Louisiana Transportation Research Center

Final Report 602

Dredging Louisiana's Navigable Waterways: A Statewide Systematic Approach to Meeting Dredging Needs

by

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16. Abstract

The Louisiana Transportation and Research Center (LTRC) requested an investigation into the impacts that the lack of dredging have on Louisiana's ports, harbors, waterways, and commerce and the evaluation of innovative technologies and alternatives to complement the traditional U.S. Army Corps of Engineers (USACE) navigation dredging activities in Louisiana. Throughout much of Louisiana, USACE is responsible for maintaining the navigation channels to authorized dimensions. For the past several years, it has become apparent that USACE does not have the budgetary resources to adequately maintain this mission at historical levels. The resultant lack of dredging has threatened the commercial viability of the state's waterways and has led to a decrease in commercial tonnage moving along those waterways. The indirect and induced loss of business to deep water, coastal, and inland ports and industry in the respective hinterlands has become more evident as the rate of federal funding has declined. The reduction in tonnage adversely affects Louisiana's ability to successfully compete for limited federal funds for operations and maintenance. In order to respond to the request, the first phase of this project was to identify and determine the viability of alternative dredging technologies, the second phase evaluated channel methodologies, and the final phase the alignment of funding sources beyond the traditional USACE sources. The research team evaluated innovative technologies in the United States, as well as other countries, that could be beneficial within Louisiana's waterways. In addition, funding strategies and legislative incentives were analyzed to ascertain the most feasible channel to obtain the requisite funds to implement the technologies. A case study was performed on the Ouachita-Black Navigation Project and the Houma Navigation Canal to assess the economic impacts due to the lack of dredging and the benefits of applying innovative technologies to supplement the traditional maintenance activities performed within the region.

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ABSTRACT

The Louisiana Transportation and Research Center (LTRC) requested an investigation into the impacts that the lack of dredging have on Louisiana's ports, harbors, waterways, and commerce and the evaluation of innovative technologies and alternatives to complement the traditional U.S. Army Corps of Engineers (USACE) navigation dredging activities in Louisiana. Throughout much of Louisiana, USACE is responsible for maintaining the navigation channels to authorized dimensions. For the past several years, it has become apparent that USACE does not have the budgetary resources to adequately maintain this mission at historical and authorized levels. The resultant lack of dredging has threatened the commercial viability of the state's waterways and has led to a decrease in commercial tonnage moving along those waterways. The indirect and induced loss of business to deep water, coastal, and inland ports and industry in the respective hinterlands has become more evident as the rate of federal funding has declined. The reduction in tonnage adversely affects Louisiana's ability to successfully compete for limited federal funds for operations and maintenance.

To respond to the request, the first phase of this project identified and determined the viability of alternative dredging technologies, the second phase evaluated channel methodologies, and the final phase analyzed the alignment of funding sources beyond the traditional USACE sources. The research team evaluated innovative technologies in the United States, as well as other countries that could be beneficial within Louisiana's waterways. In addition, funding strategies and legislative incentives were analyzed to ascertain the most feasible channel to obtain the requisite funds to implement the technologies. A case study was performed on the Ouachita-Black Navigation Project and the Houma Navigation Canal to assess the economic impacts due to the lack of dredging and the benefits of applying innovative technologies to supplement the traditional maintenance activities performed within the region.

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INTRODUCTION

The United States Army Corps of Engineers (USACE) is the primary responsible party for maintenance of the navigable channels to the authorized dimensions. Beginning in 2013, it became apparent that the USACE lacks the adequate financial resources to continue the proper maintenance of this mission at critical levels. The resultant lack of dredging has increased the threat to the commercial viability of Louisiana's waterways and has led to a decrease in commercial tonnage moving along the waterways. The indirect and induced loss of business to deep water, coastal, and inland ports and industry in the respective hinterlands has become more evident as the rate of federal funding has declined. The reduction in tonnage adversely affects Louisiana's ability to successfully compete for already limited federal funds for maintenance of authorized waterways. Additionally, anecdotal evidence suggests that the reduction in dredging has had an adverse effect on traffic conditions and highway infrastructure as the result of increased truck traffic on highways.

The reduction in maintenance of navigable waterways is not unique to Louisiana. This situation has become a pressing issue for many navigable waterways within the United States (U.S.). While many studies have been conducted to address this issue, clearly defined and acceptable solutions have yet to be identified, much less implemented. Nonetheless, techniques have been recently attempted in many parts of the country to address this ongoing situation. Attempted solutions include policy considerations, modernized dredging techniques, value engineering, and alternative funding opportunities.

Ports and navigable waterways require continuous maintenance to maintain authorized dimensions and must compete with limited funding from state and federal sources to sustain commerce. In addition, changing maritime trends require additional funds to deepen channels and accommodate modern vessels that will sustain Louisiana's economic future. Currently, shoaled channels have resulted from lack of maintenance and have forced ports to limit the draft of entering vessels, thus decreasing the gross tonnage and constraining economic viability. In many cases, waterborne commerce has been inhibited and transferred to alternative waterways, highways, and/or rail.

Commercial operation within ports is a proven economic revenue generator that results in sustainable jobs. Estimates vary, but a report by the Louisiana Association of Business and Industry (2015) "estimated one in five jobs in Louisiana is connected to the maritime industry, resulting in employment income of more than $3.5 billion every year." However, ports cannot sustain commerce and commercial viability without maintaining channels.

The ad valorem tax collected proportional to the value of cargo managed finances the Harbor Maintenance Trust Fund (HMTF). As of 2016, nearly $10 billion has accrued and is available for channel maintenance beyond the annual revenue generated, as tabulated in Davis (2017), yet funding from the federal government has been erratic and inconsistent. The funding appropriation for maintenance is based on certain priorities, which includes gross cargo tonnage.

Lack of maintenance and the proportionate reduction in revenues have become part of a degrading cycle that impacts ports which compete among themselves for needed maintenance funds. An emerging trend nationally suggests that state and local funding is being secured to sustain navigable waterways as a means to compensate for the reduction in federal funding.

In Louisiana, the need to develop a systematic approach to investigate and quantify past and potential future impacts to the state's economy that result from reduced dredging is evident. Concurrent to this need, is a requirement to investigate and recommend state, regional, and local alternatives to diminishing and inconsistent federal maintenance funding. This quantification and comparison to historical operations is also required to evaluate the impact to other modes of transportation.

OBJECTIVES

As described in the Request for Proposals – Dredging Louisiana's Navigable Waterways, LTRC Project No. 17-4SS, SIO No. DOTLT1000160, the objectives were as follows:

- To investigate impacts that insufficient dredging has on commerce, ports, waterways, and supporting infrastructure
- To investigate and recommend possible alternatives to complement current dredging activities and funding opportunities

SCOPE

GIS Engineering LLC., JAYMAC Consultants, and EJES, Inc., herein referred to as "the team," conducted a thorough literature review focused on recent trends in reduced dredging on specific waterways and the resultant local and regional economic impacts. The team identified several dredging technologies and/or alternative engineering solutions that have been developed or are being developed to improve the efficiency of dredging. This review also included the identification of relevant approaches by other states and public entities that may be applicable in Louisiana. In addition, the team identified data relative to the maintenance of navigable waterways within the state such as: historical dredging costs and quantities, waterway frameworks, jurisdictional boundaries, etc. Information was also compiled that addresses legal and policy issues relative to potential conflicts of interest within the dredging industry and incorporates innovative methods of contracting dredging operations to reduce costs.

METHODOLOGY

The team evaluated innovative technologies in the U.S., as well as other countries, that could be beneficial within Louisiana's waterways. Data was collected from multiple stakeholders within the dredging industry which included USACE, Navigation Data Center, Coastal Protection and Restoration Authority (CPRA), Louisiana Department of Transportation and Development (DOTD), industry publications, and public information centers. Utilizing the ArcGIS API for JavaScript, the data collected was mapped and tabulated. Mapped data is provided separately from this report; whereas, tabulated data is provided herein. In addition, funding strategies and legislative incentives were analyzed to ascertain the most feasible channel to obtain the requisite funds to implement the technologies. A case study was performed on the Ouachita-Black Navigation Project and the Houma Navigation Canal to assess the economic impacts due to the lack of dredging and the benefits of applying innovative technologies to supplement the traditional maintenance activities performed within the region.

Literature Review

The movement of cargo on Louisiana's waterways has many direct economic benefits such as job creation and transportation savings, as well as, many indirect economic and social benefits. Potential adverse economic impacts resulting from the lack of sufficient funding for dredging required to adequately maintain authorized channel dimensions was evaluated on a national, state, and regional scale.

National and state impacts are predominantly linked to transportation losses due to "light-loading" of vessels or moving tonnages off the waterway to alternative modes of transportation, such as rail or truck. Light loading of vessels requires additional handling and additional equipment to move the same level of cargo. Information taken from the Louisiana Marine Transportation Report (2007) states, "Barge transportation is the most energy efficient mode of transport with a gallon of fuel carrying one ton of cargo 514 miles compared to 59 miles by truck and 202 miles by train." In addition to efficiency loss, price escalation can be experienced due to the lack of competition from water movements. The movement of tonnage from waterways to alternative modes will also cause indirect losses such as increased traffic congestion on the highways and railroads, increased danger and liability to users, and higher accident rates. Inversely, the maintenance of waterways results in a reduction or elimination of transportation cost due to the employment of larger vessels, more efficient use of vessels, reduced tug assistance, reduced handling costs, and reduced transit time.

Job creation is the most significant regional economic impact of a viable navigation project. Impacts associated with reduced marine transport may include increased unemployment, decreased income, and decreased economic development opportunity. The 2017 Ouachita River Valley Association (ORVA) Annual Report for the Ouachita-Black area stated, "Loss of navigation would have significant adverse economic impacts to the region. Significant private sector workforce layoffs would occur." In addition to the loss of employment opportunity, the failure to maintain authorized channel dimensions results in the accretion of sediment, navigation hazards, reduced drainage capacity, and unusual high-river stages. The detrimental impacts on communities include the reduction in flood control measures, water supply, sewage treatment and disposal, and recreation further stressing the local and regional resources while reducing the availability of revenue sources.

Dredge Technologies

As part of the literature review, the team identified a variety of technologies and methodologies that differ from the conventional cutter head or suction dredge technologies. These alternatives are at different stages of development and would require additional assessment and development prior to implementation as a preferred alternative. The alternatives with the highest likelihood of success based on development and testing are detailed below. Additionally, the team estimated a cost per cubic yard of material for dredge alternatives. Assumptions made for each estimate varied depending on available information; however, the following general cost analysis criteria were applied to each technology: (1) 10-year life, (2) total depreciation, (3) nondiscounted values, (4) no mobilization costs, and (5) no profitability. The estimated costs for the innovative dredge technologies are provided for the purpose of comparison and are based on the assumptions listed above.

Table 1
Dredge technology cost comparison

Dredge Technology	Application	Cost per cubic yard
Water Jet	Port/Berth	$3.21
Submerged Hopper/Sediment Collector	Channel	$2.62
Trailer-mounted Dredge	Channel, Port/Berth	$1.06
Agitation	Channel	$0.91

Water Jet. The team evaluated the implementation of fixed controls to supplement or eliminate the need for annual dredge maintenance. As detailed in Brant and Mosely (2007), the South Carolina State Ports Authority's (SCSPA) Columbus Street Terminal, located on the Cooper River in Charleston, South Carolina, was experiencing significant silting within the federally authorized channel and berth area. Maintenance dredging was performed at four-month intervals and removed approximately 80,000 cubic yards at a cost of approximately $250,000 per event, or approximately $3.13 per cubic yard.

With the cost of maintenance approaching $1 million (M) per year, the SCSPA implemented a water jet system within its berth area to reduce the maintenance dredging required. The system consists of two 125-horsepower hydraulic pump units that power five individual water jet units. The water jet units, hydraulically driven at less than 500 revolutions per minute, have an inlet velocity of approximately 2.5 ft. per second. Additionally, each of the water jet units is capable of a 180-degree rotation. The system prevents sediment from settling within the berth area by discharging water at the bottom that suspends the material and moves it out of the area. The SCSPA system was installed at a cost of approximately $4.2 M, which included engineering design, system components, wharf modifications, installation, and start-up. The annual Operation and Maintenance (O&M) of the system were estimated to be $60,000. Assuming a 10-year design life before major maintenance, the return on investment was estimated to approach 20 percent with a payout slightly over four years as published by Brant and Mosely (2007).

The Water Jet technology was developed by the Navy to control sedimentation in estuarine and fluvial berthing areas within 250 ft. perpendicular to the face of the wharf, Brant and Mosely (2007). The purpose of this technology is to prevent siltation of fluid mud layers through the introduction of flow into the water column. The technology can be applied to waterways with fluid velocity as low as 0.4 ft. per second and contain sediments that have a high silt/clay content which settle slowly from the water column.

The team utilized the aforementioned cost analysis criteria and normalized assumptions to compare the alternative technologies. The installed cost of $4.2 M reported by Brant and Mosely (2007) was utilized. Based on the relevant assumptions, the team estimates a cost of $3.21 per cubic yard of material for the water jet. This estimate along with relevant assumptions are detailed in Appendix A.

This technology is more thoroughly described in Brant and Mosely (2007), provided as Attachment 1.

Submerged Hopper/Sediment Collector. The team investigated innovative technologies to reduce or mitigate dredging needs within waterways. Through the Dredging Operations and Environmental Research (DOER) Program at USACE, innovative alternative dredging technologies are under development. One such technology, the sediment collector system, has been installed in Fountain Creek near Pueblo, Colorado, as described in Thomas et al. (2017). The sediment collector system was installed at a design elevation to act as a submerged weir and as an engineering control for the channel bottom elevation. The submerged structure allows for passive bed load removal and bedload reclamation.

The Fountain Creek system is comprised of a 30-ft. bedload collector, 50-horsepower submersible pump, 100-ton-per-hour sediment separator, and 1,000-cubic-yard stacker. Sediment within the bedload drops into the collector by gravity and is subsequently pumped out of the collector to be dewatered and compiled. The total equipment cost of the Fountain Creek System is approximately $628,000. Annual utility costs for the system is approximately $52,560, assuming $0.10 per kilowatt-hour (Kwh). The production rate of the system is dependent on stream flow and available bedload. The production rate of 30 ft. bedload collector was estimated to be approximately 23,000, 150,000, and 876,000 cubic yards per year at 120, 600, and 1,000 cubic ft. per second, respectively Thomas et al. (2017).

The bedload collector is scalable to any stream width, can be utilized to actively manage the depth of a waterway, and can be deployed in remote locations. The bedload collector can be designed to remove a range of grain sizes, but is ideal for fine sands or gavel. The technology can be applied for watershed management, sediment bypassing, and sediment backpassing, or reduce the quantity of contaminated sediment dredging.

The team utilized the aforementioned cost analysis criteria and normalized assumptions to compare the alternative technologies. The equipment cost of $628,000 and annual utility costs of approximately $52,560 reported by Thomas et al. (2017) were utilized to evaluate the system over a 10-year design life. Based on the relevant assumptions, the team estimates a cost of $2.62 per cubic yard of material for the bedload collector. Calculations along with relevant assumptions are detailed in Appendix A.

Thomas et al. (2017) is provided as Attachment 2 for more information on the sediment collector system.

Trailer-mounted Dredge. Small scale, trailer-mounted dredges can be utilized for strategic projects where larger dredges cannot navigate or become economically infeasible. An example of a trailer-mounted dredge, the Amphibex 600 (Amphibex), has dimensions of 47 ft. length by 14 ft. width, with a hull divided into 13 sealed compartments, according to

Normrock. The Amphibex has a sail speed of 5 to 8 knots. The maximum excavation depth of the Amphibex is 34 ft., and the maximum discharge height (height above waterline that the equipment can place material for disposal) is approximately 34 ft. The Amphibex is powered by a 700 horsepower diesel engine and contains a 13,000-gallon-per-minute pump (Normrock Industries). The Amphibex has the capability of utilizing a bucket, rake, or cutter head attachment.

Trailer-mounted dredges, such as the Amphibex, can be utilized on smaller scale projects with navigational constraints. Trailer-mounted dredges can be outfitted with cutter head, suction heads, buckets, etc. to utilize the most efficient technology for the sediment type. The specific trailer-mounted dredge can be selected from multiple companies to fulfill project specific goals. The cost savings associated with a trailer-mounted dredge is the reduction of mobilization time and cost. With the cost analysis criteria detailed herein this section and relevant assumptions, the team estimates a cost of $1.06 per cubic yard of material for the Amphibex. This estimate along with assumptions are detailed in Appendix A.

The technical brochure for the Amphibex, Normrock, is provided as Attachment 3.

Agitation. The team evaluated the conversion of traditional dredging methodology to unconventional methods. The Atchafalaya River Lower Bar Channel (LBC) consists of a dense sediment-laden fluid material known as “fluff.” As the density of the fluff increases, the LBC becomes less navigable. USACE (2016) details a recent demonstration project where the material was agitated by a hopper dredge that pumped the material up from the bottom and over the sides of the vessel. Agitation was performed to redistribute the material within the water column and, therefore, decrease the density.

The Newport dredge (Manson) was the trailing suction hopper dredge selected for the demonstration project. The dimensions of the Newport are approximately 265 ft. long by 52 ft wide. The maximum speed of the Newport is approximately 8.5 to 10 knots. The Newport is powered by a 5,400-horsepower engine, according to Manson Construction Co. (2008).

Agitation can be utilized where dense sediment laden fluid “fluff” accumulates and reduces navigable depth. Agitation is implemented to reduce the fluid mud’s yield stress, viscosity, and/or density to improve navigability. Agitation is a preferred excavation methodology in channels with a high rate and spatial distribution of “fluid mud” channel infilling where the objective is to reduce the density of the material rather than the removal of accumulated sediment.

USACE (2016) estimates a cost of $0.80 per cubic yard of agitated material. This estimate is based on total contract value and total cubic yards of material moved (as determined by surveys) and, therefore, is not based on the cost analysis criteria detailed herein this section. Utilizing the cost analysis criteria detailed herein, the team estimates a cost of $0.91 per cubic yard of material.

The specification fact sheet for the Newport is provided as Attachment 4.

Current Technology Improvements

Along with implementing innovative dredge technologies, increasing the cost efficiency of developed technologies has also been the focus of the dredging industry. The team evaluated two innovative technologies that differ from the conventional bank stabilization techniques and traditional engine and fuel used to operate equipment.

Ecobale

The team identified the Ecobale as an alternative to traditional bank stabilization, such as riprap (loose stone) and articulated concrete, to effectively reduce the potential for shoaling and sluffing into the waterways. As detailed in Martin Ecosystems (2017), the Ecobale is a lightweight cylindrical structure manufactured with recycled polyethylene terephthalate (PET) matrix rolls and encapsulated in a nylon netting system coated with spray polyurea for armoring. The cylindrical structure can be deployed as a chain or secured by a steel or timber pile. The Ecobale was developed as a breakwater to attenuate wave energy for use as shoreline protection, bank stabilization, and pipeline demarcation. With a void space of 96%, the Ecobale provides shoreline protection through the collection of sediments. The Ecobale has a diameter of 4.5 ft. with a height of either 5 ft. or 7.5 ft. and a weight of 245 lbs. or 365 lbs., respectively. The lightweight property of the PET material allows for minimal loading of the subsoil and less subsidence for the design life of the structure. In addition, the modular production and weight of the Ecobale allow for decreased costs of production, handling, transport, and installation.

The Ecobale can be deployed in a nearshore or inland setting as an erosion control structure. The Ecobale can be deployed in a variety of geometric configurations to meet project goals such as wave dissipation, sediment trap, bank stabilization or hydraulic modification. The cost of the Ecobale is dependent on the site setting, energy of the environment (pile length) and the geometrical configuration. It is estimated that the Ecobale costs $1,150 per linear foot installed as a continuous 7-ft.-tall wall. If the Ecobale were to be deployed with spacing, the cost per linear foot can be obtained by subtracting the total linear feet by the linear feet of void space, then multiplying the remaining linear feet by the cost per linear foot to

approximate a rough order cost of magnitude installation. The data sheet for the Ecobale, Martin Ecosystems (2017), is provided as Attachment 5 for more information.

