-3549

I - JUDY HEINLE  
200 W 16TH ST  
NYC, NY 10011-0000

I - JULENE FREITAS  
472 JEAN ST  
OAKLAND, CA 94610-2601

I - JULI KRING  
12400 BROOKGLADE CIR UNIT 42  
HOUSTON, TX 77099-1381

I - JULIA GABELL  
, FL 34667-0000

I - JULIA HYDE  
1755 FRANKLIN STREET, APT. 406  
SAN FRANCISCO, CA 94109-0000

I - JULIA PHILLIPS  
1181 ALLEN AVE  
ERIE, CO 80516-6917

I - JULIAN SASSE  
202 PARK RIDGE AVE  
TAMPA, FL 33617-4141

I - JULIANN RULE  
35002 115TH AVE  
AVON, MN 56310-9636

I - JULIANNA WESOLEK  
171 TRINITY PLACE  
WEST HEMPSTEAD, NY 11552-1625

I - JULIE ALAIMO  
8515 13TH AVE NW  
8515 13TH AVE NW, WA 98117-3402

I - JULIE BROF  
4116 MERIDIAN AVE N  
SEATTLE, WA 98103-8308

I - JULIE FEELEY  
, FL 33701-0000

I - JULIE FORD  
16222 MONTEREY LN SPC 223  
HUNTINGTON BEACH, CA 92649-2244

I - JULIE HILL  
1620 SW 12TH ST  
MIAMI, FL 33135-5322

I - JULIE MCKEE  
705-925 ELYSIAN VALLEY RD  
JANESVILLE, CA 96114-9699

I - JULIE OBERMEYER  
3029 POLK ST NE  
MINNEAPOLIS, MN 55418-2127

I - JULIE RODGERS  
7406 NE 145TH PL  
KENMORE, WA 98028-4923

I - JULIE RUTH  
124 GUM ST  
NEW LENOX, IL 60451-1435

I - JULIE SKELTON  
40900 BEMIS RD  
BELLEVILLE, MI 48111-9159

I - JULIE SMITH  
1048 BAY OAKS DR  
LOS OSOS, CA 93402-4006

I - JULIE STUART  
585 LAKESHORE DR  
BERKELEY LAKE, GA 30096-3035

I - JULIE WHITACRE  
659 E LAUREL RD  
BELLINGHAM, WA 98226-9728

I - JULIET W. ALDRON  
1241 COOLIDGE AVE  
HERSHEY, PA 17033-1224

I - JULIET WALDRON  
1241 COOLIDGE AVE  
HERSHEY, PA 17033-1224

I - JUNE LOGIE  
6740 PANSY DR  
MIRAMAR, FL 33023-4863

I - JUNE MACARTHUR  
1045 HILLANDALE DR E  
PORT ORCHARD, WA 98366-3830

I - JUSTIN TAYLOR  
1901 E SUNSET DR  
BELLINGHAM, WA 98226-5606

I - K SHORT  
58 PROSPECT ST  
PORT CHESTER, NY 10573-3826

I - KAHLE BRANDT  
215 S 5TH ST  
HENDERSON, MN 56044-9718

I - KALEA GUSTAFSON  
1270 PARKWAY  
WATERFORD, MI 48328-0000

I - KAREN ANDERSON  
123 MAPLE DR  
ANNAPOLIS, MD 21403-3925

I - KAREN AUSTIN  
PO BOX 3423  
EL PASO, TX 79923-3423

I - KAREN BURROUGHS  
4404 ATHERTON WAY, NW  
ALBUQUERQUE, NM 87120-0000

I - KAREN FEDOROV  
8044 TACKETT LN  
BEALETON, VA 22712-7844

I - KAREN GLAUBER  
4920 LUCERNE LAKES BLVD  
LAKE WORTH, FL 33467-0000

I - KAREN HEESCH  
1826 ROWLAND DR  
ODESSA, FL 33556-3658

I - KAREN KIMBROUGH  
2902 BIXBY AVE NE  
BEMIDJI, MN 56601-4314

I - KAREN KORTSCH  
13279 W HEIDEN CIR  
LAKE BLUFF, IL 60044-2909

I - KAREN LINAREZ  
5249 MANZANITA AVE APT 3  
CARMICHAEL, CA 95608-0544

I - KAREN MALLONEE  
6311 WINNER AVE  
BALTIMORE, MD 21215-3118

I - KAREN MARTELLARO  
8210 CAENEN LAKE RD  
LENEXA, KS 66215-2557

I - KAREN RUBINO  
113 ICELAND DR  
HUNTINGTON STATION, NY 11746-4231

I - KAREN SALZGEBER  
5364 REGENCY DR  
CLEVELAND, OH 44129-5961

I - KAREN SANDS  
30432 WILHELMINA WAY  
BIG PINE KEY, FL 33043-5138

I - KAREN SHANE  
4375 SOUTHWEST 13TH STREET  
MIAMI, FL 33134-2718

I - KAREN WINK  
RR 1 BOX 166  
DE KALB, MS 39328-0000

I - KAREN ZIOMEK VAYDA  
98 CLARK ST  
EASTHAMPTON, MA 01027-2336

I - KARI KNABE  
21525 COUNTY ROAD H E  
WESTON, MO 64098-9767

I - KARI WISEBAKER  
16419 MANGO RIDGE CT  
HUMBLE, TX 77396-3960

I - KARRIE TORRES  
1147 US ROUTE 209  
CUDDEBACKVILLE, NY 12729-5330

I - KARYN HANNIGAN  
38 THE GARRISON  
DOVER, NH 03820-4475

I - KAT RAISKY  
40 NEWPORT PKWY APT 901  
JERSEY CITY, NJ 07310-1538

I - KATE CROWLEY  
82119 BENNETT RD  
WILLOW RIVER, MN 55795-3079

I - KATE E. ROBINSON  
P O BOX 2339 3785 N YUMA DR  
CHINO VALLEY, AZ 86323-4961

I - KATHARINE BUTTERWORTH  
15 CHARLES ST  
NEW YORK, NY 10014-3011

I - KATHARINE EMORY  
89 WOOD PL  
BLOOMINGDALE, NY 07403-1426

I - KATHERINE BABIAK  
99 BANK ST  
NEW YORK, NY 10014-2109

I - KATHERINE FULKERSON  
3158 PATTY LN  
MIDDLETON, WI 53562-1651

I - KATHERINE GREEN  
1040 DREXEL DR  
BIRMINGHAM, AL 35209-0000

I - KATHERINE SCHWIRZINSKI  
5405 BRANDON RD  
TOLEDO, OH 43615-0000

I - KATHERINE TWEEDALE  
16445 COLLINSON AVE  
EASTPOINTE, MI 48021-3023

I - KATHI ELLSWORTH  
448 SHADYGLEN LN  
SAN DIMAS, CA 91773-1035

I - KATHLEEN BEHRENS  
3741 JOHNS ST  
MADISON, WI 53714-2825

I - KATHLEEN COLE  
16404 FLORENCE CHAPEL PIKE  
CIRCLEVILLE, OH 43113-9553

I - KATHLEEN CORBY  
58 POPLAR AVE  
PINE PLAINS, NY 12567-0000

I - KATHLEEN EATON  
1035 SCHAGRIN DR  
MIDDLETOWN, DE 19709-9699

I - KATHLEEN GARNESS  
102 S. LATHROP AVE.  
102 S. LATHROP AVE., IL 60130-0000

I - KATHLEEN MORRIS  
181 E BEECHWOLD BLVD  
COLUMBUS, OH 43214-2107

I - KATHLEEN O'DONNELL  
455 S 48TH ST  
PHILADELPHIA, PA 19143-1728

I - KATHLEEN PACHECO  
956 RYAN COURT  
VENICE, FL 34293-0000

I - KATHLEEN PALMER  
PO BOX 1381  
HEALDSBURG, CA 95448-1381

I - KATHLEEN TURNER  
324 S LOCUST ST APT 8  
GREEN BAY, WI 54303-2144

I - KATHRYN BOUCHER  
PO BOX 813  
RIDGEFIELD, CT 06877-0813

I - KATHRYN CARROLL  
2645 CAMINO LENADA  
OAKLAND, CA 94611-0000

I - KATHRYN DALTON  
973 W 2ND AVE  
COLUMBUS, OH 43212-3609

I - KATHRYN GALLAGHER  
76 WOODSIDE DRIVE  
SAN ANSELMO, CA 94960-1341

I - KATHRYN STOVER  
9994 85TH WAY  
LARGO, FL 33777-1930

I - KATHY B. NEWMAN  
8414 TIMBER FAIR  
SAN ANTONIO, TX 78250-4163

I - KATHY KERKES  
643 BUCKS HILL ROAD  
SOUTHURY, CT 06488-1952

I - KATHY KUYPER  
PO BOX 764  
GRAND JUNCTION, CO 81502-0764

I - KATHY OSTRAM  
19347 LINDEN STREET  
SONOMA, CA 95476-6347

I - KATHY RUOPP  
9631 S VANDERPOEL AVE  
9631 S VANDERPOEL AVE, IL 60643-1229

I - KATHY SHIMATA  
3453 PAWAINA ST.  
HONOLULU, HI 96822-1356

I - KATY FLANAGAN  
2001 CANAL ST  
BOISE, ID 83705-4822

I - KAY FREEMAN  
520 RICHBURG ROAD  
PURVIS, MS 39475-3318

I - KAY GALLIN  
10364 ALMAYO AVE  
LOS ANGELES, CA 90064-2680

I - KAY PAUL  
2507 1ST ST, APT E  
IND RKS BCH, FL 33785-0000

I - KAY SHRADER  
PO BOX 511  
BIG BEND, WI 53103-0000

I - KAY YEUELL  
220 WHITE OAK CIRCLE  
MAITLAND, FL 32751-0000

I - KEITH GAGOMIROS  
821 F ST  
SACRAMENTO, CA 95814-1305

I - KEITH KOLISCHAK  
133 QUEENSBURY RD  
WINSTON SALEM, NC 27104-3537

I - KEITH TEETER  
604 ESSEX PLACE  
EULESS, TX 76039-0000

I - KELLE PEEPLEZ  
255 CARRIAGE CIRCLE DR APT 206  
PONTIAC, MI 48342-3367

I - KELLEY UPDIKE  
2041 WHITNEY NICOLE LN  
JACKSONVILLE, FL 32216-3189

I - KELLY DREY-HOUCK  
921 WHITE AVE  
MULLENS, WV 25882-1544

I - KELLY GARBATO  
19400 MISSION ROAD  
STILWELL, KS 66085-9117

I - KELLY KARKI  
15 NEW SUDBURY ST RM 1375  
BOSTON, MA 02203-0000

I - KELLY LYON  
2415 ANDREW DR  
SUPERIOR, CO 80027-8202

I - KELLY O'DONNELL  
511 S EL MOLINO AVE APT 16  
PASADENA, CA 91101-4205

I - KELLY REICE  
329 KENILWORTH AVE  
MOORESTOWN, NJ 08057-2317

I - KELLY RILEY  
704 ALISON AVE  
MECHANICSBURG, PA 17055-6652

I - KELLY TVEIT  
447 BRIDALWOOD DR  
MANDEVILLE, LA 70448-0000

I - KEN AND VAL HANSEN  
2200 S 29TH ST APT 54N  
GRAND FORKS, ND 58201-5837

I - KEN DUFFY  
BEM SYSTEMS, INC.  
8550 UNITED PLAZA, SUITE 702  
BATON ROUGE, LA 70809

I - KEN DUNCAN  
5000 E RIDGE DR S  
FORT COLLINS, CO 80526-4620

I - KEN ODINET  
REP. DIST 103 - STATE REPRESENTATIVE  
6535 BURGUNDY STREET  
ARABI, LA 70032

I - KENNETH & SANDY GARBER  
2405 S HOLT AV  
LOS ANGELES, CA 90034-2126

I - KENNETH BIRD  
131 ARAGON AVE  
ROCHESTER, NY 14622-1616

I - KENNETH BOWMAN  
2838 RIVERS END RD  
ORLANDO, FL 32817-2949

I - KENNETH CAROLUS  
447 CHERRY DR  
DAYTON, OH 45405-3011

I - KENNETH LINN  
7 ELGIN PL. - 711  
DUNEDIN, FL 34698-0000

I - KENNETH PAYNE  
10817 NELLE AVE NE  
ALBUQUERQUE, NM 87111-3940

I - KENT STROBEL  
1041 SINCLAIR DR  
STOWE, VT 05672-4156

I - KERMIT CUFF, JR.  
338 MARIPOSA AVE APT 2  
MOUNTAIN VIEW, CA 94041-1160

I - KERRY STICHWEH  
186 FRANKLIN STREET 5F  
NEW YORK, NY 10013-0000

I - KEVIN BRANSTETTER  
901 N PLEASANT AVE  
LODI, CA 95240-1129

I - KEVIN CLARK  
850 POINTE PACIFIC APT 1  
DALY CITY, CA 94014-3409

I - KEVIN CLIFFORD  
8718 ORCHID DR  
SEMINOLE, FL 33777-0000

I - KEVIN HOBAN  
126 E ACAPULCO DR  
SOUTH PADRE ISLAND, TX 78597-7017

I - KEVIN MERWIN  
2329 W 35TH PL # 9  
CHICAGO, IL 60609-1004

I - KEVIN MUELLER  
1455 LINN ST  
STATE COLLEGE, PA 16803-3028

I - KEVIN MURPHY  
1055 S AVON RD  
DEARY, ID 83823-9637

I - KEVIN PERKINS  
PO BOX 403673  
MIAMI BEACH, FL 33140-1673

I - KEVIN THOMAS  
2911 GLACIER ST  
SACRAMENTO, CA 95821-4718

I - KIM BAUER  
432 E LINGARD ST  
LANCASTER, CA 93535-3025

I - KIM JOHNSON  
PO BOX 1117  
WILSON, WY 83014-1117

I - KIM JOHNSON  
468 KINGS HWY  
WYANDOTTE, MI 48192-2410

I - KIM MALEK  
6139 SE 13TH AVE  
PORTLAND, OR 97202-5329

I - KIMBERLY LOWE  
612 SYCAMORE MILL DR  
GAHANNA, OH 43230-2262

I - KIMBERLY MILLER  
1170 PENHURST DR  
FLORISSANT, MO 63033-6038

I - KIMBERLY PETERSON  
127 RAILROAD AVE SPC 17  
CLOVERDALE, CA 95425-3762

I - KIRBY SOMMERS  
PO BOX 237073  
NEW YORK, NY 10023-0000

I - KIRK MAUST  
5919 21ST ST. E  
BRADENTON, FL 34203-5066

I - KIRK RHOADS  
301 COOPER ST  
MOUNTAIN HOME, AR 72653-4270

I - KIRSTIE ZAKRAJSEK  
720 CHERRY STREET  
PANAMA CITY, FL 32401-3854

I - KIRSTIN LITCHFIELD  
3118 SE 8TH AVE  
PORTLAND, OR 97202-2505

I - KIRSTIN WRIGHT  
6259 HAMPTON DR. N  
SAINT PETERSBURG, FL 33710-4833

I - KONSTANZE HICKEY  
404 WOODLEY WOODS  
WINNETKA, IL 60093-3720

I - KRISTEN DRESSLER  
33 SOUTH RONKS ROAD  
RONKS, PA 17572-0000

I - KRISTEN RIORDAN  
535 DANTON LN  
BIRMINGHAM, AL 35210-2853

I - KRISTIN HANSON  
PO BOX 201107  
ANCHORAGE, AK 99520-1107

I - KRISTIN OTTO  
25 HILLSIDE AVE  
NEW YORK, NY 10040-2307

I - KRISTIN USHER  
1218 DUNNDALE ST  
LEHIGH ACRES, FL 33936-4816

I - KRISTINE DEMPZE  
1121 16TH ST N  
WISC RAPIDS, WI 54494-3038

I - KYLE GRACEY  
201 NADONA AVE  
JOHNSTOWN, PA 15904-2417

I - KYLE TUCKER  
RR 1 # 54  
ORONOGO, MO 64855-9801

I - L. M. DRUCKER  
6546 HALEY DR  
COLUMBIA, SC 29206-1015

I - L. MOJICA  
9236 TRUE AVE  
DOWNEY, CA 90240-2547

I - L.D. STROH  
CG SECTOR NEW ORLEANS  
U.S. COAST GUARD  
201 HAMMOND HIGHWAY  
METAIRIE, LA 70005

I - LACEE GONZALEZ  
5238 EL CLARO CIRCLE  
WEST PALM BEACH, FL 33415-0000

I - LANA SCHAFFER  
1458 UPPER AFTON RD  
SAINT PAUL, MN 55106-6835

I - LARA COMPTON  
611 WESTVIEW TERRACE CIR  
SEALY, TX 77474-3116

I - LARRY DENNIS  
35170 GARCIA ST  
UNION CITY, CA 94587-5206

I - LARRY LAITNER  
801 PINECREST TER  
ASHLAND, OR 97520-3460

I - LARRY LYONS  
1714 N ROSE ST  
BURBANK, CA 91505-1712

I - LARRY MIX  
106 CAMELLIA DR  
LEESBURG, FL 34788-0000

I - LAURA BILGER  
8120 COUNTY BRIDGE RD  
SLATINGTON, PA 18080-3663

I - LAURA FELTON  
1709 VINEYARD DR #6  
WILSON, NC 27893-0000

I - LAURA GEIGER  
202 12TH ST SE  
AUBURN, WA 98002-6647

I - LAURA HERNDON  
125 N BRIGHTON ST APT 231  
BURBANK, CA 91506-2356

I - LAURA HUDDLESTONE  
5222 18TH AVE SW  
SEATTLE, WA 98106-1549

I - LAURA KRACUM  
1555 N ASTOR ST APT 41E  
CHICAGO, IL 60610-5783

I - LAURA KREBS  
517 HALFMOON ST  
BELLEFONTE, PA 16823-1211

I - LAURA MCKEE  
9582 TORTOISE LANE  
MICCO, FL 32976-3329

I - LAURA PHILLIPS  
635 PARK DR  
OXFORD, MS 38655-2824

I - LAURA SAUNDERS  
65 HIGHLAND AVE  
FITCHBURG, MA 01420-0000