Liquefied Natural Gas Engine

Along with implementing innovative technologies, increasing the efficiency of developed dredging technologies has also been the focus of the dredging industry. One improvement the dredging industry is beginning to implement is the conversion from engines fueled by diesel to engines fueled by liquefied natural gas (LNG). December 3, 2016 marked the launch of the world's first LNG powered hopper dredge, as announced by Royal IHC. Although the capital cost associated with installing storage equipment for LNG makes it a more costly investment, the current operating cost for LNG fueled engines is lower. At current prices, diesel is approximately $16 per million British Thermal Units (MMBTU) or $0.04 per horsepower-hour (hp-hr) greater than LNG, assuming equivalent engine efficiencies. Table 2 summarizes the difference in fuel operating costs between LNG and diesel engines for fuel prices from 2008 to 2017. Additionally, tax credits, grants, incentives, and other funding opportunities are available for use of LNG as a fuel source.

Table 2
LNG and diesel cost comparison

Date	LNG ($/MMbtu)[1]	Diesel ($/gal)[1]	Difference ($/MMbtu)[2][3]	Difference ($/hp-hr)[2][3]
2008	$ 15.20	$ 3.81	$ 14.49	$ 0.04
2009	$ 8.99	$ 2.47	$ 10.26	$ 0.03
2010	$ 11.83	$ 2.99	$ 11.47	$ 0.03
2011	$ 15.12	$ 3.84	$ 14.77	$ 0.04
2012	$ 10.98	$ 3.97	$ 19.91	$ 0.05
2013	$ 9.94	$ 3.92	$ 20.59	$ 0.05
2014	$ 9.56	$ 3.83	$ 20.22	$ 0.05
2015	$ 4.97	$ 2.71	$ 16.10	$ 0.04
2016	$ 5.04	$ 2.30	$ 12.90	$ 0.03
2017	$ 5.00	$ 2.70	$ 16.02	$ 0.04
Average	**$ 9.66**	**$ 3.25**	**$ 15.67**	**$ 0.04**

[1] Cost data provided by U.S. Energy Information Administration (2017)
[2] Difference equals price of Diesel less the price of LNG per equivalent unit
[3] Assuming equivalent LNG and diesel engine efficiencies

DATA COLLECTION/STATEWIDE SITE INVENTORY AND ANALYSIS

The research team identified and collected data needed to address both noted objectives of the research effort. The collected data is available at the federal level (e.g., USACE Waterborne Commerce Statistics and historical dredging reports) where applicable as well as from regional and local sources such as port authorities and industry specific working groups.

The statewide site inventory data was collected from publically available sources and was utilized to provide a base map of key infrastructure components within Louisiana. Through a GIS platform, all ports and related navigable waterways with historical dredging inventories were identified and mapped within Louisiana.

In addition to the base layer information gathered as part of the statewide site inventory, key data sets were collected and incorporated into the GIS platform for viewing and comparative purposes. The objective of the inventory of key data was to identify waterway features (e.g., location, authorized depth, commodity flow, vessel fleet, port jurisdictions, etc.) for establishing the foundation and basis of current and future activity and study. The results of this data collection were used as a means to document historical dredge practices that have been used by USACE to date and quantify current dredging needs (i.e. maintenance of authorized dimensions). Data sets include typical quantities relocated, frequency of maintenance dredging at specific locations, disposal locations, dredging and disposal methods, and related vessel traffic flow impacts (vessels, commodities, tonnage, etc.) in comparison of the "with and without" dredging scenarios.

Data Sources

The team identified several sources that contain data relevant to analysis of dredging and economic impact to projects within Louisiana. Those sources along with the data contained within those sources are detailed herein this section.

Transportation.gov

The team identified the following as data provided by Transportation.gov:

- Dams/locks – Data consists of layers of points representing locks and dams along waterways within the U.S.
- Navigable waterways – Data consists of National Waterway Network, a comprehensive network database of the nation's navigable waterways. The data

set covers the 48 contiguous states plus the District of Columbia, Hawaii, Alaska, Puerto Rico, and water links between.

- Ports – Data consists of physical information on commercial facilities within U.S. Coastal, Great Lakes, and Inland Ports.

- Other modes of transportation – Data consists of rail, aviation, roads, and public transit.

USACE

The team identified the following as data provided by the USACE:

- Historical channel condition surveys – Bathymetric surveys performed by the USACE on federally authorized channels. Surveys performed in the past decade are readily accessible in formats such as .DAT, .PDF, PPXYZ, .XML, and .ZIP. From the survey data, volume of sediment within a channel can be calculated, and, subsequently, the rate of accumulation of sediment within a channel can be calculated.

- Channel frameworks – The channel framework for each federally authorized channel consists of the centerline, width, and stationing. The centerline provides the best representation for each channel on a map. The dimensions can be used for volume calculations. Frameworks for channels within Louisiana are summarized in Table B.1 of Appendix B.

- Historical/Future dredging schedules – Both schedules can supplement the rate of accumulation calculations for scheduling. USACE schedules for fiscal year 08 to fiscal year 17 are provided as Attachment 6.

Navigation Data Center

The team has identified the following data from the Navigation Data Center:

- Historical USACE contracted/operated dredges – Data from dredges contracted and operated by USACE includes start and completion date, dredge quantity, and total cost for each dredge, provided as Table B.2 of Appendix B. From this data, cost per quantity can be calculated along with the quantity per time. Therefore, future costs for dredges can be estimated by channel based on historical data, and an approximate timeline can be developed.

- Navigable waterways – The navigable channels data on the Navigation Data Center is an extension of USACE's channel frameworks data that includes non-federally authorized waterways as well. The data consists only of line segments and does not include channel area.

- Imports/exports – The Navigation Data Center also includes import/export commodity data.

CPRA

The team has identified the following data from the CPRA:

- Completed/on-going/future projects – Information for each project includes project ID, project name, primary program, project type, basin, status, project footprint acreage, and a link to the project fact sheet. The project fact sheet details the specifics for each project, and documentation compiled throughout each project is available. Tables B.3 through B.5 of Appendix B provide a summary of projects included in the 2017 Master Plan.

- Sediment – A GIS layer of points showing sediment samples compiled from various sources such as USACE. Currently, the layer includes over 14,000 points or samples. Laboratory results for each sample are available via downloadable compressed file.

- Shorelines – A GIS layer showing the results of geologic surveys performed in the years 1828, 1922, 1948, 1998, 2004, 2005, 2008, and 2012.

Louisiana Site Selection Center

The team has identified the following data from the Louisiana Site Selection Data Center:

- Biologic – Data consists of shapefiles of marsh vegetation, national wildlife refuges, endangered species by parish, and wildlife management areas.

- Cadastral – Data consists of public land surveying system shapefiles of boundaries within Louisiana.

- Elevation – Data consists of bathymetric surveys.

- Environmental – Data consists of shapefiles of ambient water quality network, barges, dispersant preapproval areas, ecoregions, national priorities, nonattainment, and toxic release inventory.

- Governmental units – Data consists of boundaries for various governmental units within Louisiana.
- Hydrography – Data consists of shapefiles of river lines and basin lines.
- Land use cover – Data consists of boundaries for federal lands, flood zones, national parks, and state parks within Louisiana.
- Transportation – Data includes various modes of transportation.

LASARD

Louisiana Sand Resources Database (LASARD) was developed by CPRA to help identify and manage nearshore, offshore, and riverine sediment. LASARD is used to manage, store, and maintain geological (vibracore and grab sample), geophysical (seismic side-scan sonar, magnetometer, and bathymetric), and geotechnical data related to exploration of sand/sediment in various environments. Data collected is stored and maintained on a centralized GIS platform that is publically accessible through the CPRA special viewer. Project information associated with the recovery or disposition of materials by others should be accounted for in the overall planning and implementation of projects by USACE/DOT. This cooperative effort can utilize materials for a greater benefit cost in proper scenarios. Additionally, oil and gas infrastructure data are included in the database because of the effect of the infrastructure on the delineation of borrow areas, quantities of available sand/sediment, and subsequent dredging.

DOTD

DOTD maintains an ArcGIS server that contains various state related GIS layers. Those layers consist of, but are not limited to, port facilities, airport locations, railroads, and highways. A list of port facilities within the state is provided as Table B.6 of Appendix B.

FUNDING

The evaluation of federal, state, local, and private funds to maintain or enhance Louisiana's waterways is a primary objective of this study. The improved coordination of projects at each of these levels and from an inter-governmental standpoint are necessary to identify the best alternative for future project funding.

Entities within each level of government and at the private level operate with specific objectives and mission statements. This clear distinction allows for funding from specific sources that results in specific projects. The review of these funding levels, along with understanding the projects (historical, current, and future), will serve as the basis to drive coordination of the projects within certain jurisdictional boundaries that, if executed properly, will result in streamline costs and more available funding.

The sections below outline the levels of funding previously identified and offer insight into the different entities. The next phase of this work, will identify and recommend alternative management scenarios that work to reach the objective.

Federal Funding

The HMTF is the main source of federal funding for maintenance of the federally authorized projects within Louisiana's waterways. The HMTF is funded through the Harbor Maintenance Tax (HMT), which was established in 1986 and was promulgated as a 0.125% ad valorem tax on the estimated value of cargo loaded, offloaded, or transported within the waters of the U.S. While other similar transportation user fees were established to provide funding for related operations, the HMT was established as a tax due to the lack of available technology to readily collect the O&M funds. The cash flow of HMTF over the past 20 years is shown below in Table 3.

Table 3

20 Years of the Harbor Maintenance Trust Fund (Dollars in Millions) [1]

HMTF Cash Flow:	1998 Actual	1999 Actual	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual
BOY Balance	1,106	1,246	1,556	1,621	1,777	1,850	2,001	2,299	2,695	3,234
Receipts & Interest	651	607	767	816	730	737	946	1,102	1,337	1,427
Outlays	-511	-297	-702	-660	-657	-586	-648	-706	-798	-910
EOY Balance	1,246	1,556	1,621	1,777	1,850	2,001	2,299	2,695	3,234	3,751

HMTF Cash Flow:	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Est.	2017 Request
BOY Balance	3,751	4,559	5,003	5,474	6,280	6,958	7,806	8,316	8,684	9,064
Receipts & Interest	1,594	1,253	1,299	1,629	1,587	1,696	1,617	1,517	1,662	1,802
Outlays	-786	-808	-828	-823	-909	-848	-1,107	-1,149	-1,282	-986
EOY Balance	4,559	5,003	5,474	6,280	6,958	7,806	8,316	8,684	9,064	9,880

[1] Provided by Davis (2016)

Due to administrative and legislative restrictions, a significant portion of the collected HMT is not utilized on an annual basis, resulting in the accrual of nearly $10 billion (B) in reserves. The allocation of this fund needs to be addressed as a separate matter from this study. The release of the accrued funds would greatly impact the available funds for federally authorized projects in a positive manner.

Section 1113 of the 2016 Water Resource Development Act (WRDA) "authorizes the Secretary of USACE to permit a non-federal interest to carry out maintenance activities for an authorized navigation project (or a separable element of an authorized navigation project), with potential reimbursement, subject to several requirements." USACE issued a guidance document on the interpretation of Section 1113 on November 1, 2017, which is included as Attachment 7. In summary, the requirements include, but are not limited to, compliance with Section 221(b) of the Flood Control Act of 1970, Engineering Manual 385-1-1, and all applicable laws, as well as completing a Memorandum of Agreement between the entity and the Assistant Secretary of the Army (Civil Works).

Beyond HMTF funds, there are a number of other federal institutions that utilize dredging for access or as a mined source material. Entities such as, Fish and Wildlife Service, Natural Resources Conservation Services, and the National Park Service have utilized the dredging of materials from within the federally authorized channels along with other nearby sources that, when coordinated properly, enhanced the management and maintenance of the waterways.

State Funding

Similar to federal funding sources outside HMTF, state entities within Louisiana also conduct a number of operations that utilize the management of dredge materials. The CPRA, Louisiana Department of Natural Resources (LDNR), and the Department of Wildlife and Fisheries (LDWF) typically utilize the material to build or enhance land areas within the coastal zone. These projects are done under the supervision of USACE to maintain consistency of operation, but are completed independent of the O&M operations necessary to keep the channels at the federally authorized dimensions.

Additionally, the state has within its administrative code the authority to sell material from the water bottoms of these channels in accordance with licensure provisions detailed in Revised Statute 56:2011. The generation of this additional revenue, when combined with project funding allows for increased maintenance dredging of the waterways. The act of sale of the material to a private third party group creates employment opportunities and generates revenue. Given that the material renews annually with the flow of water, the potential revenue source is available into perpetuity. Successful sediment mining operations have been implemented at, but not limited to, the Port of Morgan City as well as the Port of Lake Charles.

Private Funding

Given the geographical setting of Louisiana, the maintenance of waterways is not restricted to public entities. Private landowners and commercial entities are expending significant resources and effort to maintain access to their properties and, more importantly, protect their properties from the threat of coastal erosion, land loss, and increased risk to assets.

As referenced above, the state and federal government entities have specific mission statements and scopes of work related to projects within Louisiana's waterways. Those projects have boundary conditions that preclude the deposition of material beyond the physical boundary of that project. It is viable for non-public entities to enter an agreement to receive the material and provide additional funds to complete the transportation of material for use outside of the project specific goals and objectives.

A study published by America's Wetland Foundation and Entergy Corp in 2010 estimates industry losses could exceed $350 B by the year 2030. Additionally, these same non-public entities are maintaining their own dock and facility areas along the waterways. The management of the material is done in coordination with the state and federal regulatory entity to ensure compliance, but often without consideration of the larger geographic setting.

This potential loss of real property or assets, coupled with pre-existing institutional regulatory compliance, incentivizes the alignment of public and private interest in a Public Private Partnership (P3).

The success of a P3 can be encouraged through early stakeholder engagement and development of a predevelopment agreement (PDA). Early stakeholder engagement allows the public entity to develop conceptual and financial plans, project "vision," and pricing of pre-development work. Additionally, private partners may undertake pre-development work at risk or with shared public sponsor risk. Pre-development work can include a Value for Money Analysis, which can lead to a decision about how to deliver and finance the project as a P3. Successful work typically earns first right to negotiate a development agreement, and if an acceptable agreement is not reached, the public sponsor has benefits of development work.

P3 contracts have been successfully implemented in the U.S. public transportation infrastructure sector. The contract models developed to complete large infrastructure projects include the Design-Bid-Build (DBB), Design-Build (DB), Design-Build-Finance (DBF), Design-Build-Operate-Maintain (DBOM), Design-Build-Finance-Operate-Maintain (DBFOM), and Concession models. The risks and benefits of the P3 contract models listed above depend on the scope of work, return on investment, risk, debt markets, and contractual terms specific to each project. Therefore, the development of a P3 will be project specific and an in-depth discussion of each contract model is excluded from this report.

PROGRAM ANALYSIS

The information obtained in regard to alternative dredging technologies and the collection of information related to the statewide site inventory was used to analyze and define the impact of innovative dredging options within Louisiana waterways. This included physical and financial considerations for alternative methods including the use of local, regional, or state assets.

To determine typical potential economic impacts resulting from the lack of channel maintenance along authorized navigation channels, two basic case studies – the Ouachita-Black Rivers Navigation Project (inland, cargo oriented) and the Houma Navigation Canal (coastal, oil and gas, fabrication, etc.) were prepared. Information attained throughout the process of data collection and analysis was utilized, and additional pertinent socioeconomic data relative to the respective regions was incorporated. The case study relative to the Ouachita-Black Rivers Navigation Project was limited the Louisiana reach only. Impacts include but are not necessarily limited to general economic conditions as well as impacts to highways, ports, and rails, if and where applicable. A copy of the economic impact study is provided as Attachment 8.

Ouachita-Black Rivers Navigation Project

As described by USACE, the Ouachita River originates in Polk County, Arkansas, and flows 510 miles to Jonesville, Louisiana, where it converges with the Tensas and Little Rivers to form the Black River. The Black River flows 41 miles south of Jonesville where it meets the Red River. The Ouachita-Black Navigation Project began in 1902 and is currently a 337-mile long waterway beginning in Camden, Arkansas and ending near Jonesville, Louisiana. Construction of six structures (locks and dams) was completed in 1924; however, only four locks and dams remain along the waterway. The project provides a minimum 9-ft deep and 100-ft. wide navigation channel to accommodate barge traffic from the Red River to Camden, Arkansas.

ORVA estimates that a total of $11 M per year is required to operate the project efficiently - $7.5 M to operate and maintain the locks and dams and an additional $3.5 M for dredging. However, recent USACE allocations for the project have only been about $8 M per year, resulting in reduced lock operating hours and backlogged dredging requirements.

Findings from the economic impact study indicate that approximately 28,000 jobs with an estimated annual payroll of $325,000,000 can be correlated to navigation of the Ouachita-Black Rivers.

Recently, the primary area of concern has developed in the lower 14,000 ft. of the Little River where it flows into the Black River at mile 41.5 near Jonesville, Louisiana. Little River is used as a diversion canal to Catahoula Lake during high water. During these high water events, sediments from the Black River accumulate in that portion of the Little River, blocking navigation. Fuel is a major commodity shipped on the Little River with approximately 90 million gallons of fuel per year barged up the Little River to a distribution center. Therefore, the accumulation of sediments in the lower portion of the river hinders the transport of fuel to the region and has a significant negative impact. Given the approximately 32- acre footprint of the problem area, a smaller trailer-mounted dredge should be considered as a potentially competitive alternative to mobilizing a larger dredge in to remove material within the area. The trailer-mounted dredge described herein, the Amphibex 600, is evaluated in the following case study for the area.

Limited historical dredging data was identified for the area; therefore, an average dredge depth of 5 ft. is assumed. The amount of material to be dredged is approximately 260,000 cubic yards. With a pumping rate of 13,000 gallons of slurry per minute, the Amphibex 600 would take approximately 45 15-hour days or about a month and a half, pumping continuously, to remove accumulated material within the area, assuming 10% solids content in the slurry.

Navigation of the Ouachita-Black Rivers also suffers from bank stabilization issues along the waterway. Bank stabilization was not included in the original project, and, as such, current efforts of interested parties such as ORVA are aimed at the inclusion of portions of the waterway's banks into the Mississippi Rivers and Tributaries (MR&T) Project. The Ecobale, described herein, provides bank stabilization by accumulating eroded bank sediments and, subsequently, forming a barrier between the bank and waterway. The lightweight and erosion resistant material provides a low cost alternative to traditional riprap and articulated concrete mat.

Houma Navigation Canal

The Houma Navigation Canal (HNC) flows from Houma, Louisiana south to the Gulf of Mexico. USACE maintains a 15- ft. deep by 150- ft. wide navigation channel from Houma, Louisiana to Terrebonne Bay and an 18- ft. deep by 300- ft. wide navigation channel from Terrebonne Bay out into the Gulf of Mexico. The HNC was constructed by Louisiana's Department of Public Works in 1959, and USACE was authorized to assume maintenance of the channel in 1962.

The annual average allocation for maintenance of the HNC is approximately $3.3 M. Recently, the total annual dredging allocation has been a combination of federal and local (Terrebonne Parish Consolidated Government and the Terrebonne Port Commission) appropriations.

As indicated in the economic impact study, approximately 12,610 jobs (approximately 14 percent) in the Houma area are associated with transportation and material moving.

Timbalier Island, located east of the HNC, provides a natural storm barrier and, thus, is a focus of coastal restoration efforts. However, erosion of island has resulted in the accumulation of sand within the HNC, as stated in DeSantis (2017). The use of shoreline protection for the island, such as the Ecobale, could result in a reduction of accumulated sand within the HNC and, subsequently, a reduction in required dredging maintenance cost. In addition, the dredge spoils could be placed "up-stream" of the shoreline protection system and contribute to restoration of Timbalier Island. The mitigation of sand being deposited in the channel template could result in the potential for the implementation of an alternative dredging technology such as agitation. Agitation is applicable to less dense, low sand content dredge material and can be completed at a lower unit cost than traditional cutter head technology. The paring of these technologies could enhance coastal restoration efforts and reduce the annual dredging costs required to maintain the channel.

Senate Resolution No. 220 recommends CPRA and DOTD "study shipping lanes in need of dredging and whether dredge spoils could be of beneficial use for integrated coastal protection, and make recommendations to the legislature." This program analysis includes an evaluation of a framework for supporting, sustaining, and protecting Louisiana's economic centers through the evaluation and coordination of coastal protection and restoration objectives and channel and port dredging projects. The framework includes pairing Louisiana's needs to dredge and sustain commerce with ongoing and planned mitigation efforts that reduce risk and increase the commercial viability of Louisiana's coastal communities. Similarly, through coordinating USACE and state projects, several USACE maintenance dredging cycles may be paired with the state's planned coastal protection and restoration projects for beneficial use of dredge material at a combined cost savings. The program analysis also includes an investigation into administrative requirements such as legislative, policy, and agency options with regard to the above mentioned program elements and opportunities.

RECOMMENDATIONS

As detailed above, the Ouachita-Black Rivers and HNC were analyzed for applicability of innovative technologies described herein. Additionally, the resulting economic impacts of decreased tonnage on these two waterways were evaluated. As a result, the team has developed a recommended path forward for the development of a GIS platform that would serve as a tool to allow for similar analyses to all waterways within Louisiana. The tool would allow interested parties to collaboratively increase the efficiency of dredging projects within the state while also increasing the benefits. Therefore, the tool would directly implement recommendations of Senate Resolution No. 220.

To implement a successful joint project utilizing multiple funding sources, missions, and objectives within the Ouachita-Black Rivers or HNC, local, state, and federal projects need to be accurately mapped and coordinated. Once all projects are identified, current and historical information for all identified projects will need to be compiled and analyzed in a collaborative effort to evaluate project goals, schedule, and constraints. The data identified above in this report will allow the stakeholders to identify jurisdictional and project boundaries, dredge area reaches and volumes, available placement areas, potential pipeline corridors, potential obstructions, sediment types and quantities, and adjacent restoration projects. The identification and mapping of the categories mentioned above will allow local, state, and federal stakeholders to collaborate and align state funded projects with USACE dredge maintenance funding and to develop a schedule to pair projects for beneficial use of dredge material. After the data is accurately identified and quantified, an engineering evaluation of available technologies and the economic impact of alternative technologies and methodologies can be completed. The economic impact assessment will determine the most cost effective and feasible technology as well as the increase in commerce and revenue generated by coupling the projects. This assessment will provide justification for project costs as compared to the completion of individual projects utilizing traditional technologies. At the completion of the design process, an agreement or memorandum of understanding can be executed between the stakeholders to schedule, coordinate, and complete projects simultaneously utilizing multiple funding sources while maintaining project specific objectives and mission statements.

Houma Navigation Canal

USACE has historically dredged 250,000-750,000 cubic yards of material from the Terrebonne Bay portion of the HNC at cost of $1 M to $5 M annually. USACE places the dredge material on the west side of the channel or utilizes the material as beneficial use to create islands. CPRA has two adjacent projects, Terrebonne Basin Ridge and Marsh Creation

– Bayou Terrebonne Increment (TE-0139) and Terrebonne Bay Marsh Creation-Nourishment (TE-0083), which are planned to cost $126 M and $28.7 M and create 1,370 acres and 353 acres, respectively, of marsh through the dredge and placement of sediments. CPRA project TE-0139 plans to procure the necessary sediments from off-shore sources. The portion of funds allocated for the dredge and transportation of material is not finalized at this time. However, the coordination between CPRA and USACE to utilize material dredged from Terrebonne Bay could present a cost savings to USACE and CPRA. The use of dredge material can be accomplished through a secondary lift of dredge material provided by CRPA funds or potentially through Section 1113 of WRDA 2016 which allows a non-federal interest to carry out maintenance activities for an authorized navigation project, with potential reimbursement from USACE funds. The agreement would facilitate the planning, scheduling, and implementation of restoration projects between various agencies; fund the dredging portion of the CPRA project; and maintain Terrebonne Bay's authorized dimensions to support commerce within the region. Additionally, CPRA can utilize dredge spoils from Cat Island Pass (Mile 0.0 to -3.5 of the HNC) for the maintenance needs of New Cut Dune and Marsh Restoration (TE-0037) or as a sediment source for Timbalier Island Restoration (TE-118), if the effort is economically justified.

As mentioned earlier, the use of shoreline protection, such as the Ecobale, on Timbalier Island could decrease the amount of material that accumulates within Cat Island Pass of the HNC. The shoreline protection would dually decrease the amount of material that CPRA must replenish to the eroding island. The estimated price of installation for the Ecobale is $1,150 per linear foot (with no void space between the Ecobales). Therefore, a $1 M investment will result in 870 ft. of continuous structure. However, the geotechnical, nearshore environment, and geometric configuration of the structure needs to be modeled to assess the hydrodynamic and geomorphic impacts of the structure and to quantify the retention of material upstream and thus the reduction in channel infilling. The modeling of the impacts associated with the installation of the Ecobale are out of scope of this report and will need to be addressed separately. Reducing the rate at which Timbalier Island's eroded sediment accumulates within the HNC could also result in a decrease in sand content of the material dredged from the HNC. If the sand content within the HNC decreases, an innovative technology such as agitation, which is applicable to low sand content material, should be evaluated as a potentially cost effective alternative.

Ouachita-Black Rivers

Implementation of innovative technologies within the Ouachita-Black Rivers is discussed in the Innovative Technologies section of this report. The implementation of erosion control

structures and more efficient dredge technology could reduce shoaling within the channels and provide maintenance of the channels more cost effectively. The average annual budget required for dredge material is $3.5 M with approximately 4.7 M CY per year to be removed from the Channel in 2015, 2016, and 2017. The team estimated a trailer-mounted dredge can remove sediment at a rate of $1.06 per cubic yard. Therefore, the use of a trailer-mounted dredge would result in the removal of approximately 3.3 M CY of material could be sold at market value. Through the use of the collected data associated with the project, the state could site and develop a sediment mining operation, as authorized in Revised Statute 56:2011. Through the sale of state water bottoms, the dredge material could be sold at market value to fund the maintenance of the channel. However, the Little River portion is not the only issue associated with the Ouachita-Black Rivers. USACE lacks sufficient funds to adequately maintain the locks, dams, and channels. Furthermore, the reduction of funds allocated to dredging may enable USACE to reallocate the majority of its funding to the operation and maintenance of the locks and dams, thus enabling more efficient commerce, an increase in tonnage within the region, and an increase in HMTF funding.

Implementation of Senate Resolution No. 220

The State of Louisiana needs to develop a plan to formalize the integration of innovative and available technology, alternative channel management methodologies, and funding for regional projects. The projects that are currently under assessment and planning by USACE, CPRA, LDWF, LDNR, and private entities should be considered holistically and combined to the extent practicable to enhance efforts of maintaining channel navigability, with the mission of coastal protection and restoration, wildlife habitat management, and private land recovery and maintenance, as described within Senate Resolution No. 220 from the 2017 legislative session.

As discussed in this report, a large amount of data is publically available and utilized to measure, assess, plan, design, construct, maintain, and monitor the waterways within Louisiana. More often than not, this data is used independently and without regard to the other available data sets. This team proposes the development of a full-scale desktop platform that includes all of Louisiana's ports and supporting waterways, provides access to the data identified as part of this study, allows for the incorporation of new data as it comes available, integrates the regional economic impacts relative to draft depth, and provides a user-friendly online interface to view that data. The individual data sources identified herein will be collected and integrated into the GIS platform. The data will be used to identify dredge area reach and volume, available placement areas, pipeline corridors or other obstructions, sediment type and quantity, and adjacent restoration projects. In addition, the

economic impact study performed for this report will be expanded to include each of Louisiana's ports and supporting waterways. The economic evaluation will provide key metrics for each port and supporting waterway to be incorporated into the GIS platform and will provide an interactive cost-benefit analysis for each port to aid in the decision making process. Through a collaborative and iterative effort, the final GIS platform will provide a statewide assessment tool for stakeholders to aid in planning and identification of alternate dredge management strategies with the ability to view the whole data set during the decision making process.

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LIST OF APENDICES

List of Attachments

(To access the following list of attachments, please contact Dr. Mohan Menon at 985-219-1015 or mmenon@gisy.com)

APPENDIX A

Water Jet
10-year Nondiscounted Cost Analysis

$$C_{unit} = \frac{C_{total}}{cy}$$

where,

C_{unit} = Cost per cubic yard

C_{total} = Annual total cost, assuming total depreciation

cy = Annual production in cubic yards

$$C_{total} = \frac{C_{cap}}{10} + C_{util} + C_{mr} + C_{insur}$$

where,

C_{cap} = Total capital cost

10 = Number of years

C_{util} = Annual utility cost

C_{labor} = Annual labor cost

C_{mr} = Annual maintenance and repair cost

C_{insur} = Annual insurance cost

C_{cap} = $4,200,000 [1]

C_{util} = $35,000 [1]

$$C_{mr} = 5\% * C_{cap}$$

where,

5% = Assumed percent of capital cost [2]

C_{mr} = $210,000

$$C_{insur} = 2.5\% * C_{cap}$$

where,

2.5% = Assumed percent of captial cost [2]

C_{insur} =	$105,000	
C_{total} =	$770,000	
cy =	240,000	[1]
C_{unit} =	$3.21	

[1] Attachment 1
[2] Turton et al. (2012)

Sediment Collector
10-year Nondiscounted Cost Analysis

$$C_{unit} = \frac{C_{total}}{cy}$$

where,

C_{unit} = Cost per cubic yard

C_{total} = Annual total cost, assuming total depreciation

cy = Annual production in cubic yards

$$C_{total} = \frac{C_{cap}}{10} + C_{util} + C_{mr} + C_{insur}$$

where,

C_{cap} = Total capital cost

10 = Number of years

C_{util} = Annual utility cost

C_{labor} = Annual labor cost

C_{mr} = Annual maintenance and repair cost

C_{insur} = Annual insurance cost

$$C_{cap} = \$628,000 * 3.1$$

where,

$628,000 = Total cost of equipment [1]

3.1 = Assumed Lang factor [2]

C_{cap} = $1,946,800

$$C_{util} = \frac{1\ Kwh}{min} * \frac{\$0.10}{Kwh} * \frac{60\ min}{hr} * \frac{24\ hr}{day} * \frac{365\ day}{yr}$$

where,

1 Kwh/min = System electricy requirement [1]

$0.10/Kwh = Assumed cost of electricity per kilowatt-hour [1]

C_{util} = $52,560

$$\boldsymbol{C_{mr} = 5\% * C_{cap}}$$

where,

5% = Assumed percent of capital cost [2]

C_{mr} = $97,340

$$\boldsymbol{C_{insur} = 2.5\% * C_{cap}}$$

where,

2.5% = Assumed percent of captial cost [2]

C_{insur} = $48,670

C_{total} = $393,250

cy = 150,000

C_{unit} = $2.62

[1] Attachment 2
[2] Turton et al. (2012)

Amphibex 600
10-year Nondiscounted Cost
Analysis

$$C_{unit} = \frac{C_{total}}{cy}$$

where,

C_{unit} = Cost per cubic yard

C_{total} = Annual total cost, assuming total depreciation

cy = Annual production in cubic yards

$$C_{total} = \frac{C_{cap}}{10} + C_{fuel} + C_{labor} + C_{mr} + C_{insur}$$

where,

C_{cap} = Total capital cost

10 = Number of years

C_{fuel} = Annual fuel cost

C_{labor} = Annual labor cost

C_{mr} = Annual maintenance and repair cost

C_{insur} = Annual insurance cost

$$\frac{C_{cap,a}}{C_{cap,b}} = \left(\frac{A_a}{A_b}\right)^n$$

where,

A = Cost attribute, assumed to be horsepower (hp)

n = Cost exponent

subscript a refers to equipment with the required attribute

subscript b refers to equipment with the base attribute

Model	C [1]	A [2]
400	$1,350,000	275 hp
600	C_{600}	700 hp
1200	$6,000,000	1,350 hp

n = 0.94

C_{600} = $3,241,463

$$C_{fuel} = \frac{700\ hp}{40\%} * \frac{2,544.43\ BTU}{hr\ hp} * \frac{gal}{128,450\ BTU} * \frac{15\ work-hr}{day} * \frac{365\ day}{yr} * \frac{\$2.70}{gal}$$

where,

700 hp = Total installed power of Amphibex 600 [2]

40% = Assumed engine efficiency

2,544.43 BTU/hr-hp = Conversion factor

128,450 BTU/gal = Lower Heating Value (LHV) of diesel

15 work-hr/day = Conversion factor

365 day/yr = Conversion factor

$2.70/gal = Current price of diesel [3]

C_{fuel} = $512,439

$$C_{labor} = 5\ laborer * \frac{\$25}{laborer\ hr} * \frac{15\ work-hr}{day} * \frac{365\ day}{yr} * 1.20$$

where,

5 laborer = Assumed number of laborers

$25/laborer/hr = Assumed average rate per laborer

1.20 = Assumed additional supervisory/clerical cost

Conversion factors:

15 work-hr/day

365 day/yr

C_{labor} = $821,250

$$\boldsymbol{C_{mr} = 15\% * C_{cap}}$$

where,

15% = Assumed percent of capital cost [4]

C_{mr} = $486,220

$$\boldsymbol{C_{insur} = 2.5\% * C_{cap}}$$

where,

2.5% = Assumed percent of captial cost [5]

C_{insur} = $81,037

C_{total} = $2,225,092

$$\boldsymbol{cy = \frac{13{,}000\ gal}{min} * 10\% * \frac{ft^3}{7.5\ gal} * \frac{yd^3}{27\ ft^3} * \frac{60\ min}{hr} * \frac{15\ work-hr}{day} * \frac{365\ day}{yr}}$$

where,

13,000 gal/min = flow rate of Amphibex 600 pump [6]

10% = Assumed average solids content in slurry

Conversion factors:

7.5 gal/ft^3

27 ft^3/yd^3

60 min/hr

15 work-hr/day

365 day/yr

cy = 2,108,889

C_{unit} = $1.06

[1] Healey (2014)
[2] Amphibex
[3] U.S. Energy Information Administration (2017)
[4] Wowtschuk
(2016)
[5] Turton et al.
(2012)
[6] Normrock Industries

Example Hopper [1]
10-year Nondiscounted Cost Analysis

$$C_{unit} = \frac{C_{total}}{cy}$$

where,

C_{unit} = Cost per cubic yard

C_{total} = Annual total cost, assuming total depreciation

cy = Annual production in cubic yards

$$C_{total} = \frac{C_{cap}}{10} + C_{fuel} + C_{labor} + C_{mr} + C_{insur}$$

where,

C_{cap} = Total capital cost

10 = Number of years

C_{fuel} = Annual fuel cost

C_{labor} = Annual labor cost

C_{mr} = Annual maintenance and repair cost

C_{insur} = Annual insurance cost

C_{cap} = $18,000,000 [1]

$$C_{fuel} = \frac{9{,}800\ hp}{40\%} * \frac{2{,}544.43\ BTU}{hr\ hp} * \frac{gal}{128{,}450\ BTU} * \frac{15\ work-hr}{day} * \frac{365\ day}{yr} * \frac{\$2.70}{gal}$$

where,

9,800 hp = Total installed power [1]

40% = Assumed engine efficiency

128,450 BTU/gal = Lower Heating Value (LHV) of diesel

$2.70/gal = Current price of diesel [2]

Conversion factors:

2,544.43 BTU/hr-hp

15 work-hr/day
365 day/yr

C_{fuel} = $7,174,149

$$\boldsymbol{C_{labor} = 20\ laborer\ *\ \frac{\$25}{laborer\ hr}\ *\frac{15\ work-hr}{day}\ *\ \frac{365\ day}{yr}\ *1.20}$$

where,
20 laborer = Assumed number of laborers
$25/laborer/hr = Assumed average rate per laborer
1.20 = Assumed additional supervisory/clerical cost
Conversion factors:
15 work-hr/day
365 day/yr

C_{labor} = $3,285,000

$$\boldsymbol{C_{mr} = 15\% \ *\ C_{cap}}$$

where,
15% = Assumed percent of captial cost [1]

C_{mr} = $2,700,000

$$\boldsymbol{C_{insur} = 2.5\% \ *\ C_{cap}}$$

where,
2.5% = Assumed percent of captial cost [3]

C_{insur} = $450,000

C_{total} = $15,409,149

$$\boldsymbol{cy = 9,800\ hp\ *30\% *75\%\ *\ \frac{1}{75\ ft}\ *\frac{s^2}{32.17\ ft}\ *\ \frac{ft^3}{70\ lbm}\ *10\% *Conv}$$

$$Conv = \frac{2,544.43\ BTU}{hr\ hp} * \frac{778\ ft\ lbf}{BTU} * \frac{32.17\ lbm\ ft}{s^2\ lbf} * \frac{yd^3}{27\ ft^3} * \frac{15\ work-hr}{day} * \frac{365\ day}{yr}$$

where,

9,800 hp = Total installed power [1]

30% = Assumed pumping power as percent of total installed power

75% = Assumed pumping efficiency

75 ft = Assumed total head

32.17 ft/s^2 = gravitational constant

70 lbm/ft^3 = Assumed density of slurry

10% = Assumed average solids content in slurry

Conv = Conversion factors:

2,544.43 BTU/hr-hp

778 ft lbf/BTU

32.17 lbm ft/s^2-lbf

27 ft^3/yd^3

15 work-hr/day

365 day/yr

cy = 16,859,308

C_{unit} $0.91

[1] Wowtschuk (2016)

[2] U.S. Energy Information Administration (2017)

[3] Turton et al. (2012)