I - LAURA SHOLTZ  
384 FOGLER RD  
EXETER, ME 04435-3409

I - LAUREL COVINGTON  
207 ORANGE DR  
LUTZ, FL 33548-0000

I - LAUREL ECKERT  
4801 ROANOKE PKWY APT 506  
KANSAS CITY, MO 64112-0000

I - LAUREN CHIONG  
8 CRUM LEDGE LN  
SWARTHMORE, PA 19081-1301

I - LAURI PEACOCK  
718 N. BURK  
HOBBS, NM 88240-4936

I - LAURIE BERINGER  
22455 LAKE RD  
ROCKY RIVER, OH 44116-1056

I - LAURIE BROWN  
3861 MISTY BLEAU DR  
POWDER SPRINGS, GA 30127-2351

I - LAURIE MCLAUGHLIN  
4075 HILLDALE RD  
SAN DIEGO, CA 92116-2015

I - LAURIE MEYER  
221 NE FREMONT ST APT 107  
PORTLAND, OR 97212-2066

I - LAURIE SUDOL  
580 ANTELOPE DR  
CLARKDALE, AZ 86324-3612

I - LAURIE ZALESKI  
9612 KINO ST  
DIAMONDHEAD, MS 39525-0000

I - LAWRASON CLEMENT  
106 1ST ST E APT 111  
TIERRA VERDE, FL 33715-0000

I - LAWRENCE CROWLEY  
441 PHEASANT RUN  
LOUISVILLE, CO 80027-1141

I - LAWRENCE FISCHMAN  
153 PARK ROW STE B  
BRUNSWICK, ME 04011-2053

I - LAWRENCE RICHARDS  
2451 PALESTA DR  
TRINITY, FL 34655-5160

I - LAWRENCE TOUSH  
132 W MAIN PO BOX 368  
MARCELLUS, MI 49067-0368

I - LAWRENCE TURNER  
214 S SAN JOSE DR  
GLENORA, CA 91741-3732

I - LAWRENCE WARNER  
68 MONTROSE DR PO BOX 896  
FISHERSVILLE, VA 22939-0896

I - LEANN MUNSON  
11024 GREENAIRE DRIVE  
TAMPA, FL 33624-4881

I - LEE & CHARLOTTE TERBOT  
327 CURIA CREEK LN  
CAVE CITY, AR 72521-9084

I - LEE & GEORGE HAINES  
8 BARBERRY LANE  
MADISON, CT 06443-3241

I - LEE BASNAR  
1900 E KACHINA TRL  
SIERRA VISTA, AZ 85650-8703

I - LEE FRANK  
14648 TUSTIN ST  
SHERMAN OAKS, CA 91403-4103

I - LEE GIBSON  
5924 E UNIVERSITY BLVD APT 209  
DALLAS, TX 75206-4665

I - LEE PETTENDER  
21 DIAMOND J ROAD  
SEIAD VALLEY, CA 96086-0675

I - LEE SUTTON  
231 LILAC ST  
RIDGECREST, CA 93555-0000

I - LEIGH SAVOYE  
20 ONDAORA PKWY  
HIGHLAND FALLS, NY 10928-4011

I - LEIGHANNE BOONE  
12929 WATER POINT BLVD  
WINDERMERE, FL 34786-0000

I - LEO RICHARDSON  
107 STELLA STREET  
METAIRIE, LA 70005

I - LEON BIGGS  
9317 W SR 114  
RENSSELAER, IN 47978-0000

I - LEON HAMMER  
8620 NW 13TH ST #216  
GAINESVILLE, FL 32653-0000

I - LEONARD CONLY  
1252 GILMAN ST  
BERKELEY, CA 94706-2353

I - LEONARD HESS  
316 OLD DISTILLERY RD  
STAHLSTOWN, PA 15687-1100

I - LESA HANSON  
845 LAKELAND AVE.  
NAPLES, FL 34110-1319

I - LESLEY HUNT  
236 WARWICK DR  
WALNUT CREEK, CA 94598-3213

I - LESLEY ROYCE  
4520 FULTON RD  
JACKSONVILLE, FL 32225-0000

I - LETITIA YARBOROUGH  
7517 MASON LANDING RD  
WILMINGTON, NC 28411-7225

I - LIANE KIRBY  
4704 W AZEELE STREET  
TAMPA, FL 33609-2509

I - LIANE RUSSELL  
130 TABOR RD  
OAK RIDGE, TN 37830-5537

I - LIDIA BELKNAP  
7 HERBING LANE  
KENTFIELD, CA 94904-2812

I - LIGIA VARGAS  
16292 SOUTHWEST 66TH STREET  
FORT LAUDERDALE, FL 33331-4630

I - LILA MCCAULEY  
3040 ASHLEY DR.  
CONWAY, AR 72034-0000

I - LILLIAN KENNEY  
1701 PINEHURST RD. #20-C  
DUNEDIN, FL 34698-0000

I - LILY LEUNG  
1106 BISMARCK LN  
ALAMEDA, CA 94502-6936

I - LINDA ASHTON  
2618 ECTOR RD N  
JACKSONVILLE, FL 32211-3862

I - LINDA AUSTIN  
2109 JESSIE PLACE  
FORT WORTH, TX 76134-2728

I - LINDA BACH  
504 FRANCES MCQUEEN DR  
VILAS, NC 28692-9670

I - LINDA BARROWS  
16735 RIDGEVIEW DRIVE  
BROOKFIELD, WI 53005-1353

I - LINDA BAUMGARTEN  
170 WEA  
NEW YORK, NY 10023-5451

I - LINDA BURIANEK  
3443 CLIME RD  
COLUMBUS, OH 43223-3438

I - LINDA CHVARAK  
3211 SUNDANCE CIRCLE  
NAPLES, FL 34109-0000

I - LINDA COX  
1073 GREENWOOD LN  
LEWISVILLE, TX 75067-5304

I - LINDA DALLES  
50 OLCOTT WAY  
RIDGEFIELD, CT 06877-3934

I - LINDA DAY  
4224 LEHIGH AVE  
HOUSTON, TX 77005-1935

I - LINDA GAZZOLA  
500 HIGH CLIFFE LN  
TARRYTOWN, NY 10591-0000

I - LINDA GLYNN  
2739 VISSCHER PLACE  
ALTADENA, CA 91001-0000

I - LINDA HOWE  
66 SELWYN RD  
BELMONT, MA 02478-3556

I - LINDA HUBBLE  
10950 JEFFERSON HWY APT C24  
NEW ORLEANS, LA 70123-1776

I - LINDA LYERLY  
825 MUNEVAR RD  
CARDIFF BY THE SEA, CA 92007-1332

I - LINDA QUINET  
21 EST 10TH 12B  
NEW YORK, NY 10003-5922

I - LINDA RICKS  
112 WILLOW ST  
BEAUFORT, NC 28516-1735

I - LINDA SCHEEREN  
410 NORTHWEST 60TH COURT  
MIAMI, FL 33126-4628

I - LINDA SEGALL ANABLE  
13805 CALVERT ST  
VAN NUYS, CA 91401-2910

I - LINDA SESSINE  
6900 POST OAK DR  
WEST BLOOMFIELD, MI 48322-3839

I - LINDA SHERK  
PO BOX 111  
VANDIVER, AL 35176-0111

I - LINDA VANDERVEEN  
4327 BESSEMER ROAD  
BROOKSVILLE, FL 34602-0000

I - LINDA WILLIAMS  
33 SWEETSER TER  
LYNN, MA 01904-2608

I - LINDSAY MARTIN  
1300 S ARLINGTON RIDGE RD APT 307  
ARLINGTON, VA 22202-1932

I - LISA BALACH  
510 TEMONA DR  
PITTSBURGH, PA 15236-4275

I - LISA BROHL  
PO BOX 155  
PUT IN BAY, OH 43456-0155

I - LISA COPELAND  
118 LINCOLN AVE APT 1F  
FALL RIVER, MA 02720-3638

I - LISA CRUM-FREUND  
356 FAIRBREEZE DR  
PORT TOWNSEND, WA 98368-9584

I - LISA D'ANTONIO  
3300 PORT ROYALE DR N. # 108  
FORT LAUDERDALE, FL 33308-0000

I - LISA GARCIA  
346 SANDALWOOD LN  
SAN ANTONIO, TX 78216-6841

I - LISA HAUGEN  
15225 COUNTRY LN  
KEARNEY, MO 64060-8004

I - LISA LANGCAKE  
7268 CODDIN LN  
FORT MILL, SC 29715-7175

I - LISA MARIOTTI  
49 S MAIN ST  
RANDOLPH, VT 05060-1348

I - LISA MASTRO  
2051 SENASAC AVENUE  
LONG BEACH, CA 90815-3308

I - LISA RICE-WILLIAMS  
3101 PALM TRACE LANDINGS DR #1308  
DAVIE, FL 33324-0000

I - LISA TORRIERI  
417 MONROE ST  
PHILADELPHIA, PA 19147-3117

I - LISA TREESE  
4000 OAK STREET #17  
KANSAS CITY, MO 64111-0000

I - LISA WONG  
7751 10TH AVE SW  
SEATTLE, WA 98106-2021

I - LISETTE RUCH  
13622 7TH AVE CIRCLE NE  
BRADENTON, FL 34212-0000

I - LIZ LAUDADIO  
2215 WINDSOR DRIVE  
MERRITT ISLAND, FL 32952-0000

I - LIZ MURPHY  
47 CRESCENT PL  
MONROE, CT 06468-1608

I - LIZ RYAN COLE  
VERMONT LAW SCHOOL CHELSEA  
SOUTH ROYALTON, VT 05068-0096

I - LIZ SIMPSON  
1410 14TH ST. N  
SAINT PETERSBURG, FL 33704-4114

I - LLOYD EASTERDAY  
28944 HUBBARD ST. LOT 75  
LEESBURG, FL 34748-8377

I - LLOYD SMITH  
503 N WASHINGTON ST PO BOX 351  
ATKINSON, IL 61235-0351

I - LOIS HARFORD  
14051 EARIE LN  
POWAY, CA 92064-4803

I - LOIS PAGE  
7349 STARFISH DR  
SARASOTA, FL 34231-5429

I - LOIS ROBIN  
4701 NOVA DR  
SANTA CRUZ, CA 95062-4523

I - LONNA RICHMOND  
45 SUNSET WAY  
MUIR BEACH, CA 94965-9757

I - LORA SMITH  
PO BOX 307  
BUNNELL, FL 32110-0000

I - LORA TAYLOR  
728 TURNER DR NE  
ALBUQUERQUE, NM 87123-2233

I - LOREL KAPKE  
17003 PARK AVENUE  
SONOMA, CA 95476-8505

I - LOREN CLIFT  
4120 DAY DR  
SAN MARCOS, TX 78666-9540

I - LOREN HANSEN  
311 PARK DR. BOX 87  
KINGSLEY, IA 51028-0000

I - LOREN WIELAND  
19021 ACORN RD.  
FT. MYERS, FL 33967-3302

I - LORENE SARNE  
4 MONROE ST  
ROCKVILLE, MD 20850-2541

I - LORETTA VIVES  
1501 SADDLE LN  
BARTLESVILLE, OK 74006-5745

I - LORI BLAUWET  
1216 9TH AVE NW  
ROCHESTER, MN 55901-6761

I - LORI C.  
3312 MILISSA ST  
VIRGINIA BEACH, VA 23464-1722

I - LORI KESSLER  
PO BOX 1916  
SAN PEDRO, CA 90733-1916

I - LORI MARCH  
501 DIXON AVE APT 1  
ROCK FALLS, IL 61071-1880

I - LORI PENICHE  
12660 HILLCREST  
DALLAS, TX 75230-2032

I - LORI PIPER  
1460 21ST STREET SOUTHWEST  
NAPLES, FL 34117-4314

I - LORNE BEATTY  
573 MAXFIELD RD  
BRIGHTON, MI 48114-9649

I - LORRAINE KLEIN  
PO BOX 850  
ALTOONA, FL 32702-0000

I - LORRAINE MASON  
395 LENOVER HILL RD  
PARKESBURG, PA 19365-1603

I - LORRAINE THOMPSON  
126 COTTAGE ST  
MIDDLETOWN, NY 10940-3705

I - LOUIS RHODES  
PO BOX 858  
BLUFFTON, SC 29910-0858

I - LOUISE BOYD  
1517 ASHLEY WOOD CIRCLE  
BIRMINGHAM, AL 35216-3051

I - LOUISE MANN  
10201 RIVER RD  
PETERSBURG, VA 23803-1048

I - LOUISE MC GOWAN  
9690 ASTI LA  
LAKE WORTH, FL 33467-7036

I - LOUISE TERZIA  
2200 WEST RD  
LITTLE ROCK, AR 72207-0000

I - LOWELL SMITH  
2548 CRUMS CHURCH RD  
BERRYVILLE, VA 22611-2016

I - LUANNE SERRATO  
1910 BURRY CIRCLE DRIVE  
CREST HILL, IL 60403-2004

I - LUCI UNGAR  
3 SEMINOLE AVE.  
CORTE MADERA, CA 94925-0000

I - LUCY MCCRONE  
501 E 32ND ST  
CHICAGO, IL 60616-0000

I - LUKE ASBURY  
1744 BROCKTON AVE APT 202  
LOS ANGELES, CA 90025-3897

I - LUKE LUNDEMO  
597 WARRIOR TRAIL  
JACKSON, MS 39216-0000

I - LUKE OURADNIK  
824 3ND ST N  
FARGO, ND 58104-0000

I - LUKE SHAFNISKY  
5220 PENNSYLVANIA ST  
WHITEHALL, PA 18052-2114

I - LURA IRISH  
PO BOX 578  
LAKEBAY, WA 98349-0578

I - LYDIA GARVEY  
429 S 24TH ST  
CLINTON, OK 73601-3713

I - LYLE BROWN  
4504 SUN DEVILS AVENUE  
BAKERSFIELD, CA 93313-5430

I - LYNDA KEY  
5569 E SAGINAW WAY  
FRESNO, CA 93727-7538

I - LYNDA LEIBOWITZ  
57 CROWS NEST RD APT 3  
TUXEDO PARK, NY 10987-4265

I - LYNDA LEIXNER  
1045 SOUTHWEST 13TH STREET  
BOCA RATON, FL 33486-5404

I - LYNDA TURLEY  
10002 SWEET GUM LN  
BAYTOWN, TX 77521-4940

I - LYNDE WILLIAMS  
2814 COUNTRY CLUB RD  
DENTON, TX 76210-8602

I - LYNDESEY BAUER  
352 NW 46TH ST  
SEATTLE, WA 98107-4441

I - LYNN COFFEY-EDELMAN  
27 FOXWOOD DR E  
HUNTINGTON STATION, NY 11746-2128

I - LYNN ELLIOTT  
2614 WOODMONT DR  
DURHAM, NC 27705-2760

I - LYNN MACDONALD  
27321 VIA OLMO  
MISSION VIEJO, CA 92691-2249

I - LYNN PITNEY  
14803 SHEILA ANN DR  
HUDSON, FL 34669-0000

I - LYNNE BANTA  
1443 N AVENUE 49  
1443 N AVENUE 49, CA 90042-1615

I - M ABDELNOUR  
350 CROSSING BLVD. APT. # 808  
ORANGE PARK, FL 32073-5668

I - M ERICKSON  
PO BOX 2448  
MONTEREY, CA 93942-2448

I - M HOWELL  
2600 NE MINNEHAHA ST  
VANCOUVER, WA 98665-1300

I - M. ADDISON  
6305 TOCOBEGA DRIVE  
LAKELAND, FL 33813-0000

I - M. FISCHER  
3400 NW 67TH ST  
GAINESVILLE, FL 32606-5747

I - M. ST. VINCENT  
7648 INMAN AV S  
COTTAGE GROVE, MN 55016-5103

I - M.H. WILKINSON  
10817 BREWINGTON ROAD  
RICHMOND, VA 23238-4109

I - MACKIE JACKSON  
PO BOX 343  
LEWISVILLE, NC 27023-0343

I - MADELINE ELSEA  
1706 ALTA VISTA DR  
BAKERSFIELD, CA 93305-0000

I - MAGGIE DEVANE  
AP 204A 200 CAROLINA AV  
WINTER PARK, FL 32789-6422

I - MAGGIE DEVANE  
4325 S ATLANTIC AVENUE APT 204A  
NEW SMYRNA BEACH, FL 32169-0000

I - MAILIE LA ZARR  
2805 YOSEMITE BLVD APT 178  
MODESTO, CA 95354-4084

I - MALCOLM BRAID  
340 COMANCHE STREET  
MONTEVALLO, AL 35115-3624

I - MALI HENIGMAN  
494 27TH AVENUE APT. 26  
SAN FRANCISCO, CA 94121-1807

I - MANDY MERRITT  
805 FIRST ST  
MERRITT ISLAND, FL 32953-0000

I - MARA WILLIAMS  
19337 ORANGE AVE  
SONOMA, CA 95476-6215

I - MARC BESCHLER  
5 E 51ST ST APT 4A  
NEW YORK, NY 10022-5912

I - MARC FLEISHER  
2444 BLAINE RD  
MOSCOW, ID 83843-7479

I - MARC MCCORD  
PO BOX 835994  
RICHARDSON, TX 75083-5994

I - MARC SUGARS  
2332 18TH AVE  
SAN FRANCISCO, CA 94116-2425

I - MARCELLA HAMMOND  
4181 UTAH ST  
SAN DIEGO, CA 92104-1871

I - MARCELLA MATTHAEI  
7172 A1A SOUTH  
ST. AUGUSTINE, FL 32080-0000

I - MARCIA DAVID  
661 SW 54TH AVENUE  
PLANTATION, FL 33317-0000

I - MARCIA HARVEY  
5370 MORNING STAR PL  
PASO ROBLES, CA 93446-8370

I - MARCY BALLIS  
990 SEMINOLE RD  
ATLANTIC BEACH, FL 32233-5456

I - MARE WAHOSI  
PO BOX 12541  
PRESCOTT, AZ 86304-2541

I - MARGARET DEARDO  
1311 FAIRSTEAD LN  
PITTSBURGH, PA 15217-2585

I - MARGARET EMERSON  
THE REGATTA #R-205  
901 N PENN ST UNIT R205,  