APPENDIX B

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GW_80_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_83_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_84_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_HN_08_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_09_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_12_BAY	BAY CHANNEL	15	CEMVN
CEMVN_LF_03_LWR	WEST BELLE PASS	24	CEMVN
CEMVN_LK_03_HVY	HARVEY LOCK FOREBAY	12	CEMVN
CEMVN_MD_10_GRA	GRANADA CROSSING	45	CEMVN
CEMVN_MD_13_GOU	BAYOU GOULA CROSSING	45	CEMVN
CEMVN_MM_01_BAR	BAR CHANNEL	15	CEMVN
CEMVN_MM_04_BAY	BAY CHANNEL	15	CEMVN
CEMVN_MS_07_OLD	OLD RIVER CONTROL	9	CEMVN
CEMVN_MS_09_SM1	SMITHLAND - SHEET 1	9	CEMVN
CEMVN_MS_11_SM3	SMITHLAND - SHEET 3	9	CEMVN
CEMVN_SW_06_SWP	SOUTHWEST PASS - SHEET 6	45	CEMVN
CEMVN_SW_11_SWP	SOUTHWEST PASS - SHEET 11	45	CEMVN
CEMVN_TC_55_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_67_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_AR_06_BAY	UPPER BAY CHANNEL	20	CEMVN
CEMVN_AR_09_CHE	BAYOU CHENE	20	CEMVN
CEMVN_AS_00_BLF	BERWICK LOCK FOREBAY	12	CEMVN
CEMVN_BW_01_BAR	BAR CHANNEL	12	CEMVN
CEMVN_BW_06_BAY	BAY CHANNEL	12	CEMVN
CEMVN_BW_08_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_BW_10_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_BW_13_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_07_UPR	UPPER SHEET 7	40	CEMVN
CEMVN_CR_08_UPR	UPPER SHEET 8	40	CEMVN
CEMVN_CR_17_LWR	LOWER SHEET 17	40	CEMVN
CEMVN_CR_34_BAR	BAR SHEET 34	42	CEMVN
CEMVN_CR_35_BAR	BAR SHEET 35	42	CEMVN
CEMVN_CR_40_BAR	BAR SHEET 40	42	CEMVN
CEMVN_CR_45_BAR	BAR SHEET 45	42	CEMVN
CEMVN_CR_46_BAR	BAR SHEET 46	42	CEMVN
CEMVN_CR_49_BAR	BAR SHEET 49	42	CEMVN
CEMVN_FB_04_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_07_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_18_BAR	BAR CHANNEL	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_20_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_21_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_22_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_23_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_25_LAF	BAYOU LAFOURCHE	12	CEMVN
CEMVN_GI_46_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_47_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_51_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_62_BOE	BAYOU BOEUF	12	CEMVN
CEMVN_GI_69_M99	MILE 99 POINT	12	CEMVN
CEMVN_GI_87_CHA	CHARENTON CANAL	12	CEMVN
CEMVN_GI_97_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_14_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_25_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_28_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_40_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_54_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_85_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_HN_10_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_11_LWR	LOWER CHANNEL	15	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_HN_13_BAY	BAY CHANNEL	15	CEMVN
CEMVN_HN_19_BAR	BAR CHANNEL	18	CEMVN
CEMVN_HN_21_LEC	BAYOU LECARPE	10	CEMVN
CEMVN_MD_04_RED	REDEYE CROSSING	45	CEMVN
CEMVN_MD_72_SB3	SALT WATER BARRIER, BORROW 1	45	CEMVN
CEMVN_OR_01_LFB	OLD RIVER LOCK FOREBAY	8	CEMVN
CEMVN_OV_06_TIG	TIGER PASS	16	CEMVN
CEMVN_SP_06_SPS	SOUTH PASS - SHEET 6	30	CEMVN
CEMVN_SW_12_SWP	SOUTHWEST PASS - SHEET 12	45	CEMVN
CEMVN_TC_03_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_04_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_19_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_22_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_31_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_33_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_52_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_54_KEY	KEYSTONE LOCK - UPSTREAM	6	CEMVN
CEMVN_TC_56_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_60_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_64_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_AR_01_BAR	BAR CHANNEL	20	CEMVN
CEMVN_AR_10_CHE	BAYOU CHENE	20	CEMVN
CEMVN_AR_11_CHE	BAYOU CHENE	20	CEMVN
CEMVN_BW_07_BAY	BAY CHANNEL	12	CEMVN
CEMVN_BW_15_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_BW_17_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_BW_18_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_BW_20_RIG	BAYOU RIGAUD	12	CEMVN
CEMVN_CR_11_LWR	LOWER SHEET 11	40	CEMVN
CEMVN_CR_12_LWR	LOWER SHEET 12	40	CEMVN
CEMVN_CR_19_LWR	LOWER SHEET 19	40	CEMVN
CEMVN_CR_24_LWR	LOWER SHEET 24	40	CEMVN
CEMVN_CR_28_BAR	BAR SHEET 28	42	CEMVN
CEMVN_CR_41_BAR	BAR SHEET 41	42	CEMVN
CEMVN_CR_44_BAR	BAR SHEET 44	42	CEMVN
CEMVN_CR_50_DE1	DEVIL'S ELBOW - SH 1	40	CEMVN
CEMVN_FB_02_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_19_BAR	BAR CHANNEL	12	CEMVN
CEMVN_GE_03_MRG	MRGO	36	CEMVN
CEMVN_GE_06_MIC	MICHOUD CANAL	36	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_03_HVY	HARVEY CANAL	12	CEMVN
CEMVN_GI_12_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_15_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_43_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_57_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_63_BOE	BAYOU BOEUF	12	CEMVN
CEMVN_GI_80_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_89_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_90_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_95_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_98_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_16_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_19_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_30_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_31_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_39_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_56_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_57_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_59_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_67_M2C	MERMENTAU TO CALCASIEU	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GW_70_CSC	CALCASIEU SHIP CHANNEL	12	CEMVN
CEMVN_GW_71_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_73_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_77_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_HN_07_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_LK_04_PAL	PORT ALLEN LOCK FOREBAY	12	CEMVN
CEMVN_MD_22_SMB	SMOKE BEND CROSSING	45	CEMVN
CEMVN_MD_29_RIB	RICH BEND CROSSING	45	CEMVN
CEMVN_MP_17_BSO	MORGAN CITY TO PORT ALLEN ROUTE	12	CEMVN
CEMVN_OR_02_LTB	OLD RIVER LOCK TAILBAY	8	CEMVN
CEMVN_SW_02_SWP	SOUTHWEST PASS - SHEET 2	45	CEMVN
CEMVN_TC_07_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_11_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_45_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_46_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_62_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_69_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_70_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_AR_07_CBC	CREWBOAT CUT CHANNEL	20	CEMVN
CEMVN_AR_08_CHE	BAYOU CHENE	20	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_AR_16_BLK	BAYOU BLACK	20	CEMVN
CEMVN_AS_09_STP	STOUTS PASS	12	CEMVN
CEMVN_BW_14_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_20_LWR	LOWER SHEET 20	40	CEMVN
CEMVN_CR_29_BAR	BAR SHEET 29	42	CEMVN
CEMVN_CR_31_BAR	BAR SHEET 31	42	CEMVN
CEMVN_CR_33_BAR	BAR SHEET 33	42	CEMVN
CEMVN_CR_43_BAR	BAR SHEET 43	42	CEMVN
CEMVN_FB_17_BAR	BAR CHANNEL	12	CEMVN
CEMVN_GE_02_MRG	IHNC/MRGO	36	CEMVN
CEMVN_GE_06_MRG	MRGO	36	CEMVN
CEMVN_GI_05_WCC	WEST CLOSURE COMPLEX	12	CEMVN
CEMVN_GI_10_LFT	LAFITTE	12	CEMVN
CEMVN_GI_17_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_18_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_27_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_29_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_42_HMA	HOUMA NAVIGATION CANAL	12	CEMVN
CEMVN_GI_50_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_53_H2C	HOUMA NAV TO CHENE	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_70_A2W	ATCHAFALAYA TO WAX LAKE	12	CEMVN
CEMVN_GI_77_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_82_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_83_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_88_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_94_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_08_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_10_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_17_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_33_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_35_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_37_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_41_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_53_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_58_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_81_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_HN_15_BAY	BAY CHANNEL	15	CEMVN
CEMVN_MD_16_ALH	ALHAMBRA CROSSING	45	CEMVN
CEMVN_MD_19_PHP	PHILADELPHIA POINT CROSSING	45	CEMVN
CEMVN_MM_02_BAR	BAR CHANNEL	15	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_MM_03_BAY	BAY CHANNEL	15	CEMVN
CEMVN_SP_05_SPS	SOUTH PASS - SHEET 5	30	CEMVN
CEMVN_SW_03_SWP	SOUTHWEST PASS - SHEET 3	45	CEMVN
CEMVN_SW_04_SWP	SOUTHWEST PASS - SHEET 4	45	CEMVN
CEMVN_SW_05_SWP	SOUTHWEST PASS - SHEET 5	45	CEMVN
CEMVN_SW_07_SWP	SOUTHWEST PASS - SHEET 7	45	CEMVN
CEMVN_SW_08_SWP	SOUTHWEST PASS - SHEET 8	45	CEMVN
CEMVN_SW_13_SWP	SOUTHWEST PASS - SHEET 13	45	CEMVN
CEMVN_TC_01_BER	BERWICK LOCK	8	CEMVN
CEMVN_TC_08_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_14_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_17_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_21_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_26_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_27_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_30_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_39_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_44_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_51_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_68_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_AR_04_BAR	BAR CHANNEL	20	CEMVN
CEMVN_BW_05_BAY	BAY CHANNEL	12	CEMVN
CEMVN_BW_11_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_01_UPR	UPPER SHEET 1	35	CEMVN
CEMVN_CR_03_UPR	UPPER SHEET 3	40	CEMVN
CEMVN_CR_09_UPR	UPPER SHEET 9	40	CEMVN
CEMVN_CR_10_UPR	UPPER SHEET 10	40	CEMVN
CEMVN_CR_13_LWR	LOWER SHEET 13	40	CEMVN
CEMVN_CR_18_LWR	LOWER SHEET 18	40	CEMVN
CEMVN_CR_36_BAR	BAR SHEET 36	42	CEMVN
CEMVN_CR_48_BAR	BAR SHEET 48	42	CEMVN
CEMVN_EM_01_EFG	EMPIRE FLOOD GATE	9	CEMVN
CEMVN_FB_03_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_05_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_06_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_GE_24_MIC	MICHOUD CANAL	36	CEMVN
CEMVN_GI_13_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_14_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_37_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_61_BOE	BAYOU BOEUF	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_65_BOE	BAYOU BOEUF	12	CEMVN
CEMVN_GI_72_A2W	ATCHAFALAYA TO WAX LAKE	12	CEMVN
CEMVN_GI_81_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GW_03_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_23_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_27_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_32_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_50_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_55_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_69_CSC	CALCASIEU SHIP CHANNEL	12	CEMVN
CEMVN_GW_74_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_90_SAB	SABINE RIVER	12	CEMVN
CEMVN_HN_04_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_17_BAR	BAR CHANNEL	15	CEMVN
CEMVN_LF_01_BAR	BAR CHANNEL	26	CEMVN
CEMVN_MD_06_SDP	SARDINE POINT CROSSING	45	CEMVN
CEMVN_MD_08_MED	MEDORA CROSSING	45	CEMVN
CEMVN_MD_48_FRV	FAIRVIEW CROSSING	45	CEMVN
CEMVN_MR_54_NO1	NO HARBOR - SHEET 1	35	CEMVN
CEMVN_OV_04_TIG	TIGER PASS	14	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_SP_04_SPS	SOUTH PASS - SHEET 4	30	CEMVN
CEMVN_SW_09_SWP	SOUTHWEST PASS - SHEET 9	45	CEMVN
CEMVN_TC_09_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_13_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_16_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_18_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_20_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_25_C2I	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_28_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_32_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_42_C2I	CHARENTON TO NEW IBERIA	6	CEMVN
CEMVN_TC_48_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_53_KEY	KEYSTONE LOCK - DOWNSTREAM	6	CEMVN
CEMVN_TC_57_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_58_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_61_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_63_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_65_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_AR_13_BUF	BAYOU BOEUF	20	CEMVN
CEMVN_BH_01_DEV	BATON ROUGE HARBOR	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_BS_01_SEG	GIWW TO WESTWEGO	9	CEMVN
CEMVN_BW_09_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_02_UPR	UPPER SHEET 2	40	CEMVN
CEMVN_CR_04_UPR	UPPER SHEET 4	40	CEMVN
CEMVN_CR_05_UPR	UPPER SHEET 5	40	CEMVN
CEMVN_CR_14_LWR	LOWER SHEET 14	40	CEMVN
CEMVN_CR_16_LWR	LOWER SHEET 16	40	CEMVN
CEMVN_CR_23_LWR	LOWER SHEET 23	40	CEMVN
CEMVN_CR_25_GAP	GAP SHEET 25	40	CEMVN
CEMVN_CR_26_GAP	GAP SHEET 26	40	CEMVN
CEMVN_CR_37_BAR	BAR SHEET 37	42	CEMVN
CEMVN_CR_39_BAR	BAR SHEET 39	42	CEMVN
CEMVN_FB_10_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_FB_11_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_FB_12_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_FB_16_BAR	BAR CHANNEL	12	CEMVN
CEMVN_GE_05_MRG	MRGO	36	CEMVN
CEMVN_GI_07_LFT	LAFITTE	12	CEMVN
CEMVN_GI_19_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_26_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_33_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_35_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_41_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_56_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_66_BBW	MORGAN CITY DOCKS EAST	12	CEMVN
CEMVN_GI_67_BBW	20 GRAND POINT	12	CEMVN
CEMVN_GI_68_ATR	ATCHAFALAYA RIVER	12	CEMVN
CEMVN_GI_76_WLO	WAX LAKE OUTLET	12	CEMVN
CEMVN_GI_84_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_85_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_92_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_93_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_05_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_11_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_15_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_24_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_38_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_44_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_52_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_62_M2C	MERMENTAU TO CALCASIEU	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GW_65_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_68_CSL	CALCASIEU LOCK	12	CEMVN
CEMVN_GW_75_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_78_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_82_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_88_SAB	SABINE RIVER	12	CEMVN
CEMVN_HN_01_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_02_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_18_BAR	BAR CHANNEL	18	CEMVN
CEMVN_HN_20_LEC	BAYOU LECARPE	10	CEMVN
CEMVN_LF_02_LWR	WEST BELLE PASS	24	CEMVN
CEMVN_LK_01_ALG	ALGIERS LOCK FOREBAY	12	CEMVN
CEMVN_MD_30_BEL	BELMONT CROSSING	45	CEMVN
CEMVN_MP_15_BSO	MORGAN CITY TO PORT ALLEN ROUTE	12	CEMVN
CEMVN_MS_08_FAR	FORT ADAMS REACH	9	CEMVN
CEMVN_MS_39_WIL	WILKERSON POINT	9	CEMVN
CEMVN_OV_03_BAP	BAPTSTE COLLETTE	16	CEMVN
CEMVN_SP_01_SPS	SOUTH PASS - SHEET 1	30	CEMVN
CEMVN_SP_03_SPS	SOUTH PASS - SHEET 3	30	CEMVN
CEMVN_SW_01_SWP	SOUTHWEST PASS - SHEET 1	45	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_SW_10_SWP	SOUTHWEST PASS - SHEET 10	45	CEMVN
CEMVN_TC_05_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_29_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_38_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_40_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_47_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_49_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_50_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN
CEMVN_TC_71_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_73_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_AR_02_BAR	BAR CHANNEL	20	CEMVN
CEMVN_AS_06_BER	BERWICK HARBOR	12	CEMVN
CEMVN_AS_10_S2M	STOUTS PASS TO MYETTE PT	12	CEMVN
CEMVN_BW_03_BAY	BAY CHANNEL	12	CEMVN
CEMVN_BW_19_RIG	BAYOU RIGAUD	12	CEMVN
CEMVN_CR_47_BAR	BAR SHEET 47	42	CEMVN
CEMVN_CR_52_CLI	CLOONEY ISLAND	40	CEMVN
CEMVN_FB_09_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_FB_15_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_GI_02_HVY	HARVEY CANAL	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_08_LFT	LAFITTE	12	CEMVN
CEMVN_GI_09_LFT	LAFITTE	12	CEMVN
CEMVN_GI_28_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_31_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_34_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_49_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_64_BOE	BAYOU BOEUF	12	CEMVN
CEMVN_GI_86_CHA	CHARENTON CANAL	12	CEMVN
CEMVN_GW_02_PTA	BAYOU PETIT ANSE	12	CEMVN
CEMVN_GW_04_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_09_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_12_VRM	VERMILION RIVER	12	CEMVN
CEMVN_GW_22_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_34_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_36_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_45_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_49_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_51_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_63_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_64_M2C	MERMENTAU TO CALCASIEU	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GW_72_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_87_SAB	SABINE RIVER	12	CEMVN
CEMVN_GW_89_SAB	SABINE RIVER	12	CEMVN
CEMVN_GW_91_SAB	SABINE RIVER	12	CEMVN
CEMVN_HN_14_BAY	BAY CHANNEL	15	CEMVN
CEMVN_HN_16_BAY	BAY CHANNEL	15	CEMVN
CEMVN_LK_02_IHN	I.H.N.C. LOCK FOREBAY	32	CEMVN
CEMVN_MD_01_BRF	BATON ROUGE FRONT CROSSING	45	CEMVN
CEMVN_MD_70_SB1	SALT WATER BARRIER, BORROW 2	45	CEMVN
CEMVN_MP_16_BSO	MORGAN CITY TO PORT ALLEN ROUTE	12	CEMVN
CEMVN_MR_56_NO3	NO HARBOR - SHEET 3	18	CEMVN
CEMVN_MS_24_BYS	BAYOU SARA	9	CEMVN
CEMVN_TC_02_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_12_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_23_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_24_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_34_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_35_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_41_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_66_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_TC_72_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_TC_74_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_AB_01_WLO	WAX LAKE OUTLET	12	CEMVN
CEMVN_AR_14_BUF	BAYOU BOEUF	20	CEMVN
CEMVN_BW_04_BAY	BAY CHANNEL	12	CEMVN
CEMVN_BW_16_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_30_BAR	BAR SHEET 30	42	CEMVN
CEMVN_CR_32_BAR	BAR SHEET 32	42	CEMVN
CEMVN_CR_38_BAR	BAR SHEET 38	42	CEMVN
CEMVN_CR_51_DE2	DEVIL'S ELBOW - SH 2	40	CEMVN
CEMVN_FB_01_UPR	UPPER CHANNEL	12	CEMVN
CEMVN_FB_08_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_FB_13_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_GE_04_MRG	MRGO	36	CEMVN
CEMVN_GI_06_WCC	WEST CLOSURE COMPLEX	12	CEMVN
CEMVN_GI_11_BWW	BARATARIA/SEGNETTE	12	CEMVN
CEMVN_GI_24_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_40_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_44_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_55_H2C	HOUMA NAV TO CHENE	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_58_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_60_CHE	BAYOU CHENE	12	CEMVN
CEMVN_GI_71_A2W	ATCHAFALAYA TO WAX LAKE	12	CEMVN
CEMVN_GI_73_A2W	ATCHAFALAYA TO WAX LAKE	12	CEMVN
CEMVN_GI_75_WLO	WAX LAKE OUTLET	12	CEMVN
CEMVN_GI_99_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_00_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_01_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_06_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_07_P2V	PETIT ANSE TO VERMILION	12	CEMVN
CEMVN_GW_13_FWB	FRESHWATER BAYOU	12	CEMVN
CEMVN_GW_18_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_20_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_26_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_29_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_43_MER	MERMENTAU RIVER	12	CEMVN
CEMVN_GW_46_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_47_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_60_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_66_M2C	MERMENTAU TO CALCASIEU	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GW_76_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_79_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_GW_86_C2S	CALCASIEU TO SABINE	12	CEMVN
CEMVN_HN_03_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_05_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_HN_06_LWR	LOWER CHANNEL	15	CEMVN
CEMVN_MD_54_NO1	NO HARBOR - SHEET 1	35	CEMVN
CEMVN_MD_56_NO3	NO HARBOR - SHEET 3	18	CEMVN
CEMVN_MS_10_SM2	SMITHLAND - SHEET 2	9	CEMVN
CEMVN_OR_03_3R1	THREE RIVERS 1	12	CEMVN
CEMVN_OR_04_3R2	THREE RIVERS 2	12	CEMVN
CEMVN_OV_02_BAP	BAPTSTE COLLETTE	14	CEMVN
CEMVN_OV_05_TIG	TIGER PASS	16	CEMVN
CEMVN_SP_02_SPS	SOUTH PASS - SHEET 2	30	CEMVN
CEMVN_TC_06_B2W	BERWICK TO WAX LAKE	8	CEMVN
CEMVN_TC_10_WLO	WAX LAKE OUTLET	8	CEMVN
CEMVN_TC_15_W2C	WAX LAKE TO CHARENTON	8	CEMVN
CEMVN_TC_36_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_37_C2I	CHARENTON TO NEW IBERIA	8	CEMVN
CEMVN_TC_43_I2K	NEW IBERIA TO KEYSTONE LOCK	6	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_TC_59_K2A	KEYSTONE TO ARNAUDVILLE	6	CEMVN
CEMVN_AR_03_BAR	BAR CHANNEL	20	CEMVN
CEMVN_AR_05_BAY	LOWER BAY CHANNEL	20	CEMVN
CEMVN_AR_12_CHE	BAYOU CHENE	20	CEMVN
CEMVN_AR_15_BLK	BAYOU BLACK	20	CEMVN
CEMVN_AS_08_STP	STOUTS PASS	12	CEMVN
CEMVN_BW_02_BAR	BAR CHANNEL	12	CEMVN
CEMVN_BW_12_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_CR_06_UPR	UPPER SHEET 6	40	CEMVN
CEMVN_CR_15_LWR	LOWER SHEET 15	40	CEMVN
CEMVN_CR_21_LWR	LOWER SHEET 21	40	CEMVN
CEMVN_CR_22_LWR	LOWER SHEET 22	40	CEMVN
CEMVN_CR_27_GAP	GAP SHEET 27	40	CEMVN
CEMVN_CR_42_BAR	BAR SHEET 42	42	CEMVN
CEMVN_CR_53_CNI	COON ISLAND	40	CEMVN
CEMVN_FB_14_LWR	LOWER CHANNEL	12	CEMVN
CEMVN_GI_01_HVY	HARVEY CANAL	12	CEMVN
CEMVN_GI_04_HVY	HARVEY CANAL	12	CEMVN
CEMVN_GI_16_B2L	BARATARIA TO LAFOURCHE	12	CEMVN
CEMVN_GI_30_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN

Table B.1
USACE - Channel Frameworks within Louisiana

SDSFEATURENAME	CHANNELAREAIDPK	WATERDEPTH	SOURCEAGENCY
CEMVN_GI_32_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_36_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_38_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_39_L2H	LAFOURCHE TO HOUMA NAV	12	CEMVN
CEMVN_GI_45_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_48_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_52_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_54_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_59_H2C	HOUMA NAV TO CHENE	12	CEMVN
CEMVN_GI_74_A2W	ATCHAFALAYA TO WAX LAKE	12	CEMVN
CEMVN_GI_78_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_79_W2C	WAX LAKE TO CHARENTON	12	CEMVN
CEMVN_GI_91_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GI_96_C2P	CHARENTON TO PETIT ANSE	12	CEMVN
CEMVN_GW_21_F2M	FRESHWATER TO MERMENTAU	12	CEMVN
CEMVN_GW_42_MER	MERMENTAU RIVER	12	CEMVN
CEMVN_GW_48_M2C	MERMENTAU TO CALCASIEU	12	CEMVN
CEMVN_GW_61_M2C	MERMENTAU TO CALCASIEU	12	CEMVN