PHILADELPHIA, PA 19123-3131

I - MARGARET ENGLAND  
380 RIVERVIEW DRIVE  
LABELLE, FL 33935-0000

I - MARGARET NICHOLSON  
1810 ORCHARD AVE  
GLENDALE, CA 91206-4146

I - MARGARET PETERSON  
249 ELMS AVE  
TAWAS CITY, MI 48763-9313

I - MARGARET SHERMOCK  
18180 KELLY LAKE RD  
CARVER, MN 55315-9664

I - MARGARET SIFFERLIN  
9470 GALECREST DR  
CINCINNATI, OH 45231-3908

I - MARGARET SILVER  
1829 SEA OATS DR  
ATLANTIC BEACH, FL 32233-4511

I - MARGARET WELKE  
410 CLEMONS AVE  
MADISON, WI 53704-5504

I - MARGE FISHER  
2822 CIRCLE DRIVE  
PORTSMOUTH, OH 45662-2445

I - MARGE WEIMER  
169 BRIAR LN  
169 BRIAR LN, CA 94403-3339

I - MARGIE & OREST SZYMANKYJ  
3607 LINDSAY LN  
CRYSTAL LAKE, IL 60014-4785

I - MARGUERITE CLARK  
750 WEAVER DAIRY RD APT 3115  
CHAPEL HILL, NC 27514-1443

I - MARGUERITE PANZICA  
12528 STILLMAN ST  
LAKEWOOD, CA 90715-1818

I - MARI DEVLIN  
1522 W MAIN ST  
HOUSTON, TX 77006-4710

I - MARIA DIFIORE  
2418 W EASTWOOD AVE  
CHICAGO, IL 60625-2908

I - MARIA NASIF  
6601 N LONGFELLOW DR  
TUCSON, AZ 85718-2417

I - MARIA PAPAIZIAN  
4800 GRANADA BOULEVARD  
COCONUT GROVE, FL 33146-2023

I - MARIA STAHL  
605 EMPIRE ST  
MONTPELIER, OH 43543-1414

I - MARIAN CRUZ  
661 4TH ST  
HOLLISTER, CA 95023-3601

I - MARIAN O'DONNELL  
4601 S. ATLANTIC AVE UNIT 101  
PONCE INLET, FL 32127-0000

I - MARIANNE BITHELL  
1019 ALDER GROVE RD  
ARCATA, CA 95521-9212

I - MARIANNE CORRIERE  
752 SE CEPHAS LISTON RD  
BRANFORD, FL 32008-5197

I - MARIANNE PENDLETON  
2741 BAYSIDE LN  
FLUSHING, NY 11358-1055

I - MARIE D'ANNA  
516 RUSSELL AVE  
RIDGEFIELD, NJ 07657-2111

I - MARIE PLANTE  
9209 TOPEKA ST  
BETHESDA, MD 20817-3307

I - MARIE ROSS  
127 ARGUELLO AVE  
VALLEJO, CA 94591-7905

I - MARILYN BROWN  
4609 PEBBLE CREEK COURT  
PENSACOLA, FL 32526-4380

I - MARILYN SAUNDERS  
43 GRAND AVE  
RIDGEFIELD PARK, NJ 07660-1215

I - MARILYNN HEILMAN  
163 GRIER AVENUE  
BARNESVILLE, PA 18214-2226

I - MARIO G RIVERA  
1528 AVENUE L NW  
1528 AVENUE L NW, FL 33881-2326

I - MARION AUSTIN  
134 TRISTRAM DRIVE  
BOZEMAN, MT 59718-0000

I - MARION BERNSTEIN  
PO BOX 673  
SANDISFIELD, MA 01255-0673

I - MARION HILLIARD  
2902 GREENRIDGE RD  
ORANGE PARK, FL 32073-6412

I - MARJORIE EWELL  
3316 SE 22ND PLACE  
3316 SE 22ND PLACE, FL 33904-0000

I - MARK BUESE  
SENIOR VICE PRESIDENT  
KIRBY CORPORATION  
P.O. BOX 1745  
HOUSTON, TX 77251

I - MARK FELDMAN  
137 WINCHESTER DR  
SANTA ROSA, CA 95401-9137

I - MARK FORD  
COALITION TO RESTORE COASTAL LA  
6160 PERKINS ROAD, SUITE 225  
BATON ROUGE, LA 70808

I - MARK HAYDUKE GREWARD  
1030 E MORROW DR  
PHOENIX, AZ 85024-2926

I - MARK HENSMAN  
8514 TIMBER PINE CT  
ELLCOTT CITY, MD 21043-6063

I - MARK LEESON  
44 HICKORY CT  
ORWIGSBURG, PA 17961-9124

I - MARK LESHNER  
25021 159TH ST  
LEAVENWORTH, KS 66048-7337

I - MARK LUCE  
8263 E PIMA ST  
TUCSON, AZ 85715-5217

I - MARK PARSİ  
150 DOMINION PARK DR. #938  
HOUSTON, TX 77090-0000

I - MARK RAUSCHER  
305 CAMELOT DR  
OCEANSIDE, CA 92054-4514

I - MARK SCHNEIDER  
11682 BROOKSHIRE AVE  
GARDEN GROVE, CA 92840-3622

I - MARLA BOTTESCH  
PO BOX 458  
NORRIDGEWOCK, ME 04957-0458

I - MARLA SORRELLS  
933 TIDEWATER LN  
CAROLINA BEACH, NC 28428-4642

I - MARLANA PITAS  
90 PITAS AVE  
SOUTH ATTLEBORO, MA 02703-7119

I - MARLENA LANGE  
23 ROYCE AVE  
MIDDLETOWN, NY 10940-4708

I - MARLIESE BONK  
1335 COMMERCIAL ST  
PITTSBURGH, PA 15218-1151

I - MARSHA ALEXANDER  
428 LEAFY BRANCH TRAIL  
CARMEL, IN 46032-7402

I - MARSHA ARMSTRONG  
19618 WEEBURN LANE  
TARZANA, CA 91356-0000

I - MARSHA BASSETT  
235 ISBEL DRIVE  
SANTA CRUZ, CA 95060-1959

I - MARTA BLACK  
41 CLINTON AVE  
RIDGEWOOD, NJ 07450-3602

I - MARTHA ATKINSON  
4161 DEER CREEK RD  
VALLEY, WA 99181-9718

I - MARTHA BUSHNELL  
502 ORD DR  
BOULDER, CO 80303-4732

I - MARTHA CLARK  
903 S ELM ST  
DENTON, TX 76201-6811

I - MARTHA FELICE  
APT 133 200 STARCREST DR  
CLEARWATER, FL 33765-3804

I - MARTHA FULTON  
412 228TH ST SW #201  
BOTHELL, WA 98021-0000

I - MARTHA GLENN  
3509 LISA LN  
LAKELAND, FL 33801-9778

I - MARTHA GREEN  
1314 E. GORE ST. APT. A  
ORLANDO, FL 32806-0000

I - MARTHA HOGARTH  
345 ROCK CREEK PARK AVE NE  
ALBUQUERQUE, NM 87123-4834

I - MARTHA J. KENNEY  
5785 THOMPSON RD  
CLARENCE CTR, NY 14032-9724

I - MARTHA JANE RIPPLE  
915 WELHAM GREEN RD  
GREAT FALLS, VA 22066-1517

I - MARTHA OLVER  
PO BOX 28  
AMHERST, MA 01004-0028

I - MARTHA RESK  
1021 ANGELA STREET  
KEY WEST, FL 33040-0000

I - MARTHA SWAIM  
2722 5TH AVENUE  
SACRAMENTO, CA 95818-3508

I - MARTI LEWIS  
5059 HIGHWAY 100 W  
PLEASANTVILLE, TN 37033-2735

I - MARTIN BASKIN  
2121 JAMIESON AVENUE UNIT 1201  
ALEXANDRIA, VA 22314-5713

I - MARTIN BIDNEY  
912 TAYLOR DR  
VESTAL, NY 13850-3934

I - MARTIN COOK  
16 SABAL BEND  
PALM COAST, FL 32137-4328

I - MARTIN GROMULAT  
4605 FARGREEN ROAD  
HARRISBURG, PA 17110-0000

I - MARTINA CLARK  
8 SHERWOOD LN  
WESTAMPTON, NJ 08060-3727

I - MARVIN & CAROL SOROOS  
2876 WYCLIFF RD  
RALEIGH, NC 27607-3035

I - MARY & RICHARD KING  
590 WEBER  
AKRON, OH 44303-1829

I - MARY ANN HILGEMAN  
6400 MINNESOTA AVE  
SAINT LOUIS, MO 63111-2807

I - MARY ANN WILSON  
10433 WILSHIRE BLVD APT 902  
LOS ANGELES, CA 90024-4629

I - MARY ANNA FEITLER  
1957 COUNTY ROAD 68  
AUBURN, IN 46706-9521

I - MARY BERNSTEIN  
912 CENTER ST  
SANTA CRUZ, CA 95060-3808

I - MARY BRADSHAW  
23920 N LINE CAMP STREET  
SAN ANTONIO, TX 78255-2005

I - MARY CENTORE  
65 CARRELL RD  
RANDOLPH, NJ 07869-2922

I - MARY CERULLO  
FRIENDS OF CASCO BAY  
43 SLOCUM DR  
FALMOUTH, ME 04105-1881

I - MARY ECHOLS  
917 11TH ST. NORTH  
NAPLES, FL 34102-0000

I - MARY ELLEN WHITWORTH  
3201 ALLEN PKWY STE 200  
HOUSTON, TX 77019-1800

I - MARY FAZEKAS  
1008 EAST SUNNYSLOPE ROAD  
PETALUMA, CA 94952-0000

I - MARY HICKEY  
208 W UNIVERSITY ST  
WOOSTER, OH 44691-2865

I - MARY JACKSON  
6011 QUIET VILLAGE CT  
HOUSTON, TX 77053-0000

I - MARY JANE HILES  
1126 ERWIN ST  
ELKHART, IN 46514-3533

I - MARY JO FARCO  
587 MIDWAY DR A  
587 MIDWAY DR A, FL 34472-0000

I - MARY KARCH  
600 BROADWAY SUITE 200  
KANSAS CITY, MO 64105-0000

I - MARY KEARNEY  
20740 VIA ROJA  
YORBA LINDA, CA 92886-3115

I - MARY KOZUB  
280 PEBBLECREEK DR  
LAKE ZURICH, IL 60047-2721

I - MARY LELLOUCHE  
18510 66TH AVE NE  
KENMORE, WA 98028-7927

I - MARY LOU CAMPBELL  
7030 2AND3/4 MILE EAST  
MERCEDDES, TX 78570-9522

I - MARY NELL BRYAN  
810 SUMMERLY DR  
NASHVILLE, TN 37209-4221

I - MARY OWENS  
311 CURTIS ST.  
WARNER ROBINS, GA 31093-0000

I - MARY PROPHET  
1514 CHESTNUT ST  
BERKELEY, CA 94702-1133

I - MARY RAPP  
814 PERSHING ST  
WILLARD, MO 65781-8150

I - MARY RAUSCH  
15201 ADMIRALTY WAY UNIT C7  
LYNNWOOD, WA 98087-2437

I - MARY RAWL  
1345 PLUMOSA DR  
FORT MYERS, FL 33901-7727

I - MARY REIMER  
5471 S LIBBY RD SPC 36  
PARADISE, CA 95969-5932

I - MARY REMER  
421 HAWTHORNE BLVD  
LEESBURG, FL 34748-0000

I - MARY ROCHESTER  
4300 NW 103RD DR  
CORAL SPRINGS, FL 33065-2368

I - MARY SCHILDER  
3603 SLEEPY HOLLOW DR  
SANTA ROSA, CA 95404-1530

I - MARY WEST  
7234 SE 18TH AVE  
PORTLAND, OR 97202-0000

I - MARYANN RICHMOND  
56 BUTTONWOOD DR  
LITITZ, PA 17543-8487

I - MARYELLEN HEALY  
1213 BURLINGHAM RD  
PINE BUSH, NY 12566-7324

I - MARYELLEN REDISH  
671 S RIVERSIDE DR APT 6  
PALM SPRINGS, CA 92264-0648

I - MARYLOU KLEIN  
19200 SW 101ST PLACE RD  
DUNNELLON, FL 34432-0000

I - MATT BRENNAN  
2141 26TH ST UNIT 201  
SAN FRANCISCO, CA 94107-3299

I - MATT MCCABE  
1021 N GARFIELD ST APT 102  
ARLINGTON, VA 22201-2549

I - MATT STOECKER  
3130 ALPINE RD STE 288-411  
PORTOLA VALLEY, CA 94028-7549

I - MATTHEW & BLANCHE FREUND  
12155 ROMA RD  
BOYNTON BEACH, FL 33437-0000

I - MATTHEW BRADY  
633 ELDORADO BLVD APT 1026  
BROOMFIELD, CO 80021-8830

I - MATTHEW COPLAN  
3040 DREXMORE DR  
CUYAHOGA FALLS, OH 44223-3527

I - MATTHEW KENNEDY  
102 SHAMROCK DR  
CONWAY, AR 72034-6706

I - MATTHEW NEKOLA  
7860 ZIKES RD S  
BLOOMINGTON, IN 47401-9177

I - MATTHEW PINTAR  
618 LOUISE COURT  
CANONSBURG, PA 15317-0000

I - MATTHEW R. COURTER  
10612 DIXON DRIVE SOUTH  
SEATTLE, WA 98178-2717

I - MAUREEN FAHLBERG  
1735 TEAKWOOD ST  
BOULDER CITY, NV 89005-2052

I - MAUREEN POWERS  
PO BOX 2826  
HOMER, AK 99603-2826

I - MAUREEN WRIGHT  
2816 KENTUCKY ST NE  
ALBUQUERQUE, NM 87110-3408

I - MAY DORN  
8718 VAN HEUSEN RD  
CLAY, NY 13041-9604

I - MEL HENSHAW  
2125 5TH AVE APT 3  
SAN DIEGO, CA 92101-2137

I - MELANIE DELANEY  
18 MALLARD COVE  
BALLSTON LAKE, NY 12019-0000

I - MELINDA BASHEN  
PO BOX 12862  
ARLINGTON, VA 22219-2862

I - MELINDA HENDERSON  
4340 B NORMANDY DR  
NAPLES, FL 34112-0000

I - MELINDA WEISSER-LEE  
3864 W KIMBALL ST  
THATCHER, AZ 85552-5112

I - MELISSA DARCO  
755 ASBURY AVENUE SOUTH  
OCEAN CITY, NJ 08226-3720

I - MELISSA EPPLE  
20 VILLAGE LN  
SANTA FE, NM 87505-9368

I - MELISSA FONG  
1306 WILDERNESS DR  
AUSTIN, TX 78746-0000

I - MELISSA GASKINS  
5785 SAINT JOE RD  
TALLAHASSEE, FL 32311-8585

I - MELISSA GONZALEZ  
191 14TH AVE  
HOLTSVILLE, NY 11742-2347

I - MELISSA JUDGE  
1711 W AILEEN ST  
1711 W AILEEN ST, FL 33607-2019

I - MELISSA LEMKE  
533 GLEN ST  
GLENS FALLS, NY 12801-2206

I - MELISSA PARKER  
543 STEERE FARM ROAD  
HARRISVILLE, RI 02830-0000

I - MELISSA SAMET  
SENIOR DIRECTOR, WATER RESOURCES  
AMERICAN RIVERS  
6 SCHOOL STREET, STE. 200  
FAIRFAX, CA 94930

I - MELISSA SAMET  
AMERICAN RIVERS  
6 SCHOOL STREET, SUITE 200  
FAIRFAX, CA 94930

I - MELISSA SAMET  
83 VALLEY RD  
SAN ANSELMO, CA 94960-1531

I - MELISSA WILSON  
1210 W TOWANDA AVE  
EL DORADO, KS 67042-2446

I - MELODIE PAULSEN  
19003 CHANNEL LN NE  
WYOMING, MN 55092-9507

I - MELVA PADILLA  
PO BOX 4060  
SAN FELIPE PB, NM 87001-4060

I - MERCY DRAKE  
320 E MCKELLIPS RD LOT 165  
MESA, AZ 85201-2153

I - MEREDITH SCHNELLE  
25176 W EDGAR AV  
ANTIOCH, IL 60002-8976

I - MERLE NEIDELL  
40 BACON RD  
SAINT JAMES, NY 11780-1011

I - MICHAEL BAKUNAS  
3532 N OPAL AVE  
CHICAGO, IL 60634-3028

I - MICHAEL BILECKI  
31 LOCUST RD  
BROOKHAVEN, NY 11719-9627

I - MICHAEL BORDENAVE  
951 N ADOLINE AVE  
FRESNO, CA 93728-2941

I - MICHAEL BRENNAN  
452 MAIN ST APT 215  
EAST HARTFORD, CT 06118-1430

I - MICHAEL CHARNOFSKY  
3018 CAPP ST  
3018 CAPP ST, CA 94602-0000

I - MICHAEL CRAGO  
801 RUE DAUPHINE # 304  
METAIRIE, LA 70005-4608

I - MICHAEL DEWAN  
24 RUTHERFORD CIRCLE  
STERLING, VA 20165-6219

I - MICHAEL DORNBERG  
800 NW 18TH AVE APT 16  
GAINESVILLE, FL 32609-0000

I - MICHAEL DUFFY  
1412 CANTON STREET  
ORLANDO, FL 32803-3306

I - MICHAEL GARNER  
2ND AVE  
SACRAMENTO, CA 95817-2115

I - MICHAEL GARVIN  
1 SPRING HILL CIR  
SAUSALITO, CA 94965-1776

I - MICHAEL GODLEWSKI  
3757 N PIEDRA CIR  
MESA, AZ 85207-1150

I - MICHAEL HAMMOND  
442 S BROAD ST  
LITITZ, PA 17543-2602

I - MICHAEL HUBER  
PO BOX 22  
ORCAS, WA 98280-0022

I - MICHAEL JANSKY  
REGIONAL EIS COORDINATOR  
U.S. ENVIRONMENTAL PROTECTION  
AGENCY  
1445 ROSE AVENUE, SUITE 1200  
DALLAS, TX 75202-2733