Table B.2
Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2002	MVN	3 RIV OLD RIV LK FBY PAL FBY		700000.00	6/24/2002	7/29/2002	7/29/2002		9/28/2002	$2,223,117.00	$2,320,141.00	MIKE HOOKS INC.	LAKE CHARLES	8/10/2002	9/19/2002	373542.00	$1,646,266.12	$4.41
2004	MVN	3 RIV OLD RIV LK PA LK 2004	700000.00	700000.00	9/25/2003	8/17/2004	8/19/2004	9/10/2004	10/22/2004	$1,767,414.00	$2,192,751.00	WEEKS MARINE, INC.(GULF)	Covington	9/14/2004	10/14/2004	648684.00	$2,160,250.94	$3.33
1994	MVN	3 RIV ORL FBAY PAL FBAY BR H	0.00	700000.00	6/6/1994	7/28/1994	8/17/1994	8/30/1994	10/15/1994	$1,063,104.00	$879,405.00	MIKE HOOKS INC.	LAKE CHARLES	9/3/1994	10/11/1994	658955.00	$617,602.00	$0.94
1995	MVN	3 RIV ORL FBAY PAL FBAY BR H	996.00	700000.00	5/3/1995	7/18/1995	7/28/1995	8/25/1995	10/22/1995	$1,079,064.00	$1,238,625.00	MIKE HOOKS INC.	LAKE CHARLES	8/25/1995	10/22/1995	923087.00	$1,270,949.00	$1.38
1996	MVN	3 RIV ORL FBAY PAL FBAY BR H	1313.00	700000.00	5/16/1996	6/18/1996	7/23/1996	8/21/1996	9/16/1996	$1,068,785.00	$1,383,270.00	T.L. JAMES & CO., INC.	KENNER	8/21/1996	9/15/1996	345464.00	$627,706.72	$1.82
1997	MVN	3 RIV ORL FBAY PAL FBAY BR H	1164.00	700000.00	6/17/1997	7/28/1997	7/29/1997		9/21/1997	$1,240,202.00	$1,414,830.00	MIKE HOOKS INC.	LAKE CHARLES	8/5/1997	9/21/1997	463235.00	$1,258,002.34	$2.72
1998	MVN	3 RIV ORL FBAY PAL FBAY BR H	1164.00	700000.00	5/29/1998	8/4/1998	9/2/1998	9/7/1998	11/1/1998	$1,177,380.00	$1,364,405.00	T.L. JAMES & CO., INC.	KENNER	9/7/1998	10/7/1998	422243.00	$897,686.31	$2.13
2001	MVN	3 RIV ORL FBAY PAL FBAY BR H		700000.00	5/11/2001	7/26/2001	8/15/2001	8/20/2001	10/7/2001	$2,991,945.00	$2,502,750.00	WEEKS MARINE, INC.(GULF)	Covington	8/21/2001	10/6/2001	1043930.00	$2,106,332.80	$2.02
1993	MVN	3 RIV, ORL, PAL, BR HBR	277000.00	277000.00	6/3/1993	9/15/1993	11/8/1993	11/13/1993	12/3/1993	$722,420.00	$671,725.00	T.L. JAMES & CO., INC.	KENNER	11/13/1993	12/3/1993	277299.00	$338,748.00	$1.22
1990	MVN	3 RIV, PAL, ORL FBAYS FY90	500000.00	500000.00	12/18/1989	7/3/1990	7/18/1990	9/16/1990	10/19/1990	$588,200.00	$651,000.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1991	MVN	3 RIV, PAL, ORL, BR HBR(RFP)	0.00	500000.00	5/17/1991	7/8/1991	7/24/1991			$0.00	$690,549.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1992	MVN	ATACHAFALYA B & B LSD CUTTER	2000000.00	2000000.00	1/22/1992	2/23/1992				$1,513,600.00	$1,123,500.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
2005	MVN	ATC BASIN/GIWW/OLD 1-05		1400000.00	2/4/2005	3/3/2005	3/7/2005	3/14/2005	5/14/2005	$4,963,880.00	$4,910,851.00	WEEKS MARINE, INC.(GULF)	Covington	3/14/2005	5/20/2005	1025073.00	$4,223,756.64	$4.12
2008	MVN	ATC BASIN/GIWW/OLD 1-08	925.00	1000000.00	11/30/2007	5/8/2008	5/9/2008	6/1/2008	8/31/2008	$5,247,135.00	$3,424,001.00	MIKE HOOKS INC.	LAKE CHARLES	5/13/2008	9/21/2008	1423037.00	$4,927,453.20	$3.46
2009	MVN	ATC BASIN/GIWW/OLD 1-09		1000000.00	1/22/2009	4/14/2009	4/16/2009	5/5/2009	9/15/2009	$7,304,502.00	$8,121,826.00	WEEKS MARINE, INC.(GULF)	Covington	5/5/2009	9/17/2009	1922881.00	$9,862,476.73	$5.13
2010	MVN	ATC BASIN/GIWW/OLD 1-10	1584.00	1338486.00	1/7/2010	7/22/2010	7/30/2010	8/19/2010	12/27/2010	$6,108,560.00	$4,874,421.00	MIKE HOOKS INC.	LAKE CHARLES	8/19/2010	12/26/2010	1338486.00	$6,695,432.89	$5.00
2005	MVN	ATC BASIN/GIWW/OLD 2-05	1452.00	1000000.00	3/4/2005	8/23/2005	8/24/2005	9/18/2005	10/10/2005	$3,464,919.00	$2,815,826.00	WEEKS MARINE, INC.(GULF)	Covington	9/18/2005	10/21/2005	619202.00	$2,745,304.59	$4.43
2007	MVN	ATC BASIN/GIWW/OLD 2-06	1041.00	1000000.00	5/26/2006	3/2/2007	3/2/2007	3/10/2007	5/12/2007	$2,731,307.00	$2,458,501.00	MIKE HOOKS INC.	LAKE CHARLES	3/12/2007	5/11/2007	789548.00	$2,690,624.37	$3.41
2009	MVN	ATC BASIN/GIWW/OLD 2-08		1000000.00	11/30/2007	9/23/2008	9/25/2008	10/6/2008	10/18/2008	$2,963,156.00	$2,112,351.00	MIKE HOOKS INC.	LAKE CHARLES	10/6/2008	10/18/2008	136300.00	$1,588,589.00	$11.66
2011	MVN	ATC BASIN/GIWW/OLD 2-10	873.00	786288.00	1/7/2010	7/20/2011	7/21/2011	7/27/2011	9/30/2011	$4,069,413.00	$2,229,426.00	MIKE HOOKS INC.	LAKE CHARLES	7/27/2011	9/30/2011	786288.00	$3,106,717.57	$3.95
2006	MVN	ATC BASIN/GIWW/OLD 3-05	878.00	1000000.00	3/4/2005	4/20/2006	4/24/2006	5/3/2006	7/10/2006	$3,961,988.00	$3,335,031.00	WEEKS MARINE, INC.(GULF)	Covington	5/3/2006	7/10/2006	1033305.00	$4,635,746.99	$4.49
2007	MVN	ATC BASIN/GIWW/OLD 3-06	696.00	1000000.00	5/26/2006	7/11/2007	7/11/2007	7/20/2007	8/28/2007	$3,172,344.00	$3,072,601.00	MIKE HOOKS INC.	LAKE CHARLES	7/21/2007	8/30/2007	349136.00	$2,393,636.16	$6.86
2010	MVN	ATC BASIN/GIWW/OLD 3-09	1105.00	771879.00	1/22/2009	2/2/2010	3/5/2010	3/21/2010	5/5/2010	$4,662,761.00	$4,005,876.00	WEEKS MARINE, INC.(GULF)	Covington	3/21/2010	5/6/2010	771879.00	$3,943,212.16	$5.11

Table B.2
Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2008	MVN	ATC BASIN/GIWW/OLD 4-06	1296.00	1000000.00	5/26/2006	9/20/2007	9/21/2007	11/24/2007	1/17/2008	$4,079,866.00	$2,686,241.00	MIKE HOOKS INC.	LAKE CHARLES	11/22/2007	12/31/2007	543565.00	$1,919,576.00	$3.53
2012	MVN	ATC BASIN/GIWW/OLD IDIQ FY12	2043460.00	2043460.00	2/17/2012	6/7/2012	6/13/2012	7/24/2012	3/9/2013	$19,349,082.00	$14,048,350.00	WEEKS MARINE, INC.(GULF)	Covington	7/24/2012	3/9/2013	2043460.00	$10,218,373.99	$5.00
2013	MVN	ATC BASIN/GIWW/OLD IDIQ FY13	658724.00	658724.00	8/23/2012	7/23/2013	7/31/2013	8/19/2013	10/12/2013	$19,000,208.00	$12,728,225.00	WEEKS MARINE, INC.(GULF)	Covington	8/19/2013	10/12/2013	658724.00	$3,303,625.00	$5.02
1991	MVN	ATCH BASIN CLOSURES PH I	35200.00	35200.00	4/15/1991	5/15/1991	5/30/1991			$184,058.00	$198,970.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1991	MVN	ATCH BASIN DIV & CIRC CH	715000.00	715000.00	7/2/1991	8/7/1991	8/23/1991			$1,537,909.00	$831,309.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1991	MVN	ATCH BASIN E FRESH REALIN	2090000.00	2090000.00	3/25/1991	4/23/1991	5/6/1991	6/30/1991	11/30/1991	$2,386,300.00	$2,417,500.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1990	MVN	ATCH BASIN EAST-105 A	175000.00	175000.00	7/9/1990	8/9/1990	9/7/1990			$818,290.00	$943,775.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
2004	MVN	ATCH BAY & BAR LSD CUT FY-03	4626.00	2000000.00	12/19/2002	10/29/2003	11/5/2003	11/10/2003	3/10/2004	$10,298,392.00	$11,629,201.00	WEEKS MARINE, INC.(GULF)	Covington	11/10/2003	3/7/2004	10310421.00	$8,255,090.93	$0.80
2008	MVN	ATCH BAY BAR & HORSE 1-08	600.00	11000000.00	4/25/2008	7/16/2008	7/16/2008	8/14/2008	9/30/2008	$5,367,550.00	$5,112,751.00	WEEKS MARINE, INC.(GULF)	Covington	8/14/2008	9/9/2008	265752.00	$3,836,097.00	$14.43
2009	MVN	ATCH BAY BAR & HORSE 1-09	1731347.00	1731347.00	11/17/2008	7/14/2009	7/16/2009	8/15/2009	11/22/2009	$8,299,173.00	$9,249,581.00	WEEKS MARINE, INC.(GULF)	Covington	8/15/2009	11/22/2009	1731347.00	$9,805,078.34	$5.66
2010	MVN	ATCH BAY BAR & HORSE 1-10	1878.00	10859145.00	12/18/2009	9/8/2010	9/10/2010	10/8/2010	2/11/2011	$10,508,233.00	$12,621,351.00	WEEKS MARINE, INC.(GULF)	Covington	10/8/2010	2/11/2011	10859145.00	$14,079,505.17	$1.30
2011	MVN	ATCH BAY BAR & HORSE 1-11	1030.00	1619178.00	2/24/2011	7/28/2011	7/29/2011	8/8/2011	10/26/2011	$7,146,660.00	$2,780,403.00	MIKE HOOKS INC.	LAKE CHARLES	8/8/2011	10/23/2011	1619178.00	$2,732,430.28	$1.69
2008	MVN	ATCH BAY BAR & HORSE 2-08	780.00	11000000.00	4/23/2008	8/7/2008	8/8/2008	8/19/2008	9/27/2008	$8,048,850.00	$7,171,251.00	WEEKS MARINE, INC.(GULF)	Covington	8/19/2008	9/22/2008	972528.00	$4,779,190.00	$4.91
2008	MVN	ATCH BAY BAR HORSE LSD 2-05	1820.00	11000000.00	4/29/2005	7/6/2007	7/9/2007	7/10/2007	12/15/2007	$10,614,130.00	$10,557,501.00	WEEKS MARINE, INC.(GULF)	Covington	7/20/2007	12/10/2007	6343860.00	$9,519,074.00	$1.50
2014	MVN	ATCH RIV & BAY CH, BF, & BLK	4790055.00	4790055.00	8/2/2013	7/17/2014	7/28/2014	9/24/2014	1/7/2015	$11,926,240.00	$10,250,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/24/2014	1/7/2015	4790055.00	$0.00	
2008	MVN	ATCH RIV BAR CH CY CT 1-2007	10000000.00	10000000.00	10/1/2007	4/29/2008	5/6/2008	5/19/2008	10/1/2008	$12,101,200.00	$9,320,000.00	WEEKS MARINE, INC.(GULF)	Covington	6/17/2008	9/26/2008	8240240.00	$11,170,307.00	$1.36
2002	MVN	ATCH RIV BAR CH LSD CUT 1-02	2776.00	10000000.00	11/9/2001	4/3/2002	4/18/2002	8/19/2002	11/15/2002	$5,551,447.00	$6,667,250.00	WEEKS MARINE, INC.(GULF)	Covington	8/21/2002	11/17/2002	9382250.00	$6,309,422.00	$0.67
2005	MVN	ATCH RIV BAR CHAN CY 1-2004	10000000.00	10000000.00	10/18/2004	12/13/2004	12/20/2004	1/8/2005	5/25/2005	$10,033,100.00	$12,496,000.00	WEEKS MARINE, INC.(GULF)	Covington	1/8/2005	5/24/2005	11093470.00	$10,126,383.60	$0.91
2011	MVN	ATCH RIV BAR CHAN CY 1-2010	5863107.00	5863107.00	7/28/2010	9/13/2011	9/22/2011	9/27/2011	12/1/2011	$11,473,700.00	$12,166,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/23/2011	11/18/2011	5863107.00	$6,968,528.05	$1.19
2006	MVN	ATCH RIV BAR CHAN CY 2-2004	11000000.00	11000000.00	10/18/2004	3/31/2006	4/3/2006	5/3/2006	7/5/2006	$7,635,700.00	$8,661,500.00	WEEKS MARINE, INC.(GULF)	Covington	5/3/2006	7/5/2006	6450718.00	$8,215,861.60	$1.27
2010	MVN	ATCH RIV BAR CHAN CY 2-2009	10580317.00	10580317.00	3/26/2009	8/13/2009	8/17/2009	4/1/2010	6/15/2010	$12,388,000.00	$14,877,000.00	WEEKS MARINE, INC.(GULF)	Covington	8/26/2009	6/15/2010	10580317.00	$13,726,631.65	$1.30
2003	MVN	ATCH RIV BAR CHAN CY 3-02	4500000.00	4500000.00	7/29/2002	11/7/2002	11/7/2002	2/8/2003	2/15/2003	$4,472,600.00	$4,683,000.00	WEEKS MARINE, INC.(GULF)	Covington	11/22/2002	2/12/2003	6456996.00	$6,577,736.69	$1.02
2001	MVN	ATCH RIV BAR CHAN CY FY 2001	6000000.00	6000000.00	2/5/2001	8/9/2001	8/23/2001	9/8/2001	4/16/2002	$5,550,900.00	$4,630,000.00	Mike Hooks	LAKE CHARLES	9/22/2001	4/13/2002	9783757.00	$4,168,397.56	$0.43
2000	MVN	ATCH RIV BAR CHAN CY FY2000	6000000.00	6000000.00	6/8/2000	8/24/2000	8/25/2000	6/15/2000	9/16/2000	$1,429,000.00	$1,410,000.00	WEEKS MARINE, INC.(GULF)	Covington	8/26/2000	9/16/2000	1537885.00	$1,219,625.25	$0.79

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1997	MVN	ATCH RIV BAR CHAN UNIT PRICE	10000000.00	10000000.00	6/15/1997	8/11/1997	8/27/1997	10/8/1997	12/9/1997	$4,002,500.00	$3,963,000.00	T.L. JAMES & CO., INC.	KENNER	9/30/1997	12/9/1997	10515130.00	$3,743,011.27	$0.36
1998	MVN	ATCH RIV BAR CHANN CY FY98	6000000.00	6000000.00	5/7/1998	5/27/1998	6/26/1998		11/25/1998	$4,125,300.00	$4,491,000.00	T.L. JAMES & CO., INC.	KENNER	8/16/1998	11/22/1998	10972476.00	$4,866,921.42	$0.44
1999	MVN	ATCH RIV BAR CHANNEL CY FY99	6000000.00	6000000.00	4/28/1999	6/9/1999	7/9/1999	8/10/1999	10/23/1999	$5,100,000.00	$4,361,000.00	WEEKS MARINE, INC.(GULF)	Covington	8/11/1999	10/23/1999	10421713.00	$4,114,984.25	$0.39
1990	MVN	ATCH RIV BAR CHANNEL FY90	6500000.00	6500000.00	4/2/1990	5/1/1990	5/24/1990	6/25/1990	9/15/1990	$1,962,000.00	$1,660,000.00	T.L. JAMES & CO., INC.	KENNER	7/31/1990	11/17/1990		$1,827,066.16	
2001	MVN	ATCH RIV BAR CHN LSD CT 1-01		2000000.00	11/16/2000	2/12/2001	2/13/2001	2/23/2001	4/30/2001	$3,926,874.00	$4,057,100.00	WEEKS MARINE, INC.(GULF)	Covington	2/27/2001	4/30/2001	9554971.00	$4,036,282.32	$0.42
2006	MVN	ATCH RIV BAR DUSTPAN DEMO		1000000.00	8/1/2005	8/26/2005	8/26/2005	8/30/2005	11/11/2005	$5,418,310.00	$6,263,001.00	WEEKS MARINE, INC.(GULF)	Covington	10/17/2005	11/11/2005	550238.00	$3,327,075.00	$6.05
2001	MVN	ATCH RIV BAY CHAN CY FY2000	2000000.00	2000000.00	7/24/2000	11/17/2000	11/22/2000	11/15/2000	2/16/2001	$4,939,900.00	$4,680,500.00	WEEKS MARINE, INC.(GULF)	Covington	12/12/2000	1/25/2001	1047536.00	$3,601,253.58	$3.44
1997	MVN	ATCH RIV BAY CHAN UNIT PRICE	2500000.00	2500000.00	5/8/1997	6/30/1997	7/21/1997		10/5/1997	$3,424,584.00	$4,286,000.00	T.L. JAMES & CO., INC.	KENNER	8/1/1997	10/8/1997	2370763.00	$4,000,530.05	$1.69
2000	MVN	ATCH RIV BAY/BAR LSD CUTT-1	0.00	2000000.00	5/28/1999	5/25/2000	6/13/2000		8/18/2000	$5,281,272.00	$5,679,950.00	WEEKS MARINE, INC.(GULF)	Covington	6/25/2000	8/18/2000	10749971.00	$5,125,171.38	$0.48
2003	MVN	ATCH RIV BAYOUS	3000000.00	3000000.00	12/16/2002	7/14/2003	7/14/2003	7/25/2003	1/19/2004	$6,608,690.00	$5,320,000.00	MIKE HOOKS INC.	LAKE CHARLES	7/23/2003	1/17/2004	3803168.00	$6,727,318.63	$1.77
1995	MVN	ATCH RIV GRAND/SIXMILE LAKE	1682.00	1400000.00	1/18/1995	2/8/1995	2/10/1995	3/20/1995	6/3/1995	$2,015,560.00	$1,921,100.00	MIKE HOOKS INC.	LAKE CHARLES	3/20/1995	6/5/1995	2008995.00	$1,952,089.19	$0.97
1998	MVN	ATCH RIV H/SHOE LSD CUT 3-97	963.00	1000000.00	12/16/1996	8/13/1997	9/10/1997	10/2/1997	1/30/1998	$1,772,820.00	$1,349,080.00	T.L. JAMES & CO., INC.	KENNER	10/9/1997	11/7/1997	906750.00	$1,312,184.07	$1.45
2002	MVN	ATCH RIV HORSESH LSD CT 1-02		1500000.00	12/1/2001	2/14/2002	2/19/2002	3/1/2002	5/6/2002	$5,645,038.00	$5,438,276.00	WEEKS MARINE, INC.(GULF)	Covington	3/2/2002	5/6/2002	1832361.00	$4,519,568.60	$2.47
2003	MVN	ATCH RIV HORSESH LSD CT 1-03	1191.00	1000000.00	11/22/2002	7/16/2003	7/16/2003	7/28/2003	9/5/2003	$3,639,090.00	$4,456,051.00	WEEKS MARINE, INC.(GULF)	Covington	7/25/2003	9/4/2003	1260918.00	$4,501,525.00	$3.57
2003	MVN	ATCH RIV HORSESH LSD CT 2-03	186.00	1000000.00	11/22/2002	8/26/2003	8/26/2003	9/8/2003	9/15/2003	$837,584.00	$918,276.00	WEEKS MARINE, INC.(GULF)	Covington	9/9/2003	9/14/2003	61457.00	$781,452.58	$12.72
1994	MVN	ATCH RIV HORSESHOE EMERGENCY	720.00	750000.00	6/20/1994	6/28/1994	7/7/1994	7/9/1994	8/5/1994	$869,780.00	$845,780.00	MIKE HOOKS INC.	LAKE CHARLES	7/9/1994	8/8/1994	533495.00	$759,853.00	$1.42
1995	MVN	ATCH RIV HORSESHOE LSD CUT-1	1056.00	750000.00	1/19/1995	3/2/1995	3/27/1995	5/12/1995	6/25/1995	$1,854,092.00	$1,875,025.00	T.L. JAMES & CO., INC.	KENNER	5/12/1995	6/21/1995	1392376.00	$1,459,510.00	$1.05
1996	MVN	ATCH RIV HORSESHOE LSD CUT-1	1056.00	750000.00	1/26/1996	2/28/1996	3/15/1996	4/18/1996	5/16/1996	$1,948,085.00	$1,658,975.00	T.L. JAMES & CO., INC.	KENNER	4/18/1996	5/16/1996	1006432.00	$1,285,030.00	$1.28
1997	MVN	ATCH RIV HORSESHOE LSD CUT-1	1440.00	1000000.00	12/16/1996	5/6/1997	5/7/1997		8/6/1997	$2,338,730.00	$2,804,795.00	MIKE HOOKS INC.	LAKE CHARLES	5/24/1997	7/25/1997	1117411.00	$2,446,538.01	$2.19
1998	MVN	ATCH RIV HORSESHOE LSD CUT-1	0.00	1000000.00	6/11/1998	7/13/1998	8/10/1998	9/22/1998	12/26/1998	$4,173,417.00	$4,836,275.00	T.LJAMES/GREAT LAKES JV	NEW ORLEANS	9/22/1998	12/29/1998	1174445.00	$2,732,359.21	$2.33
1996	MVN	ATCH RIV HORSESHOE LSD CUT-2	1440.00	750000.00	2/6/1996	8/1/1996	8/14/1996	8/17/1996	10/22/1996	$2,319,420.00	$2,715,120.00	MIKE HOOKS INC.	LAKE CHARLES	8/17/1996	10/25/1996	1004878.00	$2,389,642.73	$2.38
1994	MVN	ATCH RIV SIX MI LK EMERGENCY	2130.00	2000000.00	5/4/1994	5/10/1994	5/11/1994	5/22/1994	7/5/1994	$1,473,800.00	$1,122,110.00	MIKE HOOKS INC.	LAKE CHARLES	5/22/1994	7/6/1994	1053875.00	$966,784.58	$0.92
1995	MVN	ATCH RIVER BAR CHANNEL LSD	1225.00	3500000.00	3/20/1995	3/27/1995	4/4/1995	4/14/1995	5/11/1995	$1,299,860.00	$1,148,000.00	T.L. JAMES & CO., INC.	KENNER	4/14/1995	5/11/1995	2425612.00	$911,000.00	$0.38
1995	MVN	ATCH RIVER BAR CY CUTTERHEAD	9000000.00	9000000.00	3/29/1995	6/8/1995	6/20/1995	6/24/1995	10/15/1995	$3,043,305.00	$2,468,900.00	MIKE HOOKS INC.	LAKE CHARLES	6/24/1995	10/26/1995	9325760.00	$2,504,827.00	$0.27

Table B.2
Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
1996	MVN	ATCH RIVER BAR CY CUTTERHEAD	9000000.00	9000000.00	6/10/1996	7/10/1996	7/23/1996	7/28/1996	12/18/1996	$3,316,540.00	$4,056,300.00	MIKE HOOKS INC.	LAKE CHARLES	7/28/1996	12/16/1996	10506913.00	$3,757,312.03	$0.36
1995	MVN	ATCH RIVER BAY CY CUTTERHEAD	2000000.00	2000000.00	4/3/1995	6/29/1995	7/14/1995	7/27/1995	9/14/1995	$3,783,040.00	$2,984,400.00	T.L. JAMES & CO., INC.	KENNER	7/26/1995	8/28/1995	944620.00	$1,354,265.20	$1.43
2009	MVN	ATCH RIVER BAYOU CHENE	3500000.00	3500000.00	5/15/2009	8/4/2009	8/7/2009	8/15/2009	10/30/2009	$8,530,200.00	$4,342,500.00	MIKE HOOKS INC.	LAKE CHARLES	8/20/2009	11/10/2009	1703433.00	$6,336,157.00	$3.72
2001	MVN	ATCH RV BAR CHN LSD CUT 2-01		2000000.00	11/16/2000	4/16/2001	4/16/2001	5/1/2001	6/16/2001	$2,983,834.00	$2,554,250.00	WEEKS MARINE, INC.(GULF)	Covington	4/30/2001	6/18/2001	2800511.00	$1,943,956.97	$0.69
2004	MVN	ATCH RV BAR LSD CUT 1-2004	978.00	2000000.00	1/12/2004	3/25/2004	3/25/2004	4/7/2004	5/21/2004	$3,131,366.00	$2,986,375.00	BEAN DREDGING CORP.	NEW ORLEANS	4/9/2004	5/21/2004	6054053.00	$2,808,081.33	$0.46
1996	MVN	ATCH RV BAY & BAR LSD CUT-1	1920.00	2000000.00	2/6/1996	3/6/1996	3/25/1996	4/12/1996	6/26/1996	$2,647,185.00	$1,728,241.00	MIKE HOOKS INC.	LAKE CHARLES	4/16/1996	7/14/1996	4932495.00	$1,724,885.00	$0.35
1998	MVN	ATCH RV BY CHENE,BOEUF,BLACK	6000000.00	6000000.00	4/6/1998	5/6/1998	5/11/1998		12/20/1998	$8,205,800.00	$5,274,000.00	T.L. JAMES & CO., INC.	KENNER	6/20/1998	10/12/1998	5505039.00	$5,614,232.76	$1.02
2005	MVN	ATCH RV HORSE LSD CT 1-2004	1231.00	1000000.00	6/7/2004	6/7/2005	6/16/2005	8/2/2005	9/4/2005	$4,164,710.00	$4,355,926.00	WEEKS MARINE, INC.(GULF)	Covington	8/2/2005	9/21/2005	1022655.00	$4,016,617.93	$3.93
1999	MVN	ATCH RV HORSSHOE LSD CT 1-99	1441.00	1000000.00	2/5/1999	8/5/1999	8/19/1999	8/29/1999	12/22/1999	$2,987,367.00	$3,647,650.00	WEEKS MARINE, INC.(GULF)	Covington	8/30/1999	12/22/1999	1145146.00	$2,968,735.90	$2.59
2007	MVN	ATCH/BAY/BAR/HORSE LSD1-05	1246.00	11000000.00	4/29/2005	8/11/2006	8/15/2006	8/27/2006	10/22/2006	$4,772,879.00	$4,344,001.00	WEEKS MARINE, INC.(GULF)	Covington	8/30/2006	10/22/2006	1542195.00	$3,775,564.59	$2.45
1993	MVN	ATCHAF RIV BAY & BAR, CUTTER	2450.00	2000000.00	2/16/1993	3/18/1993	3/4/1993	3/14/1993	5/2/1993	$2,177,625.00	$2,006,350.00	MIKE HOOKS INC.	LAKE CHARLES	3/14/1993	5/19/1993	4159055.00	$1,285,044.00	$0.31
1994	MVN	ATCHAF RIV BAY AND BAR CHNL	8000000.00	8000000.00	5/3/1994	5/9/1994	5/10/1994	5/27/1994	10/16/1994	$8,346,125.00	$6,387,200.00	T.L. JAMES & CO., INC.	KENNER	5/27/1994	10/16/1994	8757597.00	$5,506,166.00	$0.63
1990	MVN	ATCHAF RIV BAY CHANNEL FY90	1500000.00	1500000.00	4/17/1990	5/24/1990	6/18/1990	6/30/1990	8/20/1990	$1,417,200.00	$1,252,000.00	BEAN DREDGING CORP.	NEW ORLEANS	7/20/1990	11/11/1990		$1,613,774.20	
1994	MVN	ATCHAF RIV BAY&BAR LSD CUT	992.00	300000.00	3/16/1994	3/29/1994	4/5/1994	4/12/1994	5/26/1994	$1,614,450.00	$1,087,875.00	T.L. JAMES & CO., INC.	KENNER	4/14/1994	5/26/1994	2303370.00	$1,174,893.28	$0.51
1992	MVN	ATCHAF RIV, BY & BAR UNIT PR	15500000.00	15500000.00	2/25/1992	3/26/1992	4/14/1992	5/11/1992	11/27/1992	$7,725,300.00	$6,822,500.00	MIKE HOOKS INC.	LAKE CHARLES	5/11/1992	11/26/1992		$0.00	
1991	MVN	ATCHAF RIVER BAY & BAR	14000000.00	14000000.00	12/13/1990	3/7/1991	3/27/1991	5/5/1991	10/1/1991	$7,087,200.00	$6,157,000.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1991	MVN	ATCHAF RIVER, BAY & BAR	1000000.00	1500000.00	12/14/1990	1/17/1991	1/30/1991	1/31/1991	4/17/1991	$741,820.00	$747,000.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1993	MVN	ATCHAF RIVER, BAY CHANNEL	10000000.00	10000000.00	4/23/1993	5/27/1993	6/20/1993	6/7/1993	9/20/1993	$8,003,235.00	$6,953,800.00	T.L. JAMES & CO., INC.	KENNER	6/10/1993	9/16/1993	14000000.00	$3,863,114.00	$0.28
2012	MVN	ATCHAFALAYA BAY CY 1-10	1511037.00	1511037.00	9/17/2010	7/18/2012	8/1/2012	11/26/2012	1/12/2013	$12,123,220.00	$11,506,501.00	WEEKS MARINE, INC.(GULF)	Covington	11/3/2012	4/27/2013	1511037.00	$8,119,543.85	$5.37
2006	MVN	ATCHAFALAYA RIV BAY CH CY	3000000.00	3000000.00	10/12/2004	2/6/2006	2/9/2006	3/8/2006	4/30/2006	$7,384,390.00	$8,661,900.00	WEEKS MARINE, INC.(GULF)	Covington	3/8/2006	4/30/2006	1638958.00	$6,567,717.70	$4.01
2005	MVN	BAPTISTE COLL BAR CH 2004	870000.00	870000.00	1/30/2004	4/20/2005	5/5/2005	5/9/2005	7/17/2005	$1,678,800.00	$2,024,600.00	WEEKS MARINE, INC.(GULF)	Covington	6/4/2005	7/16/2005	981335.00	$2,200,509.30	$2.24
2001	MVN	BAPTISTE COLLETTE BR CH 1-00	600000.00	600000.00	7/28/2000	8/29/2000	9/14/2000	2/2/2000	1/6/2001	$1,675,800.00	$1,276,000.00	MIKE HOOKS INC.	LAKE CHARLES	10/15/2000	12/6/2000	750000.00	$1,324,801.60	$1.77
2002	MVN	BAPTISTE COLLETTE BR CH 1-01	800000.00	800000.00	5/16/2001	10/1/2001	10/16/2001	3/20/2001	12/15/2001	$2,114,500.00	$1,845,500.00	WEEKS MARINE, INC.(GULF)	Covington	11/5/2001	11/22/2001	928072.00	$2,039,061.60	$2.20
2003	MVN	BAPTISTE COLLETTE BR CH 1-02	1100000.00	1100000.00	6/20/2002	9/17/2002	9/23/2002		1/11/2003	$2,186,100.00	$2,655,000.00	WEEKS MARINE, INC.(GULF)	Covington	10/27/2002	1/9/2003	1230590.00	$2,890,062.00	$2.35

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1998	MVN	BAPTISTE COLLETTE BR CH 1-98	810000.00	810000.00	11/19/1997	11/25/1997	12/9/1997		7/31/1998	$1,132,170.00	$1,678,400.00	T.L. JAMES & CO., INC.	KENNER	3/15/1998	7/29/1998	1167380.00	$1,793,552.00	$1.54
2006	MVN	BARATARIA BAR CHANNEL	420000.00	420000.00	5/22/2006	6/22/2006	6/30/2006	7/28/2006	8/31/2006	$2,367,800.00	$2,985,000.00	WEEKS MARINE, INC.(GULF)	Covington	7/28/2006	8/15/2006	498510.00	$3,318,667.50	$6.66
2010	MVN	BARATARIA BAR CHANNEL 1-09	394960.00	394960.00	5/26/2009	6/30/2009	7/7/2009	11/21/2009	11/30/2009	$3,735,000.00	$3,325,000.00	WEEKS MARINE, INC.(GULF)	Covington	11/11/2009	11/30/2009	394960.00	$2,826,060.00	$7.16
2002	MVN	BARATARIA BAR CHANNEL CY	600000.00	600000.00	9/12/2001	3/6/2002	3/25/2002	5/14/2002	6/26/2002	$1,990,660.00	$2,748,000.00	WEEKS MARINE, INC.(GULF)	Covington	5/27/2002	6/25/2002	532408.00	$2,671,898.96	$5.02
2006	MVN	BARATARIA BAY BY RIGAUD	595000.00	595000.00	4/26/2005	5/26/2005	6/8/2005	3/21/2006	5/5/2006	$2,899,241.00	$1,938,300.00	MIKE HOOKS INC.	LAKE CHARLES	3/31/2006	5/2/2006	528595.00	$1,861,986.80	$3.52
1996	MVN	BARATARIA BAY MI 2.6-12.1 &Y	1070000.00	1070000.00	5/31/1996	7/11/1996	8/12/1996	10/1/1996	1/30/1997	$4,727,152.00	$4,530,700.00	MIKE HOOKS INC.	LAKE CHARLES	10/1/1996	12/3/1996	653972.00	$4,769,905.20	$7.29
1996	MVN	BARATARIA WW BAR CHANNEL	650000.00	650000.00	2/22/1996	5/1/1996	5/21/1996	8/19/1996	9/5/1996	$1,780,300.00	$1,160,000.00	T.L. JAMES & CO., INC.	KENNER	8/19/1996	9/5/1996	666258.00	$1,176,258.00	$1.77
1999	MVN	BARATARIA WWAY BAR CH CY 99	500000.00	500000.00	4/19/1999	5/27/1999	6/24/1999	8/9/1999	10/1/1999	$3,087,040.00	$2,965,245.00	BEAN HORIZON CORPORATION	BELLE CHASSE	9/8/1999	9/20/1999	557750.00	$3,189,386.43	$5.72
1999	MVN	BARATARIA WWAY MI 31-25.5 CY	750000.00	750000.00	3/16/1999	5/12/1999	6/23/1999	9/6/1999	11/5/1999	$3,157,800.00	$2,653,275.00	MIKE HOOKS INC.	LAKE CHARLES	9/15/1999	11/4/1999	527323.00	$2,802,758.53	$5.32
2010	MVN	BAYOU LECARPE	63266.00	63266.00	8/25/2009	9/24/2009	9/28/2009	12/11/2009	3/4/2010	$1,437,480.00	$1,012,000.00	INTEGRATED PRO SERVICES	New Orleans	12/11/2009	3/4/2010	63266.00	$1,024,210.50	$16.19
2004	MVN	BAYOU LECARPE CY 2004	80000.00	80000.00	6/17/2003	7/29/2003	8/27/2003	1/11/2004	3/29/2004	$957,200.00	$617,000.00	GRILLOT CO. INC.	BELLE CHASSE	1/17/2004	3/25/2004	75190.00	$599,067.50	$7.97
1994	MVN	BAYOU TECHE CALUMET FLODGATE	31000.00	31000.00	8/7/1993	12/9/1993	12/15/1993	12/28/1993	12/30/1993	$84,750.00	$46,000.00	GULF COAST TRAILING CO.	St. Rose	12/28/1993	12/30/1993	21999.00	$49,098.00	$2.23
1994	MVN	BAYOU TECHE MI 0 TO 5	450000.00	450000.00	10/16/1993	1/24/1994	2/4/1994	3/10/1994	7/10/1994	$652,300.00	$587,052.00	RIVER ROAD CONSTRUCTION INC	MANDEVILLE	3/10/1994	6/16/1994	285187.00	$956,299.00	$3.35
1991	MVN	BAYOU TECHE, E&W CALUMET	14000.00	14000.00	7/1/1991	8/1/1991	8/30/1991			$62,173.00	$47,560.00	CIRCLE INC.	BELLE CHASSE				$0.00	
1991	MVN	BAYOU TECHE, MI 0-5	350000.00	350000.00	7/30/1991	9/10/1991	9/24/1991			$684,000.00	$574,000.00	RIVER ROAD CONSTRUCTION INC	MANDEVILLE				$0.00	
2003	MVN	BAYOU TECHE, NEW IBERIA	490000.00	490000.00	6/20/2001	7/24/2001	8/8/2001		11/11/2003	$4,361,849.00	$6,668,564.00	CIRCLE INC.	BELLE CHASSE	11/5/2001	11/12/2003	492739.00	$8,498,304.11	$17.25
1991	MVN	BERWICK BAY #2	2000000.00	1650000.00	4/19/1991	5/22/1991	5/30/1991	6/3/1991	9/1/1991	$1,230,426.00	$1,241,751.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1992	MVN	BERWICK BAY 1	1238.00	300000.00	2/18/1992	3/9/1992	3/10/1992			$335,185.00	$292,050.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1993	MVN	BERWICK BAY 1	700.00	800000.00	12/21/1992	1/20/1993	2/15/1993			$487,900.00	$435,531.00	T.L. JAMES & CO., INC.	KENNER	2/18/1993	3/21/1993	31200.00	$431,211.00	$13.82
1994	MVN	BERWICK BAY 1-94	0.00	300000.00	1/6/1994	1/12/1994	1/18/1994	1/21/1994	2/28/1994	$833,190.00	$784,575.00	T.L. JAMES & CO., INC.	KENNER	1/21/1994	2/28/1994	672440.00	$545,984.00	$0.81
1992	MVN	BERWICK BAY 2	2000000.00	2000000.00	4/29/1992	5/19/1992	5/21/1992			$2,202,905.00	$1,920,100.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1993	MVN	BERWICK BAY 2	3000000.00	3000000.00	2/17/1993	4/14/1993	4/15/1993	4/21/1993	11/3/1993	$2,168,745.00	$1,998,201.00	MIKE HOOKS INC.	LAKE CHARLES	4/27/1993	9/28/1993	3400000.00	$3,350,139.00	$0.99
1994	MVN	BERWICK BAY 2-94	0.00	1200000.00	4/5/1994	4/28/1994	4/29/1994	5/4/1994	10/15/1994	$2,306,800.00	$1,912,701.00	MIKE HOOKS INC.	LAKE CHARLES	5/4/1994	10/10/1994	3025200.00	$3,880,302.00	$1.28
1990	MVN	BERWICK BAY LSD CUTT #1-90	250000.00	1650000.00	12/6/1989	2/15/1990	2/23/1990	4/7/1990	4/21/1990	$255,400.00	$234,501.00	MIKE HOOKS INC.	LAKE CHARLES	4/8/1990	4/21/1990		$234,490.67	