I - MICHAEL KEMMERER  
52 BELMONT SQ  
DOYLESTOWN, PA 18901-4432

I - MICHAEL LAUGHLIN  
523 MONICA DR  
LEBANON, IL 62254-1769

I - MICHAEL LETENDRE  
92 CASS ST # 1  
PORTSMOUTH, NH 03801-4941

I - MICHAEL LEVREULT  
10504 NE 137TH PL  
KIRKLAND, WA 98034-2018

I - MICHAEL MAHONEY  
2953 S MILWAUKEE CIR  
DENVER, CO 80210-6755

I - MICHAEL MAYO  
143 SHOTWELL PARK  
SYRACUSE, NY 13206-3256

I - MICHAEL MCFARLAND  
6377 VISTA DR APT 7209  
WEST DES MOINES, IA 50266-5539

I - MICHAEL MCMANUS  
800 E LINCOLN AVE APT 5  
ROYAL OAK, MI 48067-3349

I - MICHAEL ROGERS  
1887 VAN NESS AVE  
KLAMATH FALLS, OR 97601-1842

I - MICHAEL SAXE  
6279 S.E. 8TH LANE  
OCALA, FL 34472-0000

I - MICHAEL STOCKER  
100 RIVERSIDE DR  
NEW YORK, NY 10024-4822

I - MICHAEL SUTHERLAND  
1114 WELLINGTON DR  
CHARLESTON, SC 29412-4846

I - MICHAEL TOOBERT  
212 MALLARD DR  
GRASS VALLEY, CA 95945-5745

I - MICHAEL W. EVANS  
12325 CHARNOCK RD  
LOS ANGELES, CA 90066-3105

I - MICHAELA OLDFIELD  
2300 WASHINGTON BLVD APT 203  
ARLINGTON, VA 22201-1101

I - MICHELE DEIBLER  
13104 BRANDENBURG HOLLOW RD  
SMITHSBURG, MD 21783-9292

I - MICHELE GIELIS  
147 DUDLEY ST  
CAMBRIDGE, MA 02140-2444

I - MICHELE MCRAE  
61 STONEDELL DRIVE  
DALLAS, GA 30157-0000

I - MICHELLE CAUFIELD  
315 N 2ND ST  
HARRISON, NJ 07029-2543

I - MICHELLE HUDAK  
11610 COLONY LAKE DRIVE  
TAMPA, FL 33635-0000

I - MICHELLE HUTCHINS  
1177 JACKSON ST  
MISSOULA, MT 59802-3839

I - MICHELLE JORDAN  
3913 CASTRO VALLEY BLVD SPC 41  
CASTRO VALLEY, CA 94546-6038

I - MICHELLE LEMLEY  
1209 S MILLS AVE  
LODI, CA 95242-3900

I - MICHELLE MICHLEWICZ  
1923 BRIGHTON DAM RD  
BROOKEVILLE, MD 20833-0000

I - MICHELLE SCHUMAN  
2240 SEARLES RD.  
BALTIMORE, MD 21222-0000

I - MIDGE JOLLY & TOM WEYANT  
18930 ROSALIND RD  
SUMMERLAND KEY, FL 33042-3217

I - MIJANOU BAUCHAU  
1941 LOOKOUT DR  
AGOURA HILLS, CA 91301-2928

I - MIKASA MOSS  
300 N RIDGE LN  
TEMPLE, GA 30179-4850

I - MIKE CAFFREY  
1631 POPLAR ST  
GREENSBURG, PA 15601-5455

I - MIKE GLICK  
615 JACKSON ST  
LA CROSSE, WI 54601-5339

I - MIKE HORTON  
705 VALLEY OAKS RD  
GREENWOOD, IN 46143-0000

I - MIKE KEARNEY  
KEARNEY COMPANIES  
4000 FRANCE ROAD PARKWAY  
NEW ORLEANS, LA 70126

I - MIKE KEMPF  
PO BOX 784  
LOTUS, CA 95651-0784

I - MIKE LENNEY  
411 WALNUT STREET # 2374  
GREEN COVE SPRINGS, FL 32043-3443

I - MIKE LORINO  
ASSOCIATED BRANCH PILOTS  
3813 N. CAUSEWAY BLVD.  
METAIRIE, LA 70002

I - MIKE MACDOUGALL  
10105 N PARKSIDE DR  
NINE MILE FALLS, WA 99026-9269

I - MIKE RABASCO  
11130 DRAKE ST NW  
COON RAPIDS, MN 55433-3770

I - MIKE RUSSO  
3559 GLEN RIDGE DR  
CHINO HILLS, CA 91709-2813

I - MIKE SEXTON  
2524 COMMONWEALTH DR LOT 52  
JUNCTION CITY, KS 66441-4286

I - MIKE WEBB  
1503 SOUTHPORT DR APT 124  
AUSTIN, TX 78704-7814

I - MIKKI CHALKER  
119 PROSPECT ST  
BINGHAMTON, NY 13905-2328

I - MILES CROOM  
ASSISTANT REGIONAL ADMINISTRATOR  
U.S. DEPARTMENT OF COMMERCE, NOAA  
263 13TH AVENUE SOUTH  
ST. PETERSBURG, FL 33701

I - MINDY MAYERS  
33 CRYSTAL LAKE LN  
THE WOODLANDS, TX 77380-1893

I - MINDY SCHLIMGEN  
639 TIBURON DR  
PRESCOTT, AZ 86303-7219

I - MIRIAM KARL  
621 HIGHLAND CT  
MANDEVILLE, LA 70448-7024

I - MISTI JANCOSEK  
51832 VANCE VISTA CT  
SOUTH BEND, IN 46628-9297

I - MITSUKA HORIKAWA  
1427 LINDA WAY  
ARCADIA, CA 91006-4434

I - MOGI KINSEY-O'NEIL  
54 SUNSET ROAD  
KEY LARGO, FL 33037-0000

I - MOLLY MCCARTY  
2838 S 9TH PLACE  
MILWAUKEE, WI 53215-3946

I - MOLLY WEIGEL  
8 DIVERTY RD  
PENNINGTON, NJ 08534-5009

I - MONROE JEFFREY  
802 E 6TH ST APT 303  
LOS ANGELES, CA 90021-1045

I - MORGAN CRAWFORD  
113 GALAX LN  
DURHAM, NC 27703-9273

I - MYRIEM LE FERRAND  
PO BOX 2171  
DURANGO, CO 81302-2171

I - MYRNA POTOTSKY  
428 NORTHEAST 17TH AVENUE  
FORT LAUDERDALE, FL 33301-1346

I - N.J. MAC  
2570 MCMILLAN STREET  
EUGENE, OR 97405-3115

I - NADA WAREHAM  
P.O.BOX 656  
ELM MOTT, TX 76640-0656

I - NADIA INGRAM  
5170 LEMON BAY DRIVE  
VENICE, FL 34293-0000

I - NANCY BAUR  
14288 SOUTHEAST JOHNSON ROAD  
MILWAUKIE, OR 97267-2335

I - NANCY BEAVERS  
3988 MOORE HOLLOW RD  
WOODLAWN, TN 37191-9202

I - NANCY CAILLOUET  
100 PEARL DRIVE  
LAUREL, MS 39440-1322

I - NANCY DOUCETTE  
1117 E SHORE DR  
WEST PALM BEACH, FL 33406-5124

I - NANCY ECKEL  
9 SHEPARD RD  
NORFOLK, CT 06058-1197

I - NANCY EMBLOM  
260 S STEEL ST  
ISHPEMING, MI 49849-2641

I - NANCY FORTUNATO  
249 N MARION STREET  
PALATINE, IL 60074-5470

I - NANCY G CHESNUTT  
PO BOX 1070  
SAINT HELENA ISLAND, SC 29920-1070

I - NANCY GATHING  
3701 TULANE AVE  
MADISON, WI 53714-2952

I - NANCY GRUTTMAN-TYLER  
307 BEAUREGARD HEIGHTS  
HAMPTON, VA 23669-1461

I - NANCY HODGKINS  
1400 N BARCELONA ST  
PENSACOLA, FL 32501-2004

I - NANCY HOUGH  
808 W END AVE APT 706  
NEW YORK, NY 10025-5310

I - NANCY JACKSON  
550 RED MAPLE RD  
BLOUNTSVILLE, AL 35031-4761

I - NANCY L REICHER  
401 W 58TH TERRACE  
KANSAS CITY, MO 64113-1269

I - NANCY MCGEE  
1726 N 1ST ST  
MILWAUKEE, WI 53212-3969

I - NANCY MENASCO  
503 HAYNES AV  
SHREVEPORT, LA 71105-3825

I - NANCY O'HARROW  
4124 ORCHARD WAY  
LAKE OSWEGO, OR 97035-1842

I - NANCY PATUMANOAN  
1506 THORNTON RD  
HOUSTON, TX 77018-4143

I - NANCY SHAW  
35 VAGABOND LANE  
WINTER HAVEN, FL 33881-9229

I - NANCY SMITH  
1564 RODMAN ST  
FALL RIVER, MA 02721-3640

I - NANCY SPEARS  
15 SOUTHGATE DRIVE  
BOSSIER CITY, LA 71112 8603

I - NANCY STALEY  
4788 LIBERTY GROVE ROAD  
LIBERTY, NC 27298-8042

I - NANCY STEVENSON  
1331 FOREST ST  
ST PAUL, MN 55106-0000

I - NANDITA SHAH  
7024 MINK HOLLOW RD  
HIGHLAND, MD 20777-9770

I - NAOMI GREENFIELD  
4491 NW 99TH TERRACE  
SUNRISE, FL 33351-4748

I - NATALIE ABRAM  
11416 UNITED BLVD  
LOUISVILLE, KY 40229-2572

I - NATALIE QUIET  
2154 ORCHARD PL APT D22  
FORT COLLINS, CO 80521-6006

I - NATALIE SANCHEZ  
6035 KENNEDY BLVD E  
WEST NEW YORK, NJ 07093-3834

I - NATALIE SNIDER  
COALITION TO RESTORE COASTAL LA  
6160 PERKINS ROAD, SUITE 225  
BATON ROUGE, LA 70808

I - NATALIE SNIDER  
SCIENCE DIRECTOR  
COALITION TO RESTORE COASTAL  
LOUISIANA  
6160 PERKINS ROAD STE.225  
BATON ROUGE, LA 70808