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1990	MVN	BERWICK BAY LSD CUTT #2-90	1650000.00	250000.00	4/9/1990	5/9/1990	6/7/1990	7/9/1990	9/28/1990	$1,435,550.00	$1,518,750.00	MIKE HOOKS INC.	LAKE CHARLES	7/16/1990	11/17/1990		$2,066,567.68	
1997	MVN	BERWICK BAY LSD CUTTER #1-97	833.00	400000.00	12/1/1996	1/29/1997	2/5/1997	2/17/1997	3/22/1997	$785,240.00	$616,451.00	MIKE HOOKS INC.	LAKE CHARLES	2/15/1997	3/22/1997	689981.00	$638,852.00	$0.93
1998	MVN	BERWICK BAY LSD CUTTER #1-98	833.00	400000.00	1/5/1998	2/20/1998	3/6/1998		4/25/1998	$840,338.00	$753,071.00	MIKE HOOKS INC.	LAKE CHARLES	3/27/1997	4/25/1998	559351.00	$641,159.68	$1.15
1997	MVN	BERWICK BAY LSD CUTTER #2-97	2468.00	2000000.00	12/1/1996	5/7/1997	5/8/1997	5/17/1997	9/10/1997	$2,216,860.00	$2,178,250.00	T.L. JAMES & CO., INC.	KENNER	5/18/1997	9/5/1997	1852283.00	$2,170,483.63	$1.17
1998	MVN	BERWICK BAY LSD CUTTER #2-98	0.00	2000000.00	1/6/1998	6/3/1998	6/23/1998	6/25/1998	12/20/1998	$2,201,615.00	$2,746,877.00	T.L. JAMES & CO., INC.	KENNER	6/28/1998	12/13/1998	1899863.00	$2,733,046.20	$1.44
2000	MVN	BERWICK BAY LSD CUTTER 1-00		400000.00	12/15/1999	5/8/2000	5/9/2000	5/17/2000	6/15/2000	$1,012,879.00	$852,051.00	MIKE HOOKS INC.	LAKE CHARLES	5/17/2000	6/15/2000	549212.00	$675,634.39	$1.23
2001	MVN	BERWICK BAY LSD CUTTER 1-01		400000.00	12/13/2000	3/19/2001	3/20/2001	4/2/2001	5/10/2001	$1,142,856.00	$1,137,641.00	MIKE HOOKS INC.	LAKE CHARLES	4/5/2001	5/11/2001	728287.00	$1,128,713.68	$1.55
2003	MVN	BERWICK BAY LSD CUTTER 1-03	833.00	400000.00	12/11/2002	3/24/2003	3/26/2003	4/1/2003	5/6/2003	$1,423,004.00	$980,171.00	MIKE HOOKS INC.	LAKE CHARLES	4/1/2003	5/7/2003	712024.00	$964,551.19	$1.35
2004	MVN	BERWICK BAY LSD CUTTER 1-04	594.00	500000.00	12/8/2003	4/16/2004	4/16/2004	4/26/2004	8/13/2004	$1,345,688.00	$727,561.00	MIKE HOOKS INC.	LAKE CHARLES	4/27/2004	8/14/2004	851322.00	$1,047,016.76	$1.23
1995	MVN	BERWICK BAY LSD CUTTER 1-95	1200.00	386000.00	12/21/1994	1/20/1995	3/13/1995	3/24/1995	4/21/1995	$658,700.00	$673,200.00	T.L. JAMES & CO., INC.	KENNER	3/24/1995	4/21/1995	565527.00	$540,248.00	$0.96
1996	MVN	BERWICK BAY LSD CUTTER 1-96	833.00	386000.00	12/11/1995	1/9/1996	2/6/1996	3/8/1996	4/11/1996	$600,585.00	$565,636.00	MIKE HOOKS INC.	LAKE CHARLES	3/8/1996	4/11/1996	482283.00	$451,832.00	$0.94
2001	MVN	BERWICK BAY LSD CUTTER 2-01		350000.00	12/13/2000	7/23/2001	7/24/2001	6/1/2001	8/21/2001	$785,736.00	$577,671.00	MIKE HOOKS INC.	LAKE CHARLES	7/29/2001	8/21/2001	371243.00	$567,642.80	$1.53
2003	MVN	BERWICK BAY LSD CUTTER 2-03	494.00	2000000.00	12/11/2002	8/5/2003	8/18/2003	8/26/2003	10/16/2003	$1,073,895.00	$808,701.00	MIKE HOOKS INC.	LAKE CHARLES	8/26/2003	10/16/2003	1093503.00	$1,509,739.59	$1.38
2004	MVN	BERWICK BAY LSD CUTTER 2-04	2000000.00	2000000.00	12/8/2003	8/18/2004	8/18/2004	8/27/2004	10/8/2004	$1,965,000.00	$1,045,171.00	MIKE HOOKS INC.	LAKE CHARLES	8/27/2004	10/8/2004	754181.00	$1,037,919.56	$1.38
1995	MVN	BERWICK BAY LSD CUTTER 2-95	3556.00	2000000.00	1/13/1995	6/28/1995	7/7/1995	7/10/1995	10/24/1995	$1,699,906.00	$1,683,965.00	T.L. JAMES & CO., INC.	KENNER	7/10/1995	10/24/1995	1721443.00	$1,669,223.00	$0.97
1996	MVN	BERWICK BAY LSD CUTTER 2-96	2275.00	2000000.00	6/25/1996	6/25/1996	7/9/1996	7/20/1996	10/26/1996	$1,792,841.00	$1,754,221.00	MIKE HOOKS INC.	LAKE CHARLES	7/22/1996	10/26/1996	1717246.00	$1,581,507.68	$0.92
2001	MVN	BERWICK BAY RENTAL CUT 3-01	1770.00	2000000.00	7/13/2001	8/3/2001	8/7/2001	8/25/2001	11/5/2001	$3,743,016.00	$3,415,731.00	MIKE HOOKS INC.	LAKE CHARLES	8/31/2001	11/2/2001	1192249.00	$2,299,026.97	$1.93
2002	MVN	BERWICK BAY RENTAL CUT 3-02	2128.00	1500000.00	2/28/2002	6/13/2002	6/18/2002	6/28/2002	9/15/2002	$4,382,415.00	$3,409,801.00	MIKE HOOKS INC.	LAKE CHARLES	6/29/2002	9/23/2002	1782477.00	$3,404,841.77	$1.91
1991	MVN	BERWICK BAY, #1	300000.00	250000.00	12/17/1990	1/17/1991	2/1/1991	2/23/1991	3/9/1991	$292,105.00	$251,250.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
2009	MVN	BY LAFOURCHE PORT FOURCHON	625000.00	625000.00	7/19/2006	9/18/2008	9/18/2008	9/30/2008	11/28/2008	$4,435,860.00	$4,210,000.00	WEEKS MARINE, INC.(GULF)	Covington	10/3/2008	10/23/2008	435311.00	$3,746,039.00	$8.61
2007	MVN	BY LAFOURCHE WEST BELLE	850000.00	850000.00	8/31/2006	9/29/2006	9/29/2006	2/20/2007	4/27/2007	$5,442,823.00	$5,126,725.00	WEEKS MARINE, INC.(GULF)	Covington	3/4/2007	4/25/2007	472786.00	$4,623,249.10	$9.78
1996	MVN	BY TECHE E&W CALUMET FLDGATE	20000.00	20000.00	10/6/1995	11/7/1995	12/1/1995	12/20/1995	12/22/1995	$90,600.00	$53,025.00	GULF COAST TRAILING CO.	St. Rose	12/20/1995	12/21/1995	15644.00	$41,438.00	$2.65
1998	MVN	BY TECHE E&W CALUMET FLDGT	20000.00	20000.00	10/31/1997	11/20/1997	12/11/1997	1/19/1998	3/4/1998	$121,270.00	$51,500.00	RAM INDUSTRIES, INC.	Lafayette	1/31/1998	3/4/1998	19981.00	$47,481.00	$2.38
2000	MVN	BY TECHE E&W CALUMET FLOODGT	20000.00	20000.00	1/11/2000	2/15/2000	3/1/2000	3/23/2000	4/21/2000	$110,500.00	$56,950.00	WEEKS MARINE, INC.(GULF)	Covington	4/1/2000	4/6/2000	20550.00	$56,162.50	$2.73

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2007	MVN	BY TECHE, E&W CALUMET	21000.00	21000.00	8/29/2006	9/28/2006	9/29/2006	11/27/2006	12/15/2006	$200,250.00	$190,000.00	GRILLOT CO. INC.	BELLE CHASSE	12/1/2006	12/13/2006	19630.00	$183,150.00	$9.33
1991	MVN	BYU LAFRCHE MI 19.5-23.4	380000.00	380000.00	2/19/1991	3/20/1991	4/16/1991	5/20/1991	7/15/1991	$941,650.00	$896,575.00	GRILLOT CO. INC.	BELLE CHASSE				$0.00	
1990	MVN	BYU SEGNET, MI 11.4-12.2	40000.00	40000.00	6/19/1990	7/9/1990	8/15/1990	10/15/1990	11/5/1990	$230,900.00	$185,238.00	GRILLOT CO. INC.	BELLE CHASSE	9/18/1990	10/31/1990		$185,238.40	
2004	MVN	CALC RIVER MI 10 TO 36	2500000.00	2500000.00	8/5/2004	8/11/2004	8/12/2004	10/20/2004	3/5/2005	$11,378,100.00	$3,361,500.00	MIKE HOOKS INC.	LAKE CHARLES	10/31/2004	2/23/2005	2312459.00	$3,600,316.69	$1.56
2006	MVN	CALC BAR LSD HOP IDDQ T.O 3		3000000.00	8/26/2004	9/29/2004	5/16/2006	6/16/2006	10/17/2006	$3,846,873.00	$4,240,070.00	SUNSET MARINE/B+B JV	KENNER	8/16/2006	9/13/2006	2628819.00	$1,652,896.00	$0.63
2005	MVN	CALC BAR LSD HOP IDDQ T.O. 1	5500.00	8000000.00	8/26/2004		11/19/2004		9/8/2005	$3,758,100.00	$4,116,075.00	SUNSET MARINE/B+B JV	KENNER	12/1/2004	9/8/2005	5254732.00	$3,355,548.70	$0.64
2008	MVN	CALC BAR LSD HOP IDDQ T.O. 4	4000.00	3000000.00	8/26/2004		11/1/2007	11/17/2007	3/24/2008	$3,179,020.00	$3,179,020.00	SUNSET MARINE/B+B JV	KENNER	11/17/2007	3/24/2008	6472879.00	$2,902,746.00	$0.45
2003	MVN	CALC RIV BAR CH LSD HOP 1-03	1341.00	8000000.00	11/22/2002	8/6/2003	8/7/2003	8/10/2003	10/7/2003	$3,040,690.00	$1,605,215.00	BEAN STUYVESANT, LLC	New Orleans	8/10/2003	10/7/2003	7262717.00	$1,544,881.50	$0.21
2001	MVN	CALC RIV BAR CH LSD HOP 2-00	854.00	3000000.00	8/30/1999	9/25/2000	10/5/2000	10/15/2000	11/10/2000	$1,171,896.00	$803,645.00	WEEKS MARINE, INC.(GULF)	Covington	10/7/2000	11/10/2000	6176254.00	$803,245.00	$0.13
2004	MVN	CALC RIV BAR CH LSD HOP 2-03	1421.00	7000000.00	11/22/2002	2/9/2004	2/11/2004	2/24/2004	3/29/2004	$2,689,382.00	$1,483,025.00	BEAN STUYVESANT, LLC	New Orleans	2/21/2004	3/29/2004	6541544.00	$1,407,710.25	$0.22
1995	MVN	CALC RIV BAR CHANNEL LSD HOP	2065.00	7000000.00	3/7/1995	4/6/1995	4/18/1995	4/27/1995	7/7/1995	$2,428,625.00	$2,572,044.00	GULF COAST TRAILING CO.	St. Rose	4/27/1995	7/8/1995	6687985.00	$1,579,754.00	$0.24
1997	MVN	CALC RIV BAR CHANNEL LSD HOP	1341.00	8000000.00	10/9/1996	11/26/1996	12/13/1996	12/18/1996	3/9/1997	$2,659,349.00	$2,975,720.00	GULF COAST TRAILING CO.	St. Rose	12/18/1996	3/9/1997	7071436.00	$2,263,874.87	$0.32
1999	MVN	CALC RIV MI 05-14 CY 99	3500000.00	3500000.00	7/2/1999	7/12/1999	7/16/1999	9/15/1999	11/12/1999	$4,592,100.00	$4,490,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/16/1999	11/12/1999	3575887.00	$4,613,057.17	$1.29
1998	MVN	CALC RIV MI 14-26 & DEV ELBO	6500000.00	6500000.00	6/12/1998	7/20/1998	8/18/1998	11/15/1998	7/7/1999	$5,924,900.00	$7,080,000.00	WEEKS MARINE, INC.(GULF)	Covington	1/4/1999	7/7/1999	6384587.00	$7,139,762.82	$1.12
1994	MVN	CALC RIV MI 22.7-36	6000000.00	6000000.00	5/20/1994	8/24/1994	9/12/1994	10/7/1994	6/1/1995	$5,868,000.00	$5,030,000.00	MIKE HOOKS INC.	LAKE CHARLES	10/25/1994	5/30/1995	4998445.00	$4,448,487.00	$0.89
2012	MVN	CALC RIV MI 34 TO 36	294935.00	294935.00	3/31/2011	9/25/2012	9/28/2012	4/13/2013	8/3/2013	$6,183,700.00	$6,100,500.00	MIKE HOOKS INC.	LAKE CHARLES	6/1/2013	8/7/2013	294935.00	$3,758,704.50	$12.74
2003	MVN	CALC RIV MILE 14-21.9 CY	2330000.00	2330000.00	5/7/2003	6/19/2003	6/19/2003	9/1/2003	12/1/2003	$3,886,400.00	$3,990,590.00	MIKE HOOKS INC.	LAKE CHARLES	9/5/2003	11/29/2003	2183947.00	$3,872,852.69	$1.77
2004	MVN	CALC RIV STA 1300-1160 & DE	1500000.00	1500000.00	2/21/2003	9/8/2003	9/11/2003	11/30/2003	1/25/2004	$2,883,400.00	$2,440,200.00	MIKE HOOKS INC.	LAKE CHARLES	11/30/2003	1/25/2004	2006184.00	$3,188,376.70	$1.59
1990	MVN	CALC RIV, DEVIL'S ELBOW	900000.00	900000.00	10/5/1989	10/11/1989	10/12/1989	10/15/1989	10/27/1989	$346,560.00	$212,550.00	MIKE HOOKS INC.	LAKE CHARLES	10/15/1989	11/17/1989		$458,674.50	
1992	MVN	CALC RIV, DEVIL'S ELBOW	569.00	400000.00	3/17/1992	5/7/1992	5/27/1992			$481,445.00	$352,750.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
2007	MVN	CALC RIVER MI 29-35 CY 2006	1535470.00	1535470.00	5/4/2006	8/24/2006	8/25/2006	10/20/2006	2/3/2007	$8,957,000.00	$5,996,500.00	MIKE HOOKS INC.	LAKE CHARLES	10/25/2006	2/2/2007	1535470.00	$4,859,269.01	$3.16
2001	MVN	CALC RV 14-30.3 CLOONEY IS	5400000.00	5400000.00	8/11/2000	9/11/2000	9/13/2000	9/1/2000	12/20/2001	$8,375,233.65	$6,291,000.00	MIKE HOOKS INC.	LAKE CHARLES	12/30/2000	12/19/2001	5219800.00	$9,921,932.10	$1.90
2005	MVN	CALC RV MI 17- 28.7 CY CT 05	4000000.00	4000000.00	6/29/2005	7/7/2005	7/7/2005	8/12/2005	3/1/2006	$6,735,600.00	$5,510,500.00	MIKE HOOKS INC.	LAKE CHARLES	8/11/2005	2/27/2006	3835097.00	$7,419,628.93	$1.93
1994	MVN	CALCAS RIV BAR CHNL LSD HOPP	4028.00	5000000.00	6/2/1994	7/6/1994	7/19/1994	7/21/1994	9/26/1994	$2,262,900.00	$2,668,860.00	GULF COAST TRAILING/NATCO JV	NEW ORLEANS	7/21/1994	9/27/1994	7288260.00	$1,567,828.78	$0.22

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2013	MVN	CALCASIEU MI 17 TO 34 CY	3500029.00	3500029.00	4/11/2013	6/11/2013	6/26/2013	8/16/2013	3/21/2014	$14,926,370.00	$9,652,000.00	MIKE HOOKS INC.	LAKE CHARLES	7/23/2013	5/16/2014	3500029.00	$13,217,028.95	$3.78
2014	MVN	CALCASIEU MI 5-17/DEVL'S EB	5065568.00	5065568.00	5/7/2014	7/24/2014	8/5/2014	9/22/2014	7/23/2015	$21,413,670.00	$22,564,000.00	Mike Hooks	LAKE CHARLES	9/22/2014		5065568.00	$0.00	
1993	MVN	CALCASIEU R BAR CH LSD HOP	2065.00	5000000.00	6/2/1993	7/6/1993	7/20/1993	8/21/1993	10/31/1993	$2,136,300.00	$2,637,005.00	GULF COAST TRAILING CO.	St. Rose	8/20/1993	12/18/1993	1548182.00	$2,637,005.00	$1.70
1993	MVN	CALCASIEU R MI 5.0-22.7(NEG)	9000000.00	9000000.00	9/17/1992	1/9/1993	2/9/1993	5/7/1993	10/21/1993	$5,609,300.00	$5,591,000.00	T.L. JAMES & CO., INC.	KENNER	5/7/1993	10/21/1993	7139446.00	$5,462,922.00	$0.77
2010	MVN	CALCASIEU RIV MI 5 TO 24	9722210.00	9722210.00	3/18/2009	5/19/2009	7/10/2009	4/8/2010	1/9/2011	$38,660,360.00	$47,762,500.00	WEEKS MARINE, INC.(GULF)	Covington	4/8/2010	1/9/2011	9722210.00	$65,644,681.82	$6.75
1996	MVN	CALCASIEU RIV MI 5.0 - 25.5	8500000.00	8500000.00	2/21/1996	3/21/1996	4/10/1996	6/26/1996	1/17/1997	$5,831,500.00	$4,913,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	7/1/1996	1/17/1997	9498344.00	$6,762,573.28	$0.71
2010	MVN	CALCASIEU RIVER 24-31.5	2967889.00	2967889.00	2/11/2010	3/15/2010	3/18/2010	7/3/2010	5/29/2011	$8,374,690.00	$6,898,000.00	MIKE HOOKS INC.	LAKE CHARLES	7/3/2010	5/29/2011	2967889.00	$11,619,060.00	$3.91
2009	MVN	CALCASIEU RIVER MI 17 - 29	7294161.00	7294161.00	9/4/2007	5/15/2008	5/15/2008	7/25/2008	7/31/2009	$17,124,500.00	$17,570,000.00	MIKE HOOKS INC.	LAKE CHARLES	7/25/2008	7/22/2009	7294161.00	$0.00	
2007	MVN	CALCASIEU RIVER MI 5 TO 23	4000000.00	4000000.00	8/4/2006	9/6/2006	9/14/2006	12/1/2006	8/28/2007	$16,611,700.00	$14,162,500.00	MIKE HOOKS INC.	LAKE CHARLES	12/18/2006	8/29/2007	5327444.00	$15,608,935.98	$2.93
1997	MVN	CALCASIEU RIVER, BLACK BAYOU	100000.00	100000.00	10/31/1996	11/19/1996	12/9/1996	12/11/1996		$426,000.00	$213,000.00	MIKE HOOKS INC.	LAKE CHARLES	12/11/1996	12/17/1996	114442.00	$231,485.76	$2.02
2010	MVN	E & W CALUMET FLOODGATE	22406.00	22406.00	8/24/2009	9/25/2009	9/29/2009	10/1/2009	10/5/2009	$504,520.00	$240,000.00	WEEKS MARINE, INC.(GULF)	Covington	10/1/2009	10/2/2009	22406.00	$260,436.00	$11.62
2014	MVN	E & W CALUMET FLOODGATES	12821.00	12821.00	7/1/2014	8/5/2014	8/12/2014	10/20/2014	10/31/2014	$245,470.00	$140,750.00	GRILLOT CO. INC.	BELLE CHASSE	10/20/2014	10/31/2014	12821.00	$124,653.50	$9.72
1991	MVN	EMPIRE-GULF, MI 7.5-9.6	200000.00	200000.00	2/13/1991	3/14/1991	8/15/1991	9/15/1991		$267,220.00	$398,008.00	GRILLOT CO. INC.	BELLE CHASSE				$0.00	
1990	MVN	FRESHWATER BAYOU FY90	1000000.00	1000000.00	6/26/1990	7/26/1990	8/10/1990	9/14/1990	10/30/1990	$796,144.00	$704,970.00	MIKE HOOKS INC.	LAKE CHARLES	9/14/1990	10/17/1990		$704,970.00	
2001	MVN	FRESHWATER BY LOCK TO GULF	945000.00	945000.00	9/6/2000	10/11/2000	10/20/2000	11/19/2000	1/10/2001	$1,633,300.00	$1,381,000.00	MIKE HOOKS INC.	LAKE CHARLES	11/23/2000	1/8/2001	843385.00	$1,574,569.75	$1.87
2005	MVN	FRESHWATER LK TO GLF CY	500000.00	500000.00	1/29/2004	1/5/2005	1/5/2005	2/18/2005	3/20/2005	$2,899,800.00	$2,056,000.00	MIKE HOOKS INC.	LAKE CHARLES	2/18/2005	3/20/2005	621411.00	$1,605,547.18	$2.58
2009	MVN	FRESHWATER MI 1.3 TO -4.0	750000.00	750000.00	12/14/2007	1/15/2009	1/21/2009	4/9/2009	5/6/2009	$3,940,800.00	$3,280,200.00	MIKE HOOKS INC.	LAKE CHARLES	4/9/2009	5/6/2009	264664.00	$2,168,458.80	$8.19
2007	MVN	FRESHWATER/MERMENTAU	1450000.00	1450000.00	8/1/2006	9/12/2006	9/25/2006	11/4/2006	3/14/2007	$6,616,600.00	$7,266,500.00	WEEKS MARINE, INC.(GULF)	Covington	11/8/2006	3/14/2007	1624042.00	$7,803,072.50	$4.80
1994	MVN	FRSHWTER BAYOU MI 1.3 TO -4	1000000.00	1000000.00	1/31/1994	3/2/1994	3/10/1994	3/15/1994	5/1/1994	$1,039,000.00	$961,000.00	MIKE HOOKS INC.	LAKE CHARLES	3/15/1994	4/29/1994	989041.00	$865,332.00	$0.87
1990	MVN	GIWW BELOE MORGAN CITY FY90	785000.00	785000.00	6/18/1990	7/24/1990	8/2/1990	9/5/1990	9/30/1990	$785,030.00	$762,590.00	T.L. JAMES & CO., INC.	KENNER	9/4/1990	10/25/1990		$762,590.00	
1993	MVN	GIWW BELOW BAYOU SORREL	350000.00	350000.00	4/22/1993	5/26/1993	6/24/1993	7/30/1993	12/15/1993	$394,000.00	$432,500.00	COBO SERVICE	METAIRIE	7/30/1993	12/15/1993	80000.00	$264,468.00	$3.31
1994	MVN	GIWW BELOW BAYOU SORREL	401543.00	401543.00	5/10/1994	7/7/1994	7/26/1994	9/14/1994	12/10/1994	$1,130,000.00	$1,082,940.00	RIVER ROAD CONSTRUCTION INC	MANDEVILLE	9/14/1994	12/15/1994	400884.00	$1,095,661.00	$2.73
1996	MVN	GIWW BELOW BAYOU SORREL	350000.00	350000.00	6/20/1996	7/24/1996	8/5/1996	9/19/1996	10/5/1996	$939,900.00	$885,000.00	T.L. JAMES & CO., INC.	KENNER	9/19/1996	10/4/1996	155900.00	$549,695.80	$3.53
1995	MVN	GIWW BELOW BAYOU SORREL CY	350000.00	350000.00	5/10/1995	6/15/1995	7/7/1995	9/2/1995	9/29/1995	$1,185,000.00	$693,300.00	MIKE HOOKS INC.	LAKE CHARLES	9/3/1995	9/26/1995	235000.00	$586,000.00	$2.49