I - NATASHA SAMTO  
356 CHICAGO AVENUE  
356 CHICAGO AVENUE, FL 32580-1123

I - NATASHA SHPILLER  
5601 N SHERIDAN RD  
CHICAGO, IL 60660-4804

I - NATHAN JAMES LEIN  
810 THIRD AVENUE SOUTH WEST  
OELWEIN, IA 50662-0000

I - NATHAN KRAUSE  
SOLUTIA  
3000 OLD CHEMSTRAND ROAD  
CANTONMENT, FL 32560

I - NAYEEM ASLAM  
135 ELK TRAIL  
CAROL STREAM, IL 60188-0000

I - NEAL HALLORAN  
317 MUELLER RD  
COCHECTON, NY 12726-5134

I - NEIL BOCCANFUSO  
212 MAXSON AVE  
POINT PLEASANT BORO, NJ 08742-2127

I - NELSON LOCK  
29 CIRCLE DR  
DECATUR, IL 62521-4128

I - NETA VILLALOBOS-BELL  
5085 BLACKNELL LANE  
SANFORD, FL 32716-0000

I - NEWTON LOGAN  
4517 APPLE WAY  
BOULDER, CO 80301-1740

I - NIA DOHERTY  
1558 S 6TH ST W  
MISSOULA, MT 59801-3342

I - NICHOLAS ROMANO  
703 E 133RD ST  
BRONX, NY 10454-3425

I - NICK GORDY  
5405 BEEBE ST NE  
5405 BEEBE ST NE, NM 87111-1903

I - NICKOLAS GUTIERREZ  
8240 LINGER LODGE RD DIAMOND K RANCH  
BRADENTON, FL 34202-0000

I - NICOLAS WIENDERS  
571 OAKLAND AVENUE  
TALLAHASSEE, FL 32301-0000

I - NICOLE MIANI  
3652 LORIMER LN  
ENCINITAS, CA 92024-5507

I - NICOLE SAMPIERI  
7426 CAPITAL HEIGHTS STREET  
ENGLEWOOD, FL 34224-0000

I - NICOLE TURNER  
1901 GARFIELD AVE  
WILMINGTON, DE 19809-1366

I - NIKI PESTEL  
974 KAHENA ST  
HONOLULU, HI 96825-1077

I - NIKKI WOJTALIK  
3723 GREEN OAK CT  
PARKVILLE, MD 21234-4258

I - NIYATI BROWN  
PO BOX 82  
PAAUILO, HI 96776-0082

I - NK ACEVEDO  
33 WAVE AVE # 3  
REVERE, MA 02151-5452

I - NOEL BEDNAZ  
PO BOX 709  
SOUTHWICK, MA 01077-0709

I - NOEL HOLLAND  
222 W 83RD ST  
NEW YORK, NY 10024-4909

I - NORAH RENKEN  
5603 N SYRACUSE ST  
PORTLAND, OR 97203-5241

I - NOREEN KENNY  
3730 BILL DOWNING RD  
RAYMOND, MS 39154-0000

I - NORMAN BENDROTH  
35 GRANVILLE RD  
CAMBRIDGE, MA 02138-6806

I - NORMAN F. WADE  
920 SHERWOOD ST  
MISSOULA, MT 59802-2604

I - O. BISOGNO SCOTTI  
5078 LEMON GROVE AVE  
LOS ANGELES, CA 90029-3760

I - OLIVIA DUSOLD  
6903 WAYNE AVE  
6903 WAYNE AVE, PA 19119-0000

I - OSCAR PENA  
SHAW GROUP  
97 ELYSIAN DRIVE  
HOUMA, LA 70363

I - OTTO ONASCH  
262 HAMILTON DR.  
DELHI, NY 13753-0206

I - P. MAGEE  
3 HEARTWOODS CT APT A  
SAINT LOUIS, MO 63132-4452

I - PALMER CRAIG  
206 ARROWHEAD TRAIL  
WARNER ROBINS, GA 31088-5330

I - PALOMA NAVARRETE  
PO BOX 2251  
TAOS, NM 87571-2251

I - PAMELA CHIPMAN  
36320 ROAD N  
MANCOS, CO 81328-9118

I - PAMELA COHEN  
320 KOCH AVE APT 1  
ANN ARBOR, MI 48103-5446

I - PAMELA DANNACHER  
2519 PERSHING AVE  
DAVENPORT, IA 52803-2645

I - PAMELA HANSON  
304 SPRING STREET APT. 1  
SAINT JOHNSBURY, VT 05819-0000

I - PAMELA HOPKINS  
452 S.E. EDGEWOOD DRIVE  
STUART, FL 34996-0000

I - PAMELA KOSINSKI  
6500 KNIGHT DRIVE SOUTHEAST  
PORT ORCHARD, WA 98367-9097

I - PAT BARBUTTI  
1159 NIMITZ LN  
FOSTER CITY, CA 94404-3623

I - PAT GALLWAY  
PORT OF NEW ORLEANS  
P.O. BOX 60046  
NEW ORLEANS, LA 70160

I - PAT HARDEN  
5200 S.W. 25TH BLVD #3224  
GAINESVILLE, FL 32608-0000

I - PAT KULTGEN  
115 BRANDY HL  
LORENA, TX 76655-9745

I - PAT MURRELL  
187 W 19TH ST  
ALTON, IL 62002-0000

I - PAT PASCUAL  
1216 ROUTE 311  
PATTERSON, NY 12563-2823

I - PAT SHARP  
312 MARSHALL ST  
GRASS VALLEY, CA 95945-7212

I - PAT WATKINS  
110 CHRISTOPHER CIRCLE  
SLIDELL, LA 70460-0000

I - PATRICIA ASHTON  
269 E CRESCENT AVE  
269 E CRESCENT AVE, CA 92373-6811

I - PATRICIA BRADY  
6 MAISONS DRIVE  
LITTLE ROCK, AR 72223-0000

I - PATRICIA BROTMAN  
16 SNOWDEN RD  
BALA CYNWYD, PA 19004-2633

I - PATRICIA BURCHARD  
122 MAIN ST  
CAMDEN, NY 13316-1138

I - PATRICIA COFFEY  
2253 WOODBINE RD  
LANGLEY, WA 98260-8222

I - PATRICIA DISHMAN  
914 BRIARWOOD CRST  
NASHVILLE, TN 37221-4351

I - PATRICIA FEAREY  
20 IRWIN WAY APT 738  
ORINDA, CA 94563-2587

I - PATRICIA GEORGE  
706 S SGT WOODALL DR  
CAMP VERDE, AZ 86322-7136

I - PATRICIA MACKURA  
1338 WINSTON RD  
SOUTH EUCLID, OH 44121-2516

I - PATRICIA MATEJCEK  
PO BOX 2067  
SANTA CRUZ, CA 95063-2067

I - PATRICIA MCCAIN  
1405 JIM MATHIS RD  
BRYAN, TX 77808-8041

I - PATRICIA MICHAEOFF  
1206 W PONTOON RD  
GRANITE CITY, IL 62040-2233

I - PATRICIA PARSONS  
1314 W PATTERSON STREET  
TAMPA, FL 33604-4722

I - PATRICIA PHILLIPS  
487 WOLCOTT AVE  
KENT, OH 44240-2355

I - PATRICIA ROSSI  
1 MAPLEWOOD DR  
LEVITTOWN, PA 19056-1016

I - PATRICIA SIKORA  
1229 AMERICAN LEGION HWY  
WESTPORT, MA 02790-1125

I - PATRICIA SNOWDEN  
5145 WESTBARD AVE  
BETHESDA, MD 20816-1413

I - PATRICIA SUNNY WALTER  
12525 206TH PL SE  
ISSAQUAH, WA 98027-8543

I - PATRICIA WALLACE  
66 EDGEWOOD AVENUE  
NEW HAVEN, CT 06511-4615

I - PATRICK BOSOLD  
202 N 5TH ST  
FAIRFIELD, IA 52556-2501

I - PATRICK EGGLESTON  
69 TIMBERLANE DR  
KEENE, NH 03431-2069

I - PATTI CONSTANTINO  
17249 HELEN K DR  
SPRING HILL, FL 34610-7720

I - PATTY KOTELES  
9002 AVERY RD  
BROADVIEW HTS, OH 44147-2508

I - PATTY MAJORS  
4875 SUMMERFIELD RD  
PETERSBURG, MI 49270-9708

I - PAUL BECHTEL  
734 CAJON STREET  
REDLANDS, CA 92373-5940

I - PAUL BUECHLER  
2211 LA COSTA DR  
ROWLETT, TX 75088-6205

I - PAUL BUSCH  
1523 LAUREL AVE  
SAINT PAUL, MN 55104-6739

I - PAUL HARRISON  
ENVIRONMENTAL DEFENSE  
1875 CONNECTICUT AVE NW, STE 600  
WASHINGTON, DC 20009

I - PAUL HOFFERKAMP  
512 HERITAGE DR  
OSWEGO, IL 60543-8689

I - PAUL HOLM  
11521 HOLM RD SW  
ROCHESTER, WA 98579-9625

I - PAUL HOPKINS  
1168 W MAIN STREET APT. 3  
BELLEVUE, OH 44811-9014

I - PAUL HUDDY  
5233 E WOODSPRING DRIVE  
TUCSON, AZ 85712-1364

I - PAUL KEMP  
LOUISIANA STATE UNIVERSITY  
COASTAL AND ENVIRONMENT BUILDING  
LSU 1002Q ENERGY  
BATON ROUGE, LA 70803

I - PAUL KRIPLI  
11445 SHILLING DR  
STERLING HEIGHTS, MI 48314-3556

I - PAUL KUTRUBES  
23 ASHUELOT ST APT B  
WINCHESTER, NH 03470-3221

I - PAUL LIMA  
9648 BIG SPRINGS RD  
CHRISTIANA, TN 37037-5952

I - PAUL MALONEY  
4243 BRUSSELS DR  
JACKSON, MS 39211-6106

I - PAUL MARTINEZ  
16725 BUCK PATH  
LOCKPORT, IL 60441-7646

I - PAUL MILLER  
10306 KERRIGAN ST  
SANTEE, CA 92071-1207

I - PAUL ROHRBACH  
P.O. BOX  
OAKLAND, CA 94619-0000

I - PAUL SCHMALZER  
6109 GALLOP COURT  
TITUSVILLE, FL 32780-0000

I - PAUL WILKINS  
2303 CEDROS CIR  
SANTA FE, NM 87505-5252

I - PAUL YATES  
112 GANO AVE  
GEORGETOWN, KY 40324-1912

I - PAULA DODSON  
246 RIVER HILLS DR  
JACKSONVILLE, FL 32216-8925

I - PAULA ELLIOTT  
26 CHERRY HILL CIRCLE  
METHUEN, MA 01844-0000

I - PAULA FELDMAN  
1651 ROSLYN DRIVE  
COLUMBIA, SC 29206-2931

I - PAULA GRUGINSKI  
2819 NORTHEAST 47TH STREET  
VANCOUVER, WA 98663-2124

I - PAULA MENYUK  
162 MASON TER  
BROOKLINE, MA 02446-2772

I - PAULA PHILLIPS  
8 SAN ROSSANO DR  
GOLETA, CA 93117-1914

I - PAULETTE WHITCOMB  
9085 W 95TH AVE  
WESTMINSTER, CO 80021-4313

I - PEG SCHULTE  
6034 N MARMORA AVE  
CHICAGO, IL 60646-3904

I - PEG (MARGARET) LAUBER  
3419 MCELROY COURT  
EAU CLAIRE, WI 54701-0000

I - PEGGY CADIGAN  
8975 FILLMORE RD  
FREDONIA, WI 53021-0000

I - PEGGY FUGATE  
6685 STILLWELL BECKETT RD  
OXFORD, OH 45056-9246

I - PEGGY OGATA  
2002 MENTONE AVENUE  
PASADENA, CA 91103-1431

I - PEGGY RETHERFORD  
10350 HOOVER WOODS RD  
GALENA, OH 43021-9413

I - PEGGY ROBINSON  
2020 WILLOWAY CT S  
COLUMBUS, OH 43220-0000

I - PEGGY SEARS  
1648 ARBOR KNOLL LOOP  
TRINITY, FL 34655-7182

I - PEGGY STUBBS  
35724 US 231 N PO BOX 31  
ASHVILLE, AL 35953-0031

I - PEGGY WYNN  
122 BAG END RD  
HENDERSONVILLE, NC 28739-2286

I - PEGGY-JO SCHULTE  
6034 N MARMORA AVENUE  
CHICAGO, IL 60646-3904

I - PENELOPE JOHNSTONE  
PO BOX 2882  
OAKHURST, CA 93644-2882

I - PENNY WIRT  
4311 CRYSTAL LAKE DRIVE APT. #314  
POMPANO BEACH, FL 33064-1296

I - PERRIE'LEE PROUTY  
5213 NORBECK RD.  
ROCKVILLE, MD 20853-0000

I - PETE RICHARDSON  
10 WHITE OAK DR APT 113  
EXETER, NH 03833-5320

I - PETER & MARY ALICE BELOV  
325 W DARLAND DR  
GOLDENDALE, WA 98620-9557

I - PETER ADAMS  
516 WATERS EDGE  
NEWTOWN SQUARE, PA 19073-2131

I - PETER BARNETT  
12086 99TH AVENUE  
SEMINOLE, FL 33772-2126

I - PETER BROMER  
13205 NORTHEAST 3RD COURT  
MIAMI, FL 33161-3927

I - PETER BRUCKER  
PO BOX 1089  
SAWYERS BAR, CA 96027-1089

I - PETER CAMARATA  
4015 BOWEN FALLS PLACE  
SARASOTA, FL 34243-4256

I - PETER HAY  
11727 COUNTRY SPRINGS ST  
SAN ANTONIO, TX 78249-2657

I - PETER THEIS  
3203 N BAYVIEW LN  
MCHENRY, IL 60051-9621

I - PHILIP CROLL  
52 BALLARD BRANCH RD  
WEAVERVILLE, NC 28787-9761

I - PHILIP NARO  
124 E MAIN ST APT 1  
BOZEMAN, MT 59715-4728

I - PHILIP O'HARTIGAN  
726 DAYLILY LN  
BAINBRIDGE ISLAND, WA 98110-2919

I - PHILIP VIRGIL  
4504 ABBOTT AVE APT 8  
DALLAS, TX 75205-3935

I - PHILLIP GOUBEAUD  
2950 PINE NECK RD PO BOX 5  
SOUTHOLD, NY 11971-0005

I - PHILLIP HALL  
RHODIA ECO SERVICES  
1275 AIRLINE HWY  
BATON ROUGE, LA 70817

I - PHILLIP J. CRABILL  
430 COPPERAS TRL  
HIGHLAND VILLAGE, TX 75077-7256

I - PHILLIP SHERMAN  
2507 NW HOLIDAY, CT.  
STUART, FL 34994-0000

I - PHILLIP WEBSTER  
903 SUGARCANE WAY  
CLARKSVILLE, TN 37040-2883

I - PHYL MORELLO  
984 HARRISON FERRY  
WHITE PINE, TN 37890-0000

I - PHYLLIS RUTH  
113 ELMTOWNE BLVD  
HAMMONTON, NJ 08037-2544

I - PIER HARDIN  
8 LANCASTER RD  
MOBILE, AL 36608-1928

I - PINE DUBOIS  
93 ELM ST  
KINGSTON, MA 02364-1901

I - PINKY JAIN PAN  
PO BOX 14982  
SANTA ROSA, CA 95402-6982

I - POLLY SEARFOS  
2620 CLUBHOUSE CIR  
POWELL, OH 43065-8632

I - POLLY VICTOR  
5543 N FRESNO ST APT D  
FRESNO, CA 93710-8326

I - POPPY GLOR  
14901 SE 272ND ST APT P204  
KENT, WA 98042-8182

I - PRISCILLA & ROGER WALDMAN  
6594 WALDMANN LANE  
SEVEN VALLEYS, PA 17360-8840

I - PROBYN GREGORY  
1766 N LAS PALMAS AVE  
LOS ANGELES, CA 90028-4810

I - QUENTIN & JACQUELYN WENZEL  
17 CIRCLE DR  
STROUDSBURG, PA 18360-8883

I - R. VANSTRIEN  
PO BOX 301  
LIBERTY CORNER, NJ 07938-0301

I - RACHAEL DENNY  
2680 LYNCH CANYON RD  
BRADLEY, CA 93426-9656

I - RACHAEL STERN  
3318 NUNDY ROAD  
TAMPA, FL 33618-2526

I - RACHEL DOLNEY  
2315 ORLANDO PL  
PITTSBURGH, PA 15235-2768

I - RACHEL DOLNEY  
1315 MONTE LN  
WINTER PARK, FL 32792-2203

I - RACHEL WEAVER  
768 QUEEN ANNE RD  
AMSTERDAM, NY 12010-8188

I - RACHEL WOLF  
403 EMELINE AVE  
SANTA CRUZ, CA 95060-2244

I - RACHELLE GIULIANI  
RIDGE STREET  
MARQUETTE, MI 49855-3163

I - RACHELLE GREENE  
13042 CLAREWOOD DR  
HOUSTON, TX 77072-1765

I - RACHELLE WARD  
9630 S BIG THUNDER DR  
VAIL, AZ 85641-6035

I - RAE NEWMAN  
7921 SW 100TH ST  
MIAMI, FL 33156-2521

I - RAINEY LAMEY  
2319 PACKARD ST APT 205B  
ANN ARBOR, MI 48104-6359

I - RALPH BOCCHETTI  
939 ARCADIA AVE  
ARCADIA, CA 91007-7151

I - RALPH SANCHEZ  
PO BOX 223153  
CARMEL, CA 93921-6607

I - RANDEL ROGERS  
5931 BAYTREE DR  
GALLOWAY, OH 43119-9288

I - RANDI KUHNE  
5641 SOUTH OAKRIDGE DRIVE  
HOMOSASSA, FL 34448-4957

I - RANDOLPH GYULAY  
3735 RANDOM DR  
AKRON, OH 44319-2240

I - RANDOLPH SCHOEDLER  
3709 W MICHIGAN ST  
MILWAUKEE, WI 53208-3714

I - RANDY MOERTLE  
BILOXI MARSH LANDS CORPORATION  
1008 MAR DRIVE  
LOCKPORT, LA 70374

I - RANDY MOERTLE  
BILOXI MARSHLANDS CORP.  
1008 MAR DRIVE  
LOCKPORT, LA 70374

I - RANDY SAILER  
1018 CHERRY LN  
BEULAH, ND 58523-6421

I - RANDY TASHJIAN  
1031 TRAFALGER DR  
GLENDALE, CA 91207-1139

I - RAUL DE BRIGARD  
8 CHRISTIAN HILL RD  
HIGGANUM, CT 06441-4030

I - RAVIN CARLSON  
117 AVENIDA LUCIA  
SAN CLEMENTE, CA 92672-3414

I - RAY CUNNINGHAM  
526 S HUNT CLUB BOULEVARD  
APOPKA, FL 32703-4960

I - RAY MORRIS  
7319 PEMBROKE AVE  
BAKERSFIELD, CA 93308-3702

I - RAY SCHRAFT  
113 SUMMERDALE ROAD  
ANGOLA, NY 14006-9027

I - RAYMOND BRAGAR  
250 E 54TH ST APT P-5  
NEW YORK, NY 10022-4810

I - RAYMOND BUTLER  
EXECUTIVE DIRECTOR  
GULF INTRACOASTAL CANAL  
2010 BUTLER DRIVE  
FRIENDSWOOD, TX 77546

I - RAYMOND BUTLER  
GULF INTRACOASTAL CANAL ASSOC.  
2010 BUTLER DRIVE  
FRIENDSWOOD, TX 77546

I - RAYMOND GILL  
200 217TH PL SW  
BOTHELL, WA 98021-8227

I - RAYMOND GILL  
310 PASEO ENCINAL ST  
SAN ANTONIO, TX 78212-1708

I - RAYMOND KEELING  
762 PANORAMA DR  
MILFORD, MI 48381-1552

I - REBECCA BUERKETT  
PO BOX 37  
RAINBOW LAKE, NY 12976-0037

I - REBECCA GEMMILL  
101 SANDY BOTTOM DR  
HARDYVILLE, VA 23070-0001

I - REBECCA GILBERT  
821 SYCAMORE DR  
CANTON, GA 30115-9487

I - REBECCA GOFF  
6394 TERRACE LN  
SALIDA, CO 81201-3650

I - REBECCA HARGROVE  
112 RAMUNNO CIRCLE  
HOCKESSIN, DE 19707-0000

I - REBECCA HARPER  
2616 CORDELIA ROAD  
LOS ANGELES, CA 90049-1220

I - REBECCA KOO  
1050 JOHNSON AVE  
SAN JOSE, CA 95129-3126

I - REBECCA LONG  
61 MAY AVE PO BOX 353  
CHAUNCEY, OH 45719-0353

I - REBECCA OLSEN  
35 LIBERTY LN  
PETALUMA, CA 94952-0000

I - REBECCA SWEAT  
PO BOX 476  
CRAWFORDVILLE, FL 32326-0066

I - RED MCGEE  
3038 S RICHARDT AVE  
INDIANAPOLIS, IN 46239-1365

I - RENEE BAUERLY  
310 S MIRALESTE DR UNIT 88  
SAN PEDRO, CA 90732-6031

I - RENEE DOLNEY  
2315 ORLANDO PL  
PITTSBURGH, PA 15235-2768

I - RHETT LAWRENCE  
6445 N COMMERCIAL AVE  
PORTLAND, OR 97217-2024

I - RHONDA LAWFORD  
855 PINE BLUFF RD  
MORRIS, IL 60450-7373

I - RHONDA ROTHROCK  
7398 HICKORY RIDGE RD.  
CARBONDALE, IL 62901-0000

I - RHONDA WEST  
608 HILL ST  
COPPERAS COVE, TX 76522-1521

I - RICH & LINDA KOLEHMAINEN  
4125 SIEFER DR  
ROOTSTOWN, OH 44272-9615

I - RICH SPISAK  
4284 AIMEE LANE  
WILLOUGHBY, OH 44094-7902

I - RICHARD & YVETTA WILLIAMS  
29841 KNOLL VIEW DR  
RANCHO PALOS VERDES, CA 90275-6437

I - RICHARD BERGMANN  
1025 SUMMER LAKES DR  
ORLANDO, FL 32835-5128

I - RICHARD CAMPBELL  
88 HICKORY PL  
ROCKAWAY, NJ 07866-2812

I - RICHARD CARDELL  
1528 CORNELL RD  
JACKSONVILLE, FL 32207-7702

I - RICHARD CHURRAY  
P.O. BOX 505  
PORT HAYWOOD, VA 23138-0000

I - RICHARD FELS  
3417 CHIMNEY ROCK ROAD  
MANHATTAN, KS 66503-2407

I - RICHARD FERNALD  
PO BOX 1320  
BEND, OR 97709-1320

I - RICHARD FLETCHER  
11055 FORESTVIEW LN  
SAN DIEGO, CA 92131-1327

I - RICHARD FRAZIER  
522 ALAMO TRL  
GRAPEVINE, TX 76051-8004

I - RICHARD HARDIN  
105 NW SINCLAIR DR  
GRANTS PASS, OR 97526-3363

I - RICHARD HEANING  
12 SENECA DR  
N MASSAPEQUA, NY 11758-1026

I - RICHARD J. TREITNER  
PO BOX 222 9 ACADEMY ST  
PINE HILL, NY 12465-0222

I - RICHARD KENNON  
37814 NE 234TH AVE  
YACOLT, WA 98675-4812

I - RICHARD KRAMER  
8505 SOUTHWEST 80TH PLACE  
MIAMI, FL 33143-7003

I - RICHARD LEE  
2001 W SUPERIOR ST # 228  
DULUTH, MN 55806-2019

I - RICHARD LETOURNEAU  
386 HUNT CUTOFF  
HALLSVILLE, TX 75650-3104

I - RICHARD PASICHNYK  
1007 W MAIN ST LOT 11  
MESA, AZ 85201-7127

I - RICHARD RASKIN  
13724 BLUEFIN DR  
WOODBIDGE, VA 22193-0000

I - RICHARD ROTHSTEIN  
11600 SOUTHWEST 96TH TERRACE  
MIAMI, FL 33176-2593

I - RICHARD SANDERS  
2022 DRIFTSTONE DR  
GLENDDORA, CA 91740-5388

I - RICHARD SONNENBERG  
419 ORLENA AV  
LONG BEACH, CA 90814-0000

I - RICHARD SPOTTS  
1125 W EMERALD DR  
SAINT GEORGE, UT 84770-6026

I - RICHARD STRAWSER  
6548 KINGS CHARTER RD  
REYNOLDSBURG, OH 43068-1941

I - RICHARD TILL  
1436 SE STARK ST APT 205  
PORTLAND, OR 97214-1491

I - RICHARD WREDE  
305 MAIN ST  
RIVERTON, NJ 08077-1240

I - RICK BLANCHETT  
1441 SW 97TH AVE  
PEMBROKE PINES, FL 33025-0000

I - RICK MEYERS  
7015 N 90TH ST  
MILWAUKEE, WI 53224-4706

I - RICKI BENNETT  
65 RIVERSIDE AVE APT 32  
MEDFORD, MA 02155-4604

I - RICKY TAYLOR  
4221 114TH ST SE  
EVERETT, WA 98208-7761

I - RITA SANFORD  
454 REQUEZA STREET APT. 218A  
ENCINITAS, CA 92024-6760

I - RIVER EYES  
1918 N 7TH ST  
BOISE, ID 83702-2805

I - ROB BRODERICK  
818 QUEEN DR  
WEST CHESTER, PA 19380-1442

I - ROB CAYLOR  
5458 LIPPAN WAY  
INDIANAPOLIS, IN 46221-4893

I - ROB ROCKE  
98 LINDEN ST APT A  
NEW HAVEN, CT 06511-2453

I - ROB SACCOCCIO  
4609 GRAMERCY CT  
RALEIGH, NC 27609-5580

I - ROB SELTZER  
6465 KANAN DUME RD  
MALIBU, CA 90265-4040

I - ROBBY STROZIER  
130 CALLOWAY DR. APT. B  
MACON, GA 31204-2944

I - ROBERT A. SARGENT  
320 MAIN ST  
SALEM, NH 03079-2498

I - ROBERT APPERSON  
1311 LORIMER ROAD  
RALEIGH, NC 27606-0000

I - ROBERT B. KAPLAN  
PO BOX 577  
PORT ANGELES, WA 98362-0105

I - ROBERT BARRINGTON  
32 THORNDIKE ST  
BEVERLY, MA 01915-5837

I - ROBERT C. DAVENPORT  
50 WINCHESTER ST APT 305  
BROOKLINE, MA 02446-2754

I - ROBERT CARRINGTON  
1138 18TH AVENUE S.  
BIRMINGHAM, AL 35205-0000

I - ROBERT FINKBINE  
8150 S OPEN TRAIL LN  
APACHE JUNCTION, AZ 85218-5121

I - ROBERT FURSICH  
9 LONGFELLOW ST  
HARTSDALE, NY 10530-0000

I - ROBERT GARTNER  
6319 SHERINGHAM ST  
HOUSTON, TX 77085-3244

I - ROBERT HILL  
E1251 CHANNEL PARK DR  
WAUPACA, WI 54981-9737

I - ROBERT HOLSTON  
BUZZI UNICEM  
14900 INTRACOASTAL DRIVE  
NEW ORLEANS, LA 70129

I - ROBERT J. MOLDOVAN  
90 LOON MOUNTAIN LANE  
CENTER CONWAY, NH 03813-0000

I - ROBERT JANUSKO  
43 UPSALA PATH  
WEST MILFORD, NJ 07480-4244

I - ROBERT JERESKI  
2 TUDOR CITY PL  
NEW YORK, NY 10017-6800

I - ROBERT JONES  
443 24TH ST NE  
SALEM, OR 97301-4450

I - ROBERT KEISER  
6131 SOUTHWEST 85TH STREET  
CORAL GABLES, FL 33143-8145

I - ROBERT L FOLEY, JR.  
20 HAMPSON ST  
S ATTLEBORO, MA 02703-7820

I - ROBERT LAMAR  
145 TRESCONY ST  
SANTA CRUZ, CA 95060-4229

I - ROBERT LEVENSON  
29 CREST DR  
LITTLE SILVER, NJ 07739-1317

I - ROBERT MAGILL  
PO BOX 1314  
PALISADE, CO 81526-1314

I - ROBERT MENDOZA  
DEPT OF PUBLIC WORKS - CITY OF NO  
1300 PERDIDO STREET, ROOM 6W03  
NEW ORLEANS, LA 70112

I - ROBERT MYERS  
5210 N EISENHOWER RD  
ROSWELL, NM 88201-8603

I - ROBERT NOAKES  
756 WEYBOURNE CT  
MARIETTA, GA 30066-4804

I - ROBERT O'BRIEN  
972 ALLAMANDA DRIVE  
DELRAY BEACH, FL 33483-4914

I - ROBERT PALSHA  
2720 TERRACE DRIVE  
BURLINGTON, NC 27215-5448

I - ROBERT PANCNER  
7936 REDONDO CT  
DARIEN, IL 60561-1633

I - ROBERT PARKINSON  
1542 SW 18TH TER  
FORT LAUDERDALE, FL 33312-4131

I - ROBERT RUTKOWSKI  
2527 SE FAXON CT  
TOPEKA, KS 66605-2086

I - ROBERT SCHULTZ  
1800 W FARWELL AVE APT 2A  
CHICAGO, IL 60626-3141

I - ROBERT SEMMLER  
3099 E VIRGO PL  
CHANDLER, AZ 85249-9695

I - ROBERT STREBECK  
509 ARANSAS DR  
EULESS, TX 76039-7516

I - ROBERT SYLVESTER  
PO BOX 22487 128 DIXON ST (BELOW)  
JUNEAU, AK 99802-0000

I - ROBERT WARRINGTON  
701 W PLEASANT GROVE RD  
WEST CHESTER, PA 19382-7123

I - ROBERT WEISS  
12604 OTSEGO ST  
VALLEY VILLAGE, CA 91607-2920

I - ROBERT WISE  
6778 CANBURY DRIVE  
LAKELAND, FL 33809-7824

I - ROBERT WITZEMAN  
4619 E ARCADIA LN  
PHOENIX, AZ 85018-2804

I - ROBERT WOLF  
1705 GORDON DR  
NAPLES, FL 34102-0000

I - ROBERT ZAI III  
89 LUMLEY AVE  
FORT THOMAS, KY 41075-1840

I - ROBERTA CLAYPOOL  
350 OCEAN DR  
KEY BISCAYNE, FL 33149-1611

I - ROBERTA E. NEWMAN  
300 MONTE VISTA AVENUE  
MILL VALLEY, CA 94941-5080

I - ROBERTA HYLTON  
19160 AMELIA DR  
ABINGDON, VA 24211-6772

I - ROBERTA RICHARDSON  
P O BOX 1304  
MELBOURNE, FL 32902-1304

I - ROBIN BAILEY  
1130 US HIGHWAY 24  
STOCKTON, KS 67669-8835

I - ROBIN BUTLER  
4501 FRITCHEY ST  
HARRISBURG, PA 17109-2812

I - ROBIN NADEAU  
26 MICKLER BLVD  
ST AUGUSTINE, FL 32080-5906

I - ROBIN PEACOCK  
PO BOX 3161  
SAINT PETERSBURG, FL 33731-3161

I - ROCHELLE ROLLENHAGEN  
8536 ALKIRE RD  
BEAR LAKE, MI 49614-9643

I - RODGER CARLOUGH  
800 UNION ST. B4  
BIRDSBORO, PA 01950-8265

I - RODNEY HEMMILA  
1889 WHITAKER ST  
WHITE BEAR LAKE, MN 55110-3755

I - ROGER HARRER  
224 APPALOOSA AVE  
POCATELLO, ID 83201-2005

I - ROGER HOFFMANN  
1118 E 7TH ST  
LOVELAND, CO 80537-4958

I - ROGER OVERHOLT  
200 JANZEN WAY  
HEMET, CA 92545-8875

I - ROGER PACKARD  
N7550 N SHORE ROAD  
LAKE MILLS, WI 53551-9638

I - ROLAND A. PRESS  
1290 7TH ST  
1290 7TH ST, CA 90254-4946

I - RON AVILA  
2901 PACIFIC AVE # 197  
SAN FRANCISCO, CA 94115-1011

I - RON DUCKWORTH  
208 WILLOWBROOK DRIVE  
MORGANTON, NC 00002-8655

I - RON THIGPEN  
1621 SUNRISE AVE  
RALEIGH, NC 27608-2547

I - RONALD H. SILVER  
1829 SEA OATS DR  
ATLANTIC BEACH, FL 32233-4511

I - RONALD KESTLER  
2101 CHALLEDON WAY  
LOUISVILLE, KY 40223-1236

I - RONALD MESSINA  
16911 WHISPERING PINES DRIVE  
GREENWELL SPRINGS, LA 70739-6235

I - RONALD SCHERER  
25581 W FLORENCE AVE  
ANTIOCH, IL 60002-0000

I - RONALD SITTON  
1921 BROKEN ARROW DR  
N LITTLE ROCK, AR 72118-3724

I - RONNIE MELIN  
22013 MARJORIE AVE  
TORRANCE, CA 90503-6938

I - ROSA MARTIRE  
201 E 17TH ST AP 14A  
NEW YORK, NY 10003-3677

I - ROSALIE HEWITT  
13 BROWN ST APT 12A  
NORWICH, NY 13815-1847

I - ROSAMOND MITCHELL  
7137 TUOLUMNE DR  
GOLETA, CA 93117-1310

I - ROSE COOK  
PO BOX 749  
RURAL RETREAT, VA 24368-0749

I - ROSE NICHOLS  
1601 S 15 AVE # 1 PO BOX 5516  
FARGO, ND 58105-5516

I - ROSE OLIVER  
1208 BAY ST STE 201  
BELLINGHAM, WA 98225-4304

I - ROSE PORTILLO  
2858 ANGUS ST  
LOS ANGELES, CA 90039-2631

I - ROSELINA GUERRA  
139 PUELBA LANE  
KISSIMMEE, FL 34743-9219

I - ROSEMARIE SAWDON  
PO BOX 125  
BLACKSBURG, VA 24063-0125

I - ROSEMARY NELSON  
3548 CODY WAY  
SACRAMENTO, CA 95864-1535

I - ROSEMARY SHOONG  
206 N FOURTH AVE #800  
SANDPOINT, ID 83864-1424

I - ROSS FARNHAM  
2809 BOLLING RD  
FALLS CHURCH, VA 22042-2012

I - ROSS KELSON  
7330 OCEAN TERRACE SUITE 1801  
MIAMI BEACH, FL 33141-0000

I - ROSS LOCKRIDGE, III  
PO BOX 22  
CERRILLOS, NM 87010-0022

I - ROSS TEDTER  
1703 TREADWELL ST  
AUSTIN, TX 78704-2145

I - ROXANNE ACOSTA  
6861 SW 44TH STREET 302  
MIAMI, FL 33155-0000

I - ROXIE SCHLIESMANN  
320 STATE ST APT 15  
HOLMEN, WI 54636-9167

I - ROY MOSS  
7000 MONUMENT DR # A  
GRANTS PASS, OR 97526-8516

I - ROYAL HARTIGAN  
1068 NORTH ST  
WESTPORT, MA 02790-0000

I - RUSH FULLER  
460 CHERYL LN NW  
KENNESAW, GA 30144-1311

I - RUSS ANDERSON  
240 LIVINGSTON AVE  
MISSOULA, MT 59801-8102

I - RUSS PASCOE  
400 E 22ND ST  
VANCOUVER, WA 98663-3205

I - RUSSEL DEROCHE  
919 SAINT ROCH AVENUE  
NEW ORLEANS, LA 70117-7839

I - RUSSELL MCBURNEY  
35 VIA ENCANTO  
MONTEREY, CA 93940-4334

I - RUSSELL WEISZ  
319 LAGUNA STREET  
SANTA CRUZ, CA 95060-6109

I - RUSSELL YOUNG  
BURK-KLEINPETER, INC.  
4176 CANAL STREET  
NEW ORLEANS, LA 70119-5994

I - RUTH ANN WIESENTHAL-GOLD  
657 HURST ROAD NE  
PALM BAY, FL 32907-0000

I - RUTH BYINGTON  
3607 172ND STREET  
FLUSHING, NY 11358-2350

I - RUTH LEVOW  
6950 COUNTRY PLACE ROAD  
WEST PALM BEACH, FL 33411-0000

I - RUTH OLSON  
1244 MOUNTAIN BLVD  
OAKLAND, CA 94611-1922

I - RUTH SILVERMAN  
60 JOHNSON RD  
STONE RIDGE, NY 12484-5004

I - RUTH TROETSCHLER  
184 LOCKHART LANE  
LOS ALTOS, CA 94022-2121

I - RYAN KENNEDY  
7624 SE SOUTHGATE  
PORTLAND, OR 97222-1279

I - S. PERRY  
1403 INYO ST APT 30  
CRESCENT CITY, CA 95531-2146

I - SALIANE ANDERSSON  
7140 N GUTHRIE RD  
TUCSON, AZ 85743-9353

I - SALLY BROADBENT  
108 STONELEIGH CT  
ROCHESTER, NY 14618-3268

I - SALLY SCHWARTZ  
1402 JEFFERSON ST  
HYATTSVILLE, MD 20782-3450

I - SAMUEL KENDALL  
510 HERMITS TRAIL  
ALTAMONTE SPRINGS, FL 32701-0000

I - SANDRA BARNETT  
5232 S TANAGER AVE  
BATTLEFIELD, MO 65619-9222

I - SANDRA COUCH  
2903 BARTLETT CT UNIT 201  
NAPERVILLE, IL 60564-4694

I - SANDRA LORD  
3531 S M ST  
TACOMA, WA 98418-2606

I - SANDRA NOAH  
939 S DUNSMUIR AVE  
LOS ANGELES, CA 90036-4729

I - SANDRA NORDMARK  
6666 D DR S  
CERESCO, MI 49033-9789

I - SANDRA PHILLIPS  
1114A GLENWOOD AVE  
RALEIGH, NC 27605-1516

I - SANDRA WAGNER  
126 AVENUE B  
BRYAN, OH 43506-1507

I - SANDRA WALTERS  
480 WARRIOR TRAIL  
ENTERPRISE, FL 32725-0000

I - SANDRA WAWRYTKO  
10869 WALLINGFORD ROAD  
SAN DIEGO, CA 92126-2560

I - SANDY HORNFECK  
4025 CALLE DEL MEDIA  
FORT MOHAVE, AZ 86426-0000

I - SANDY LEVINE  
2304 PANORAMA DRIVE  
LA CRESCENTA, CA 91214-0000

I - SANDY LYNN  
7631 LYNN AVE  
SAINT LOUIS, MO 63130-1311

I - SANDY ROSENTHAL  
LEVEES.ORG  
1421 SONIAT STREET  
NEW ORLEANS, LA 70115

I - SARA BRYDGES  
24 MARTHA'S POINT ROAD  
CONCORD, MA 01742-4917

I - SARA CENDEJAS-ZARELLI  
2124 YOUNG ST APT 2  
BELLINGHAM, WA 98225-3670

I - SARA GARDNER-HEART  
460 UMLAND DR  
SANTA ROSA, CA 95401-5355

I - SARA GRAZIOSA  
PO BOX 388  
EAST CANAAN, CT 06024-0388

I - SARAH BARRS  
517 HICKORY ST  
SAN FRANCISCO, CA 94102-5518

I - SARAH BOUCAS NETO  
319 WINDING WAY  
MERION STATION, PA 19066-1521

I - SARAH CULLEN  
2987 BRIDGEPORT AVENUE  
MIAMI, FL 33133-3607

I - SARAH DANNER  
6661 FAIRMONT STREET  
NAVARRE, FL 32566-8135

I - SARAH FRANKLIN  
6911 SAN PEDRO CIR  
BUENA PARK, CA 90620-2930

I - SARAH HINCKS  
19 PUNCH BROOK RD  
BURLINGTON, CT 06013-1809

I - SARAH JOHNSON  
86 N MIDLAND AVE  
NYACK, NY 10960-2529

I - SARAH LAGOMARSINO  
5167 GREENBERRY DRIVE  
SACRAMENTO, CA 95841-0000

I - SARAH LAUCK  
3509 PARLIAMENT DR.  
OCEAN SPRINGS, MS 39564-0000

I - SARAH LINNEY  
711 VENUS DR  
COCOA, FL 32926-5336

I - SARAH WILLIAMS  
408 CHEWNING ST  
CAMDEN, SC 29020-2808

I - SASKIA SANTOS  
704 SW 16TH AVE APT 306  
GAINESVILLE, FL 32601-8581

I - SCOTT ANGELLE  
SECRETARY-STATE OF LOUISIANA  
DEPARTMENT OF NATURAL RESOURCES  
P.O. BOX 44027  
BATON ROUGE, LA 70804

I - SCOTT ANGELLE  
LA DEPT OF NATURAL RESOURCES  
P.O. BOX 94396  
BATON ROUGE, LA 70804-9396

I - SCOTT BISHOP  
1710 GILES AVE NW  
OLYMPIA, WA 98502-4734

I - SCOTT BURBRIDGE  
3301 POWDER MILL RD  
ADELPHI, MD 20783-1033

I - SCOTT NICOL  
1604 ORANGE AVE  
WESLACO, TX 78596-7924

I - SCOTT SOBEL  
201 W 72ND ST APT 8D  
NEW YORK, NY 10023-2765

I - SEAN DUFFY  
PRESIDENT & CEO  
GULF STATES MARITIME ASSOCIATION  
3939 NORTH CAUSEWAY BLVD, SUITE  
METAIRIE, LA 70002

I - SEPTEMBER JAZZBORNE  
PO BOX 996  
MELBOURNE, FL 32902-0000

I - SHANA KELLY  
9317 MONHEGAN AVE  
BAKER, LA 70714-0000

I - SHANA UDVARDY  
2305 RENAISSANCE WAY NE  
ATLANTA, GA 30308-2462

I - SHANE ROBINSON  
2814 E OLIVE ST  
SEATTLE, WA 98122-3148

I - SHANNON HARPER  
PO BOX 12706  
GAINESVILLE, FL 32604-0706

I - SHANNON TEPER  
1920 S PALMETTO AVENUE  
FLAGLER BEACH, FL 32136-3956

I - SHAREN PERRY  
1327 W 200 S  
OGDEN, UT 84404-4703

I - SHARLENE WHITE  
6807 CAMINO ROJO  
SANTA FE, NM 87507-3455

I - SHARON B. PETERSON  
12994 LA BARR MEADOWS ROAD  
GRASS VALLEY, CA 95949-9642

I - SHARON MERRITT  
2905 W GENESEE ST  
2905 W GENESEE ST, NY 13219-0000

I - SHARON MORRIS  
23693 GLENBROOK LN  
HAYWARD, CA 94541-4458

I - SHARON OLSON  
20 KANSAS AVENUE  
BABSON PARK, FL 33827-0000

I - SHARON RUSSICK  
2851 S OCEAN BOULEVARD APT. 4L  
BOCA RATON, FL 33432-8405

I - SHAUNDA CRISLER  
2635 MAPELTON AVE #178  
BOULDER, CO 80304-0000

I - SHAWN MCGUIRE  
129 N 8TH STREET 401  
LAS VEGAS, NV 89101-0000

I - SHAWN OLSEN  
9025 WAVERLY DR SW  
LAKEWOOD, WA 98499-1988

I - SHAWN PETERSON  
10124 ASPEN ST  
AUSTIN, TX 78758-5102

I - SHEILA COY  
401 DALY AVE.  
MISSOULA, MT 59801-0000

I - SHEILA LOAYZA  
15 OVERLOOK ROAD  
WAYLAND, MA 01778-2905

I - SHEILA VINCENT  
903 PENNSYLVANIA AVE  
NEW CASTLE, DE 19720-2558

I - SHEILA WARD  
265 CALLE SORBONA # 2 URB UNV. GDNS  
SAN JUAN, PR 00927-4106

I - SHELBY HEIMBACH  
8127 RAPALLO WAY  
CLAY, NY 13041-0000

I - SHELLEY DAHLGREN  
4449 242ND AVE SE  
ISSAQUAH, WA 98029-7520

I - SHELLEY GALLOWAY  
2700 N A1A 6-102  
INDIALANTIC, FL 32903-0000

I - SHELLEY JESSES  
1006 MILES TER  
UNION CITY, GA 30291-2257

I - SHELLEY PARKER  
1214 8TH AVENUE  
ALBANY, GA 31707-3510

I - SHELLEY DANIELS  
1615 N 36TH ST APT 8  
SAINT JOSEPH, MO 64506-2386

I - SHELLY YOUNG  
PO BOX 176  
CARSON, WA 98610-0176

I - SHERI PFENDLER  
2502 FLAT SHOALS RD. SW  
CONYERS, GA 30094-0000

I - SHERIE BARYCHKO  
7033 NORTHWEST 63RD WAY  
PARKLAND, FL 33067-1448

I - SHERRI MYER  
164 1ST OAK DRIVE  
MABANK, TX 75156-9020

I - SHERRILL FUTRELL  
151 INNER CIRCLE  
DAVIS, CA 95616-5421

I - SHERRY CORDOVA  
731 GAIL AVE  
SUNNYVALE, CA 94086-8504

I - SHERRY MARSH  
5030 ALICANTE WAY  
OCEANSIDE, CA 92056-5159

I - SHERYL OCROTTY  
320 CAPATOLA STREET  
PORT CHARLOTTE, FL 33948-6214

I - SHIRLEY BURGA  
18650 BOWDISH RD  
GREGORY, MI 48137-9429

I - SHIRLEY FORD  
16909 EYLERS VALLEY RD  
EMMITSBURG, MD 21727-9730

I - SHIRLEY JIN  
335 EUTAU COURT  
INDIAN HARBOUR BEACH, FL 32937-0000

I - SHIRLEY SAMIT  
22584 MIDDLETOWN DR  
BOCA RATON, FL 33428-4710

I - SIDDHARTH MEHROTRA  
3230 ORANGE DRIVE  
CAMARILLO, CA 93010-1322

I - SIDNEY HANEY  
1285 NICE DR  
LEXINGTON, KY 40504-1515

I - SIDNEY RAMSDEN SCOTT  
PO BOX 3963  
CARMEL, CA 93921-3963

I - SIDNEY WAGNER  
367 LAKESHORE DR  
MCCOOK LAKE, SD 57049-4002

I - SIMONA FRAZIER  
2330 CHADWICK CIR  
KISSIMMEE, FL 34746-5174

I - SIOBHAN MCLAUGHLIN  
1409 RODMAN STREET  
HOLLYWOOD, FL 33020-6435

I - SISSY YATES  
95 E 55TH ST  
LONG BEACH, CA 90805-5259

I - SISTER DIANNE ZIMMER  
5454 S HOHMAN AVE  
HAMMOND, IN 46320-1931

I - SISTER LETITIA PRENTICE  
S83W27815 BEAVER TRL  
MUKWONAGO, WI 53149-9623

I - SISTER MARY FRAN GEBHARD  
PO BOX 66  
EAU CLAIRE, WI 54702-0066

I - SOL COHEN  
261 BREEZEWALK DR  
VALLEJO, CA 94591-7145

I - SOLO GREENE  
PO BOX 57  
LAPWAI, ID 83540-0057

I - SONIA BELLIN  
438 SO. CRESCENT DR.  
BEVERLY HILLS, CA 90212-0000

I - SONIA BOWLING  
2712 W. THARPE ST. APT. I-60  
TALLAHASSEE, FL 32303-8613

I - SOPHIA RUBINSTEIN  
310 GREENWICH ST  
NEW YORK, NY 10013-2708

I - SORETTA RODACK  
310 E 6TH ST  
NEW YORK, NY 10003-8705

I - SPARROW HAWK  
77 SIRCY RIDGE LANE  
PLEASANT SHADE, TN 37145-3324

I - SPENCER BEDWELL  
8216 BART AVE NE  
ALBUQUERQUE, NM 87109-1705

I - STACEY ARSCOTT  
11281 E 13 MILE RD  
WARREN, MI 48093-2526

I - STACEY BAKER  
178 GARRISON XING  
DALLAS, GA 30157-7931

I - STACEY CYRUS  
5358 LAKE LE CLARE  
LUTZ, FL 33558-0000

I - STACI STANTON  
707 W JEFFERSON ST  
KNOXVILLE, IA 50138-2924

I - STAN MARTIN  
5001 W SLIPPERY FALL RD  
TISHOMINGO, OK 73460-4422

I - STAN SAMUELS  
328 PONCE DE LEON PL  
DECATUR, GA 30030-5122

I - STAN SCHARF  
214 S HILL TER  
ITHACA, NY 14850-5606

I - STANLEY PENDZE  
308 E THAYER STREET  
PHILADELPHIA, PA 19134-0000

I - STANLEY S. BERG  
59 POQUITO RD  
SHALIMAR, FL 32579-1115

I - STANLEY WELSH  
2269 NW SUNSET BLVD  
JENSEN BEACH, FL 34957-0000

I - STEFANI GARIS  
929 WEDGEWOOD DR  
LANSDALE, PA 19446-1834

I - STEFANIE COLLINS  
3210 DUVAL ST  
AUSTIN, TX 78705-2430

I - STEPHAN DONOVAN  
4851 N BERNARD ST  
CHICAGO, IL 60625-5107

I - STEPHANIE CLOAK-SANDER  
N5554 LUEBKE RD  
BARABOO, WI 53913-9506

I - STEPHANIE EMBREY  
4205 E ANAHEIM ST  
LONG BEACH, CA 90804-4270

I - STEPHANIE FAIRCHILD  
6885 SHERRARD RD  
CAMBRIDGE, OH 43725-9560

I - STEPHANIE FEYNE  
PO BOX 230582  
NEW YORK, NY 10023-0010

I - STEPHANIE JACKSON  
5112 TINSTON CT  
SUMMERVILLE, SC 29485-8688

I - STEPHANIE POWELL  
3036 DAUPHINE ST  
NEW ORLEANS, LA 70117-6725

I - STEPHANIE POWER  
307 W. DIXIE HWY.  
DANIA BEACH, FL 33004-0000

I - STEPHEN CARDWELL  
230 LONGMARSH ROAD  
DURHAM, NH 03824-0000

I - STEPHEN CARLTON  
6251 CHATHAM WAY  
EDEN PRAIRIE, MN 55346-1308

I - STEPHEN DONNELLY  
6 PINEBROOK DR  
EASTHAMPTON, MA 01027-9723

I - STEPHEN DUNNE  
7 MARSH AVE  
WORCESTER, MA 01605-2214

I - STEPHEN ECHOLS  
180 BLOOMFIELD ST APT C1  
ATHENS, GA 30605-1265

I - STEPHEN GERWER  
532 SOUTHWEST BAILEY TERRACE  
FORT PIERCE, FL 34953-2917

I - STEPHEN JONES  
9405 HIGHLANDER BOULEVARD  
WALKERSVILLE, MD 21793-9112

I - STEPHEN MATERA  
336 NE 56TH ST  
SEATTLE, WA 98105-3740

I - STEPHEN MELIK  
7895 SOUTHEAST TRENTON AVENUE  
HOBE SOUND, FL 33455-5807

I - STEPHEN OWENS  
1018 RIVERCHASE NORTH DR  
BRANDON, MS 39047-7454

I - STEPHEN SLEEPER  
24716 CARNOUSTIE COURT  
24716 CARNOUSTIE COURT, FL 34135-7623

I - STEPHEN SPENCER  
REGIONAL ENVIRONMENTAL OFFICER  
U.S. DEPARTMENT OF THE INTERIOR  
P.O. BOX 26567  
ALBUQUERQUE, NM 87125

I - STEPHEN VAUGHAN  
419 EAST SAN RAFAEL ST  
COLORADO SPRINGS, CO 80903-0000

I - STEPHEN WHITE  
2011 IRVING AVE  
ASTORIA, OR 97103-3435

I - STEPHEN ZEREFOS  
1770 BEECHWOOD ST NE  
WARREN, OH 44483-4134

I - STEVAN SPENCER  
ORLEANS LEVEE DISTRICT  
6920 FRANKLIN AVE.  
NEW ORLEANS, LA 70112

I - STEVE BLACK  
2746 FEIFFER CIRCLE  
SARASOTA, FL 34235-0000

I - STEVE CANNIZARO  
ST. BERNARD PARISH  
8404 GALLOON DRIVE  
CHALMETTE, LA 70043

I - STEVE GIFFORD  
1846 19TH AVE APT 4  
VERO BEACH, FL 32960-0632

I - STEVE JENKINS  
823 OAKVIEW DRIVE  
SALEM, VA 24153-4823

I - STEVE KEEL  
USCG SECTOR NEW ORLEANS  
1615 POYDRAS STREET, SUITE 700  
NEW ORLEANS, LA 70112

I - STEVE KOCHMAN  
481 12TH ST APT 2C  
BROOKLYN, NY 11215-7007

I - STEVE LINNEROOTH  
16236 308TH ST  
CENTER CITY, MN 55012-7681

I - STEVE PRICE  
CAMP DRESSER MCKEE  
1515 POYDRAS STREET  
NEW ORLEANS, LA 70112

I - STEVE ROBAY  
25559 BROOKSHIRE DR  
CASTRO VALLEY, CA 94552-5511

I - STEVE SCHRAMM  
198 FAIR ST  
PETALUMA, CA 94952-2515

I - STEVE WIGGS  
1009 W PEACE ST  
RALEIGH, NC 27605-1419

I - STEVEN HEMSTREET  
5109 GREEN CREEK TER  
GLENN DALE, MD 20769-9132

I - STEVEN HIBSHMAN  
609 CELESTIAL LN  
FOSTER CITY, CA 94404-2751

I - STEVEN HUBER  
3500 N MILLER RD  
LINCOLN, NE 68521-2763

I - STEVEN LIBBY  
177 SUMMIT AVE  
JERSEY CITY, NJ 07304-3105

I - STEVEN PRESLEY  
36 NORTH RD  
ASHFORD, CT 06278-1215

I - STEVEN ROWELL  
9743 GOLDEN EAGLE AVENUE  
HIGHLANDS RANCH, CO 80129-0000

I - STEVEN SHORE  
8652 COBBLEFIELD DR APT 3D  
COLUMBIA, MD 21045-5921

I - STEVEN SORENSEN  
9 WEATHERLY CT  
VALLEY CENTER, KS 67147-8547

I - STEVEN TEMPELMAN  
9612 ASPEN HILL CIR  
LONE TREE, CO 80124-5493

I - STEVEN TURLEY  
960 ELDORADO AVE F  
NEDERLAND, CO 80466-9561

I - STEWART REGO  
PO BOX 402  
MINEOLA, NY 11501-0402

I - STEWART WILBER  
PO BOX 280  
THE ROCK, GA 30285-0280

I - STUART HILL  
210 GREENLAND DR  
YORKTOWN, VA 23693-3524

I - SUDI SUDI MCCOLLUM  
3244 CORNWALL DR.  
GLENDALE, CA 91206-1419

I - SUE CHRISTIANSEN  
41 VALLEY AVE APT 7  
IOWA CITY, IA 52246-2261

I - SUE E. DEAN  
33945 N 66TH WAY  
SCOTTSDALE, AZ 85262-7231

I - SUE ELLEN LYONS  
612 ROYAL ST APT A  
NEW ORLEANS, LA 70130-2116

I - SUE KAUFLEIE  
840 JACKSON ST.  
LANSDALE, PA 19446-5262

I - SUE STEINMANN  
7046 REIMANN RD  
ARENA, WI 53503-9536

I - SUMNER PEIRCE  
1501 NORTHWEST 42ND STREET  
FORT LAUDERDALE, FL 33309-4527

I - SUSAN BLAKER  
SAN ANTONIO, TX 78223-0000

I - SUSAN BROADHEAD  
328 MARTINS CREEK RD  
BARNARDSVILLE, NC 28709-8705

I - SUSAN BURGENBAUCH  
275 ANDSBURY AVE  
MOUNTAIN VIEW, CA 94043-4801

I - SUSAN C. HINZPETER  
2375 H STREET  
BAKER CITY, OR 97814-1872

I - SUSAN CARROLL  
3203 150TH ST  
FLUSHING, NY 11354-3245

I - SUSAN CHANDLER  
1060 S US HIGHWAY 1 LOT 99  
VERO BEACH, FL 32962-5681

I - SUSAN CUMMINS  
5913 RAMSGATE ROAD  
BETHESDA, MD 20816-1127

I - SUSAN DAVIS  
6348 POCAHONTAS CLUB RD  
VIRGINIA BEACH, VA 23457-1260

I - SUSAN EMERY  
6906 ARBOR OAKS COURT  
BRADENTON, FL 34209-7435

I - SUSAN EVILSIZER  
20529 BROOKSTONE TRL  
CLEVELAND, OH 44130-2489

I - SUSAN GEEAR  
2211 SPRING ST  
MEDFORD, OR 97504-6377

I - SUSAN GOLDIN  
141 BEEBE POND RD  
CANAAN, NY 12029-2505

I - SUSAN HARDIN  
804 KONRAD COURT  
LITTLE ROCK, AR 72223-9201

I - SUSAN HASKEW  
PO BOX 1504  
SIERRA VISTA, AZ 85636-1504

I - SUSAN KEPNER  
105 MILL RD  
HAMPTON, NH 03842-3338

I - SUSAN KUHN  
9807 NE SKIDMORE ST  
PORTLAND, OR 97220-3565

I - SUSAN L. D. SHAMBLIN  
1230 KINGLET DR  
MORGANTON, NC 28655-6739

I - SUSAN LAHEY  
206 14TH AVENUE NE  
ST. PETERSBURG, FL 33701-0000

I - SUSAN MARKOWITZ  
PO BOX 656  
LAHASKA, PA 18931-0656

I - SUSAN MERRITT  
19924 BUHRSTONE DR  
GAITHERSBURG, MD 20886-1017

I - SUSAN MOCK  
2705 CHESTNUT ST  
WILMINGTON, NC 28405-3039

I - SUSAN P. VESSICCHIO  
66 POPE STREET  
NEW HAVEN, CT 06512-0000

I - SUSAN ROSS  
3510 NYLAND WAY  
LAFAYETTE, CO 80026-8900

I - SUSAN SCHNEIDER  
1326 SW 104TH COURT  
MIAMI, FL 33174-0000

I - SUSAN SELBIN  
600 ALCALDE PL SW UNIT 2B  
ALBUQUERQUE, NM 87104-1055

I - SUSAN SILBERBERG  
1127 EAGLE WAY  
LYONS, CO 80540-8434

I - SUSAN SMART  
16280 72ND RD. N  
LOXAHATCHEE, FL 33470-3107

I - SUSAN SNYDER  
1894 TUDOR RD  
NORTH PALM BEACH, FL 33408-0000

I - SUSAN STRAND  
107 SIMMONS WAY  
FOLSOM, CA 95630-1831

I - SUSAN WOLF  
405 GARDEN STATE DR  
CHERRY HILL, NJ 08002-1915

I - SUSAN YORKE  
7501 SW SPRINGHAVEN AVE  
INDIANTOWN, FL 34956-0000

I - SUZANN GILMORE  
610 FELLOWSHIP DRIVE  
FERN PARK, FL 32730-2781

I - SUZANNE GREENE  
JONES FALLS WATERSHED  
3000 CHESTNUT AVE STE 100  
BALTIMORE, MD 21211-2756

I - SUZANNE MURPHY LARRONDE  
7101 LA RONDA COURT BA293  
SARASOTA, FL 34238-0000

I - SUZANNE PIERSON  
1845 DEER VALLEY RD  
BOULDER, CO 80305-5227

I - SUZANNE WONG  
1041 NE 166 ST  
NORTH MIAMI BEACH, FL 33162-0000

I - SYBIL KOHL  
18103 NE 159TH AVE  
BRUSH PRAIRIE, WA 98606-8738

I - SYDNEY COFFEE  
LACPR  
1051 N 3RD ST., STE 138, CAPITOL  
BATON ROUGE, LA 70804

I - SYLVIA BARNARD  
84 WILLETT ST  
ALBANY, NY 12210-1038

I - SYLVIA CARDELLA  
4570 BLUFF TOP  
HYDESVILLE, CA 95547-9416

I - SYLVIA KANEKO  
22 PETTEE ST  
NEWTON, MA 02464-1213

I - SYLVIA RODRIGUEZ  
227 E 5TH ST APT 3FW  
NEW YORK, NY 10003-8556

I - T. CRUGNOLA  
VENDITTO RD.  
REVERE, MA 02151-2894

I - T. LOGAN RUSSELL  
PO BOX 2052  
MADISON, MS 39130-2052

I - T.S. MCMILLIN  
299 E COLLEGE ST  
OBERLIN, OH 44074-1354

I - TAMARA BONECK  
505 MESA CT  
WAUKESHA, WI 53188-4413

I - TAMARA CROLL  
N7703 EVERGREEN DR  
CHRISTMAS, MI 49862-8958

I - TAMERA BRYANT  
990 BRYDEN RD  
COLUMBUS, OH 43205-1812

I - TAMMY AMBLER  
16259 LONE STAR RANCH DR  
CONROE, TX 77302-8303

I - TAMMY ROBINSON  
1588 LAKE COUNTRY DR  
ASHEBORO, NC 27205-0508

I - TAMRA MCCONOUGHAY  
1532 W HIGH STREET  
DAVENPORT, IA 52804-2117

I - TANYA COWPERTHWAIT  
8622 CHAPEL DR  
ANNANDALE, VA 22003-3618

I - TASH HODGES  
PO BOX 78  
FAYETTEVILLE, OH 45118-0078

I - TAWNIA SHIELDS  
2975 KELLY RD  
HERNANDO, MS 38632-7962

I - TED FISHMAN  
790 VILLA TERESA WAY  
SAN JOSE, CA 95123-2639

I - TERI MUROFF  
5613 CATALPA AVE  
RIDGEWOOD, NJ 11385-4833

I - TERENCE PAVLETIC  
12810 W NORTH LANE  
NEW BERLIN, WI 53151-9055

I - TERRI GREENWELL  
8610 HIGHLAND RD  
MARTINSVILLE, IN 46151-8320

I - TERRI HUCK  
8713 WADEBROOK TER  
SPRINGFIELD, VA 22153-3417

I - TERRY CUMMINGS  
6740 E 10TH AVE  
ANCHORAGE, AK 99504-1814

I - TERRY HUEY  
PO BOX 22253  
LEXINGTON, KY 40522-2253

I - TERRY KILCREASE  
308 FOREST AREA RD  
KINSTON, AL 36453-6044

I - TERRY MILLER  
106 WARRINER AVE  
LITCHFIELD, MI 49252-9741

I - TERRY PROEGER  
755 INDIAN BEACH LANE  
SARASOTA, FL 34234-5744

I - TERRYANN TOWERS  
141 WELLINGTON RD  
RINDGE, NH 03461-7804

I - THADDEUS CHAUVIN  
1218 DOGWOOD AVENUE  
NEW IBERIA, LA 70560-5733

I - THERESA EVERETT  
500 HIGH CLIFFE LANE  
TARRYTOWN, NY 10591-0000

I - THERESA JAQUSS  
417 13TH ST APT C  
HUNTINGTON BEACH, CA 92648-4560

I - THERESA PERENICH  
215 RIVERHILL DR  
ATHENS, GA 30606-4039

I - THERESA SISKIND  
11763 7TH LANE NORTH BLD#8 APT#4  
ST. PETERSBURG, FL 33716-0000

I - THERESA TERHARK  
8602 JEWEL AVE S  
COTTAGE GROVE, MN 55016-4901

I - THOMAS ALEXANDER  
499 BELL LANE  
  
QUINCY, CA 95971-9682

I - THOMAS BRENNER  
512 BELLA ST  
  
HOLLIDAYSBURG, PA 16648-2304

I - THOMAS C. JACKSON  
SE LA FLOOD PROTECTION AUTHORITY-  
EAST  
  
203 PLAUCHE COURT  
HARAHAN, LA 70123

I - THOMAS CONROY  
1466 11TH ST  
MANHATTAN BEACH, CA 90266-6108

I - THOMAS FEDORKA  
7472 GORDON LOOP  
BROOKSVILLE, FL 34601-7041

I - THOMAS GROSS  
11409 PERICO ISLE CIR  
BRADENTON, FL 34209-0000

I - THOMAS KALIHI  
95-185 HOKUULA PLACE  
MILILANI, HI 96789-1029

I - THOMAS KLEM  
725 KUSER RD APT E4  
HAMILTON, NJ 08619-0000

I - THOMAS MULLIGAN  
222 SUNSET AV  
ISLAND PARK, NY 11558-2242

I - THOMAS NELSON  
105 DREXEL AVE  
LANSDOWNE, PA 19050-1304

I - THOMAS PASS  
1304 7TH ST  
LAKE CHARLES, LA 70601-6320

I - THOMAS PATNAUDE  
2460 SUMAC WAY  
SAINT PAUL, MN 55125-3944

I - THOMAS SAAM  
2651 PINEAPPLE AVE  
MELBOURNE, FL 32935-0000

I - THOMAS WELTON  
202 MARSHALL ST  
BROOKNEAL, VA 24528-0000

I - THOR BAHRMAN  
PO BOX 724  
CORBIN, KY 40702-0724

I - TIA TRIPLET  
4073 BLEDSOE AVE  
LOS ANGELES, CA 90066-5429

I - TIM BARLOW  
923 RIVER MOUNTAIN DR  
HENDERSON, NV 89015-2740

I - TIM FLOOD  
503 E MEDLOCK DR  
PHOENIX, AZ 85012-1512

I - TIM GLOVER  
9660 ESTUARY WAY  
SEBASTIAN, FL 32958-6337

I - TIM REEDE  
3302 24TH AVE S  
MINNEAPOLIS, MN 55406-2404

I - TIM ROBBINS  
1131 N MARYLAND AVE  
GLENDALE, CA 91207-1606

I - TIM WALTERS  
1458 PARAMOUNT DRIVE APT 4A  
HUNTSVILLE, AL 35806-0000

I - TIMOTHY BROWN  
520 W 15TH ST  
THE DALLES, OR 97058-1527

I - TIMOTHY COLEMAN  
30 HORSESHOE LN  
REPUBLIC, WA 99166-9537

I - TIMOTHY DEVINE  
24702 BROADMORE AVE  
  
HAYWARD, CA 94544-1126

I - TIMOTHY DODDY  
SE LA FLOOD PROTECTION AUTHORITY-  
EAST  
  
203 PLAUCHE COURT  
HARAHAN, LA 70123

I - TIMOTHY DODDY  
PRESIDENT-SOUTHEAST LOUISIANA  
FLOOD PROTECTION AUTHORITY-EAST  
FLOOD PROTECTION AUTHORITY-EAST  
203 PINACHE COURT, SUITE B  
HARAHAN, LA 70122

I - TIMOTHY KENNEDY  
2527 WEST 49TH STREET  
DAVENPORT, IA 52806-0000

I - TIMOTHY KNECHT  
1716 SE 49TH AVE  
PORTLAND, OR 97215-3225

I - TIMOTHY MOSSMAN  
4105 CHRISTACY WAY  
MARIETTA, GA 30066-2780

I - TIMOTHY SHANAHAN  
10470 FALCON AVE  
FOUNTAIN VALLEY,, CA 92708-7412

I - TINA BURNS  
241 VALLEY RD  
ROCHESTER, NY 14618-2511

I - TINA FRITTS  
715 MINNESOTA AVE  
OWATONNA, MN 55060-3614

I - TINA HENIZE  
PO BOX 421162  
SUMMERLAND KEY, FL 33042-0000

I - TINA HOROWITZ  
4701 PINE ST APT M8  
PHILADELPHIA, PA 19143-7002

I - TINA MCQUISTON  
1816 CHANDRAPURA LN APT A  
FAIRFIELD, IA 52556-9098

I - TINA MOSSBARGER  
5567 CYNTHIA LANE  
SARASOTA, FL 34235-0000

I - TOBI ZAUSNER  
137 E 38TH ST APT 6J  
NEW YORK, NY 10016-2620

I - TODD FRIEDMAN  
5707 15TH ST N  
ARLINGTON, VA 22205-2856

I - TODD SOMODEVILLA  
568 10TH ST  
BROOKLYN, NY 11215-4402

I - TODD WEBSTER  
4000 SOUTHWEST 47TH STREET LOT E3  
GAINESVILLE, FL 32608-2203

I - TODD WILSON  
1504 HENRY ST  
NORMAL, IL 61761-4824

I - TOM BURKETT  
1793 RIVER RD  
GRANVILLE, OH 43023-9523

I - TOM FERGUSON  
543 N MACDONALD  
MESA, AZ 85201-5017

I - TOM HEINRICH  
14651 W COUNTY ROAD B  
HAYWARD, WI 54843-6627

I - TOM HISSONG  
408 GOLD KEY BLVD  
DAYTON, OH 45415-2129

I - TOM HOLDER  
2103 PLUM RD  
STARKVILLE, MS 39759-2727

I - TOM MERRIMAN  
2515 MERIDIAN ST  
HUNTSVILLE, AL 35811-0000

I - TOM SCIAMANNA  
1329 W HILE RD  
MUSKEGON, MI 49441-4829

I - TOM WALLS  
PO BOX 130265  
CORAM, MT 59913-0265

I - TOMAR LEVINE  
191 CLAREMONT AVE APT 43  
NEW YORK, NY 10027-4035

I - TONI SNIDOW  
9323 MANCHACA RD APT 1124  
AUSTIN, TX 78748-6257

I - TONJA G.  
631 MILL STREET  
EXCELSIOR, MN 55331-0000

I - TONY DEFALCO  
4347 NE SUMNER ST  
PORTLAND, OR 97218-1543

I - TONY KOROMILAS  
3640 ALAN DRIVE  
TITUSVILLE, FL 32780-5213

I - TRACY HART  
25 BLUE HERON RD  
WAKEFIELD, RI 02879-5648

I - TRINITY ROWLES  
2912 WEST 31ST AVENUE  
VANCOUVER, BC V6L 2A4

I - TRISHA STEPHENS  
10761 NORTHWEST 14TH STREET #287  
PLANTATION, FL 33322-6950

I - V. ALEXANDER  
PO BOX 11302  
ALBUQUERQUE, NM 87192-0302

I - VALERIE FRIEDMAN  
7948 SNOWBERRY CIRCLE  
ORLANDO, FL 32819-0000

I - VALI FLYNN  
3030 GOPHER CANYON RD  
VISTA, CA 92084-1212

I - VAN VIVES  
1501 SADDLE LN  
BARTLESVILLE, OK 74006-5745

I - VERNETTA MULLINS  
11222 ELMFIELD DRIVE  
TAMPA, FL 33625-5704

I - VESNA GLAVINA  
1703 KOSOLA AVE APT A2  
FAIRFIELD, IA 52556-9227

I - VIC LANDRY, SR.  
EVANS-GRAVES-HPO  
329 VIRGINIS STREET  
NEW ORLEANS, LA 70124

I - VIC MILES  
5917 WORNALL RD  
KANSAS CITY, MO 64113-1401

I - VICKI BAROCO  
1182 E LAKEVIEW AVE  
PENSACOLA, FL 32503-5324

I - VICKI DODSON  
1004 UNION AVE  
BALTIMORE, MD 21211-1820

I - VICKIE DUFFOURC  
SCI / JEFF PARISH  
615 4TH STREET  
WESTWEGO, LA 70094

I - VICKY MIERAU  
1766 HOLLY ST  
DENVER, CO 80220-1445

I - VICTORIA BUCHANAN  
7126 DARTMOUTH AVENUE N  
SAINT PETERSBURG, FL 33710-7544

I - VICTORIA BUTTS  
4008 TURQUOISE DRIVE  
PENSACOLA, FL 32507-9299

I - VICTORIA RAY  
15006 134 AVE EAST  
PUYALLUP, WA 98374-0000

I - VIOLET RESTALL  
820 NOCTURNE DR  
CHULUOTA, FL 32766-0000

I - VIRGINIA ADKINS  
2506 THORNTON RD # B  
AUSTIN, TX 78704-4910

I - VIRGINIA ANDERSON  
310 SUNSHINE DRIVE  
COCONUT CREEK, FL 33066-1845

I - VIRGINIA DALE PEARCE  
207 DONALDSON ST  
STATESBORO, GA 30458-7128

I - VIRGINIA DOWNS  
3701 40TH ST  
LUBBOCK, TX 79413-2647

I - VIRGINIA ILARDI  
2786 N STAR DR  
BARTLETT, TN 38134-4712

I - VIRGINIA LAMARCHE  
1838 HWAY 35 WEYBRIDGE D-3  
WALL, NJ 07719-3523

I - VIVIAN FAHLGREN  
1837 SALLY CREEK CIR  
HAYWARD, CA 94541-5442

I - WADE ALBRECHT  
10014 WOODSTOCK RD  
GARDEN PRAIRIE, IL 61038-0000

I - WALTER PHILLIPS  
610 BENHAM AVE  
NEOSHO, MO 64850-1101

I - WALTER SYKES  
PO BOX 733  
JOSEPH, OR 97846-0733

I - WAYNE KELLY  
1257 SISKIYOU BLVD # 1133  
ASHLAND, OR 97520-2241

I - WAYNE LAUBSCHER  
749 E CROAK HOLLOW RD  
LOCK HAVEN, PA 17745-8153

I - WAYNE SALMON  
9300 KERWOOD DR  
INDIANAPOLIS, IN 46240-1326

I - WAYNE TEEL  
3715 HIDDEN MEADOW LN  
KEEZLETOWN, VA 22832-2033

I - WAYNE THIBEAULT  
6348 16 PLACE SOUTH  
WEST PALM BEACH, FL 33415-5468

I - WAYNE UDE  
4249 NUTHATCH WAY  
CLINTON, WA 98236-8714

I - WENDY BROWN  
1773 TANGLEWOOD COURT APT. 2  
BURLINGTON, KY 41005-0000

I - WENDY EAMES  
2100 MEADOW BROOK DR  
ROUND ROCK, TX 78664-2332

I - WENDY KRUPNICK  
4993B OCCIDENTAL RD  
SANTA ROSA, CA 95401-5638

I - WHITE BEAR  
15240 40TH AVE S PO BOX 69533  
TUKWILA, WA 98168-9533

I - WHITNEY SCHUTT  
3694 FELIZ CREEK RD  
HOPLAND, CA 95449-9701

I - WILHELMINA MYENBURG  
11300 SW 94TH AV  
MIAMI, FL 33176-4200

I - WILLIAM & MARIANNE SHERMAN  
106 FLINTRIDGE DR  
MOUNTAIN HOME, AR 72653-6352

I - WILLIAM BELKNAP  
629 DON VINCENTE DR  
BOULDER CITY, NV 89005-3018

I - WILLIAM BRANSON  
3933 N MARSHFIELD AVENUE  
CHICAGO, IL 60613-2515

I - WILLIAM BUSS  
449 RECLINING ACRES RD  
CORRALES, NM 87048-0000

I - WILLIAM GONZALEZ GARCIA  
5 SLINN AVE APT B6  
SPRING VALLEY, NY 10977-4262

I - WILLIAM KENNEDY  
5935 CARGO CIR  
KEARNS, UT 84118-8235

I - WILLIAM MORRISON  
PO BOX 215  
KENNESAW, GA 30156-0215

I - WILLIAM O. JENKINS  
562 SOUTHWEST COMET TERRACE  
PORT SAINT LUCIE, FL 34953-2942

I - WILLIAM OBERJOHN  
3645 RAMBO AVENUE  
ALLIANCE, OH 44601 5260

I - WILLIAM O'CONNOR  
427 S.W. 5 ST  
GAINESVILLE, FL 32601-0000

I - WILLIAM SARBELLO  
933 E PINE HILL DR  
SCHENECTADY, NY 12303-5559

I - WILLIAM SCHULTHEIS  
S46W39028 COUNTY ROAD ZC  
DOUSMAN, WI 53118-9568

I - WILLIAM SNYDER  
124 ROSEWOOD DR  
GREENBELT, MD 20770-1622

I - WILLIAM WOLLSCHLAGER  
4068 COQUINA DRIVE  
SANIBEL, FL 33957-0000

I - WILLIS WHITTAKER  
4651 MARYSVILLE ROAD  
DELAWARE, OH 43015-9528

I - WILMA BRADBEER  
130 STRIBLING AVE  
CHARLOTTESVILLE, VA 22903-2941

I - WRETHA SWINEHART  
116 BRUSHWOOD DRIVE  
MANSFIELD, OH 44907-2878

I - WYNECTA SISHER  
DIRECTOR-ENVIRONMENTAL AFFAIRS  
CITY OF NEW ORLEANS  
1340 POYDRAS STREET, 10TH FLOOR  
NEW ORLEANS, LA 70112

I - YVETTE ROGERS  
243 STONE CHURCH RD  
RHINEBECK, NY 12572-3315

I - YVONNE HARDIN  
435 7TH LANE SOUTHWEST  
VERO BEACH, FL 32962-4718

I - YVONNE LARUE  
1820 DAPPLEGREY LN  
AUSTIN, TX 78727-4546

I - YVONNE O'NEILL IMPERIALE  
251 E 51ST ST  
NEW YORK, NY 10022-6534

I - ZABRINA LEITH  
526 BROAD ST  
526 BROAD ST, NJ 08010-1504

I - ZAK RAINES  
77 BLARE CASTLE DRIVE  
PALM COAST, FL 32137-7380

I - ZANDRA SAEZ  
1805 E 34TH AVE  
SPOKANE, WA 99203-4007