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1999	MVN	GIWW BELOW BY SORREL LK CY	100000.00	100000.00	5/28/1999	7/7/1999	7/23/1999	8/26/1999	9/10/1999	$936,400.00	$589,750.00	MIKE HOOKS INC.	LAKE CHARLES	8/27/1999	9/10/1999	151847.00	$577,478.91	$3.80
2003	MVN	GIWW BELOW BY SORREL LK CY	200000.00	200000.00	8/18/2001	9/16/2002	10/23/2002		2/25/2003	$1,094,973.00	$995,500.00	WEEKS MARINE, INC.(GULF)	Covington	1/19/2003	2/17/2003	208483.00	$1,016,306.55	$4.87
1998	MVN	GIWW BELOW BY SORREL LK CY98	225000.00	225000.00	7/23/1998	8/21/1998	9/15/1998	9/28/1998	10/21/1998	$891,500.00	$660,500.00	MIKE HOOKS INC.	LAKE CHARLES	10/1/1998	10/17/1998	164013.00	$653,302.60	$3.98
1998	MVN	GIWW BELOW BY SORREL LK FY97	250000.00	250000.00	7/21/1997	8/25/1997	9/5/1997	10/13/1997	11/7/1997	$650,000.00	$527,300.00	MIKE HOOKS INC.	LAKE CHARLES	10/19/1997	11/7/1997	193228.00	$508,591.20	$2.63
2007	MVN	GIWW IHNC CONT REMOVAL	14900.00	14900.00	7/5/2006	4/4/2007	4/19/2007	5/11/2007	7/12/2007	$2,543,000.00	$2,543,000.00	BERTUCCI CONTRACTING CORP	Jefferson	5/12/2007	6/27/2007	20228.00	$2,069,380.00	$102.30
1991	MVN	GIWW, BELOW BAYOU SORREL	1522.00	1000000.00	6/25/1991	7/30/1991	8/6/1991			$867,050.00	$910,730.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1992	MVN	GIWW, BELOW BAYOU SORREL	600000.00	600000.00	6/19/1992	7/21/1992	7/30/1992	8/29/1992	12/17/1993	$1,162,360.00	$1,240,720.00	G.W. CONTRACTORS	Folsom	8/29/1992	11/15/1992		$0.00	
2006	MVN	HOUMA (MATOC) TB & CI	2000000.00	2000000.00	10/16/2005	11/16/2005	11/17/2005	11/29/2005	2/8/2006	$5,459,370.00	$6,646,900.00	WEEKS MARINE, INC.(GULF)	Covington	11/29/2005	2/1/2006	1655465.00	$6,636,558.50	$4.01
2003	MVN	HOUMA CAT ISL PASS	1050000.00	1050000.00	2/7/2003	2/19/2003	2/19/2003	3/24/2003	5/26/2003	$4,084,700.00	$4,412,500.00	WEEKS MARINE, INC.(GULF)	Covington	3/20/2003	5/28/2003	865592.00	$3,838,630.00	$4.43
1998	MVN	HOUMA NAV CANAL CY FY98	1300000.00	1300000.00	6/26/1998	6/30/1998	7/1/1998	9/12/1998	5/29/1999	$3,186,200.00	$3,773,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	10/1/1998	5/26/1999	1621755.00	$4,326,927.00	$2.67
1993	MVN	HOUMA NAV CANAL, CAT ISLE PA	2488065.00	2488065.00	6/18/1993	7/28/1993	8/17/1993	8/28/1993	10/20/1994	$2,593,100.00	$2,447,000.00	MIKE HOOKS INC.	LAKE CHARLES	8/21/1993	10/12/1994	2029086.00	$2,459,966.94	$1.21
1998	MVN	HOUMA NAV CAT ISL, EMERGENCY	235.00	300000.00	11/21/1997	11/26/1997	11/26/1997	12/6/1997	12/16/1997	$444,906.00	$439,225.00	GULF COAST TRAILING CO.	St. Rose	12/6/1997	12/16/1997	117412.00	$436,825.00	$3.72
2007	MVN	HOUMA NAV MI 10.1 TO -3.5	1000000.00	1000000.00	9/21/2006	5/3/2007	5/3/2007	6/1/2007	8/20/2007	$4,132,550.00	$3,878,600.00	MIKE HOOKS INC.	LAKE CHARLES	6/1/2007	8/19/2007	896342.00	$3,498,487.45	$3.90
2006	MVN	HOUMA NAV MI 11.5 TO 36	700000.00	700000.00	3/31/2006	4/19/2006	4/20/2006	6/11/2006	9/30/2006	$4,350,000.00	$3,833,000.00	MIKE HOOKS INC.	LAKE CHARLES	6/11/2006	10/1/2006	671812.00	$3,739,980.00	$5.57
2003	MVN	HOUMA NAV TERREBONE BAY	1906430.00	1906430.00	8/9/2002	8/20/2002	8/20/2002		1/25/2003	$3,225,490.00	$2,980,000.00	MIKE HOOKS INC.	LAKE CHARLES	12/5/2002	1/19/2003	1389062.00	$3,563,694.04	$2.57
2002	MVN	HOUMA NAV TERREBONNE BAY	575000.00	575000.00	6/24/2002	7/9/2002	7/9/2002	7/19/2002	9/15/2002	$839,900.00	$680,250.00	MIKE HOOKS INC.	LAKE CHARLES	7/14/2002	8/6/2002	534776.00	$645,255.12	$1.21
1995	MVN	HOUMA NAV. CANAL MI 36.4-4.1	1425000.00	1425000.00	7/14/1995	8/16/1995	9/6/1995	9/18/1995	11/30/1995	$1,398,950.00	$1,534,250.00	BEAN DREDGING CORP.	NEW ORLEANS	9/18/1995	11/18/1995	1265224.00	$1,492,484.35	$1.18
2005	MVN	HOUMA TERR BAY & CAT ISL	1500000.00	1500000.00	2/11/2005	2/24/2005	3/18/2005	11/25/2005	4/15/2006	$5,085,800.00	$5,906,000.00	WEEKS MARINE, INC.(GULF)	Covington	5/25/2005	9/4/2005	1944433.00	$4,793,099.74	$2.47
1994	MVN	LA BRANCHE WETLAND RESTRATON	2500000.00	2500000.00	3/16/1993	9/9/1993	11/10/1993	1/6/1994	10/10/1994	$2,725,000.00	$2,489,000.00	T.L. JAMES & CO., INC.	KENNER	1/6/1994	4/2/1994	2851135.00	$2,682,124.00	$0.94
1993	MVN	LOWER ATCH.RVR HORSESHOE ELD	800000.00	800000.00	7/9/1993	7/15/1993	7/19/1993	7/26/1993	8/23/1993	$1,033,940.00	$1,450,800.00	T.L. JAMES & CO., INC.	KENNER	7/26/1993	8/23/1993	712441.00	$1,131,200.00	$1.59
2005	MVN	MERMENTAU MI 6.5 TO 1.3 CY	1000000.00	1000000.00	3/14/2005	3/29/2005	3/29/2005	5/12/2005	7/1/2005	$2,469,000.00	$2,269,200.00	MIKE HOOKS INC.	LAKE CHARLES	5/11/2005	6/12/2005	1312276.00	$2,892,728.52	$2.20
1991	MVN	MERMENTAU RIV MI 6.2-GULF	450000.00	450000.00	7/26/1990	3/21/1991	4/2/1991	4/29/1991	5/7/1991	$684,455.00	$555,306.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
2000	MVN	MERMENTAU RIV MI 6.5 TO 1.2	1020000.00	1020000.00	3/8/2000	6/22/2000	6/30/2000	3/1/2000	11/15/2000	$2,756,520.00	$2,206,226.00	MIKE HOOKS INC.	LAKE CHARLES	9/27/2000	12/1/2000	1338104.00	$2,571,033.83	$1.92
2004	MVN	MERMENTAU RIVER CY 2004	1200000.00	1200000.00	9/8/2003	10/8/2003	10/29/2003	12/15/2003	12/31/2003	$2,300,500.00	$1,778,000.00	MIKE HOOKS INC.	LAKE CHARLES	11/7/2003	12/19/2003	1101602.00	$1,833,213.66	$1.66

Table B.2
Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2009	MVN	MERMENTAU RIVER MI 6.5 - 1.3	1000000.00	1000000.00	11/29/2007	4/28/2009	5/12/2009	5/13/2009	6/30/2009	$3,046,400.00	$3,487,500.00	MIKE HOOKS INC.	LAKE CHARLES	5/22/2009	6/29/2009	987790.00	$3,323,748.00	$3.36
1996	MVN	MERMENTAU RIVER MI. 1.2-6.2	1100000.00	1100000.00	2/8/1996	3/14/1996	3/27/1996	4/8/1996	5/24/1996	$963,800.00	$838,000.00	MIKE HOOKS INC.	LAKE CHARLES	4/21/1996	5/22/1996	1035435.00	$789,497.00	$0.76
1997	MVN	MISS R SWP LSDHPR 4-96 EMER	828.00	2300000.00	10/3/1995	10/11/1996	10/11/1996	10/14/1996	11/18/1996	$1,580,820.00	$924,240.00	BEAN DREDGING CORP.	NEW ORLEANS	10/14/1996	11/18/1996	924501.00	$924,240.00	$1.00
2014	MVN	MISS RIV HDDA DREDGING	7000000.00	7000000.00	7/31/2014	9/3/2014	9/9/2014	11/10/2014	5/13/2015	$23,941,600.00	$23,109,001.00	WEEKS MARINE, INC.(GULF)	Covington	11/10/2014	5/13/2015	7000000.00	$0.00	
1995	MVN	MISS RIV NEW ORL HARBOR 1-95	967.00	717762.00	12/13/1994	1/18/1995	1/19/1995	1/29/1995	3/13/1995	$716,678.00	$717,965.00	T.L. JAMES & CO., INC.	KENNER	1/30/1995	3/13/1995	717762.00	$716,675.00	$1.00
1996	MVN	MISS RIV NEW ORL HARBOR 1-96	967.00	700000.00	12/19/1995	1/8/1996	1/10/1996	1/17/1996	2/8/1996	$718,977.00	$616,196.00	MIKE HOOKS INC.	LAKE CHARLES	1/17/1996	2/8/1996	394828.00	$338,649.00	$0.86
1995	MVN	MISS RIV NEW ORL HARBOR 2-95	4979.00	2000000.00	12/21/1994	6/7/1995	6/23/1995	7/5/1995	9/15/1995	$2,676,185.00	$2,057,661.00	MIKE HOOKS INC.	LAKE CHARLES	7/5/1995	9/12/1995	1481110.00	$926,231.00	$0.63
1996	MVN	MISS RIV NEW ORL HARBOR 2-96	3455.00	2000000.00	3/4/1996	6/5/1996	6/6/1996	6/12/1996	8/11/1996	$2,381,560.00	$2,244,826.00	MIKE HOOKS INC.	LAKE CHARLES	6/12/1996	8/11/1996	1358714.00	$1,150,723.00	$0.85
1994	MVN	MISS RIV NEW ORL HARBR 1-94	1559.00	700000.00	12/6/1993	1/5/1994	1/6/1994	1/16/1994	2/25/1994	$1,017,095.00	$920,246.00	MIKE HOOKS INC.	LAKE CHARLES	1/16/1994	2/25/1994	962827.00	$539,519.00	$0.56
1994	MVN	MISS RIV NEW ORL HRBR 2	3455.00	2000000.00	12/7/1993	5/18/1994	5/19/1994	5/27/1994	8/19/1994	$2,369,825.00	$2,083,171.00	T.L. JAMES & CO., INC.	KENNER	5/27/1994	8/19/1994	1622892.00	$1,141,541.00	$0.70
2012	MVN	MISS RIV ORCS LOW SILL	2988111.00	2988111.00	5/16/2012	7/3/2012	7/10/2012	9/11/2012	1/19/2013	$14,282,000.00	$10,750,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/11/2012	1/19/2013	2988111.00	$7,771,336.20	$2.60
1999	MVN	MISS RIV SALTWT SILL LSD CUT	0.00	1000000.00	10/30/1998	9/20/1999	9/22/1999		10/30/1999	$1,849,940.00	$1,429,891.00	MIKE HOOKS INC.	LAKE CHARLES	9/27/1999	10/30/1999	598080.00	$1,158,377.00	$1.94
2000	MVN	MISS RIV SOUTH PASS CY	4000000.00	4000000.00	2/13/1999	2/26/1999	3/12/1999	7/2/1999	11/17/1999	$9,650,000.00	$8,410,884.00	CENTRAL GULF CONTRACTORS	MANDEVILLE	7/24/1999	11/22/1999	5379955.00	$8,975,230.12	$1.67
2014	MVN	MISS RIV SWP CDR 1-14	2522889.00	2522889.00	12/12/2013	2/4/2014	2/10/2014	3/21/2014	7/12/2014	$13,229,497.00	$13,558,625.00	WEEKS MARINE, INC.(GULF)	Covington	5/20/2014	7/7/2014	2522889.00	$0.00	
1994	MVN	MISS RIV SWP CUTRHD 1-94	5000000.00	5000000.00	10/29/1993	2/1/1994	2/8/1994	2/24/1994	7/5/1994	$4,573,175.00	$6,278,000.00	T.L. JAMES & CO., INC.	KENNER	2/24/1994	7/5/1994	5137538.00	$6,443,205.00	$1.25
1991	MVN	MISS RIV SWP CUTTERHEAD 1	12000000.00	12000000.00	12/10/1990	1/8/1991	1/9/1991	2/11/1991	9/30/1991	$12,357,400.00	$7,461,000.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1995	MVN	MISS RIV SWP CUTTERHEAD 1-95	2500000.00	2500000.00	12/30/1994	5/23/1995	5/24/1995	6/5/1995	9/4/1995	$3,862,950.00	$3,781,750.00	T.L. JAMES & CO., INC.	KENNER	6/5/1995	9/4/1995	3300751.00	$3,749,125.00	$1.14
1996	MVN	MISS RIV SWP CY CUTTER 1-96	3000000.00	3000000.00	12/28/1995	5/7/1996	5/8/1996	5/20/1996	8/9/1996	$3,873,950.00	$3,751,750.00	T.L. JAMES & CO., INC.	KENNER	5/24/1996	8/9/1996	3622117.00	$4,180,670.00	$1.15
1997	MVN	MISS RIV SWP CY CUTTER 1-97	3000000.00	3000000.00	10/30/1996	3/12/1997	3/12/1997	3/12/1997		$4,257,000.00	$3,866,000.00	MIKE HOOKS INC.	LAKE CHARLES	3/25/1997	6/7/1997	1293962.00	$2,131,453.26	$1.65
1997	MVN	MISS RIV SWP CY CUTTER 2-97	3000000.00	3000000.00	12/15/1996	4/1/1997	4/2/1997	4/13/1997		$4,047,080.00	$4,363,000.00	T.L. JAMES & CO., INC.	KENNER	4/14/1997	6/11/1997	2727304.00	$4,042,334.00	$1.48
1999	MVN	MISS RIV SWP CY CUTTER 2-99	3000000.00	3000000.00	1/27/1999	2/23/1999	2/24/1999	3/8/1999	3/31/2000	$4,312,850.00	$5,365,000.00	WEEKS MARINE, INC.(GULF)	Covington	3/8/1999	4/6/1999	1691935.00	$3,750,980.85	$2.22
2009	MVN	MISS RIV SWP LSD CUT 1-2008	1757.00	3000000.00	4/24/2008	2/5/2009	2/19/2009	3/18/2009	5/18/2009	$8,284,627.00	$11,116,326.00	WEEKS MARINE, INC.(GULF)	Covington	3/19/2009	5/18/2009	2896991.00	$10,628,925.00	$3.67
2010	MVN	MISS RIV SWP LSD CUT 1-2009	1757.00	2745396.00	3/31/2009	12/17/2009	12/21/2009	1/10/2010	3/27/2010	$9,370,519.00	$10,291,941.00	WEEKS MARINE, INC.(GULF)	Covington	1/10/2010	3/27/2010	2745396.00	$10,228,292.05	$3.73
2011	MVN	MISS RIV SWP LSD CUT 1-2010	1757.00	3493134.00	2/18/2010	1/20/2011	1/25/2011	2/25/2011	7/15/2011	$10,329,564.00	$8,850,651.00	MIKE HOOKS INC.	LAKE CHARLES	2/25/2011	7/15/2011	3493134.00	$9,306,421.20	$2.66

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FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2013	MVN	MISS RIV SWP LSD CUT 1-2013	5430960.00	5430960.00	3/15/2013	4/16/2013	4/19/2013	5/21/2013	8/8/2013	$13,163,042.00	$11,198,825.00	WEEKS MARINE, INC.(GULF)	Covington	5/21/2013	8/8/2013	5430960.00	$11,170,200.00	$2.06
2003	MVN	MISS RIV SWP LSD HOP 10-02		2300000.00	6/3/2002	11/6/2002	11/7/2002		12/4/2002	$1,191,708.00	$972,260.00	BEAN STUYVESANT, LLC	New Orleans	11/14/2002	12/4/2002	3323620.00	$912,300.00	$0.27
2008	MVN	MISS RIV SWP LSD HOP 10-2008	889.00	2300000.00	10/11/2007	7/10/2008	7/10/2008	7/16/2008	8/22/2008	$4,300,324.00	$4,007,350.00	WEEKS MARINE, INC.(GULF)	Covington	7/16/2008	8/26/2008	524273.00	$4,218,800.00	$8.05
2007	MVN	MISS RIV SWP LSD HOP 1-2007	900.00	2300000.00	10/25/2006	1/5/2007	1/5/2007	1/6/2007	2/17/2007	$2,429,100.00	$2,755,000.00	BEAN STUYVESANT, LLC	New Orleans	1/6/2007	2/17/2007	1251804.00	$2,755,000.00	$2.20
2002	MVN	MISS RIV SWP LSD HOP 12-01		2300000.00	5/4/2001	12/19/2001	1/1/2002		3/4/2002	$2,191,820.00	$3,039,500.00	WEEKS MARINE, INC.(GULF)	Covington	1/1/2002	3/4/2002	1657624.00	$2,701,053.95	$1.63
2008	MVN	MISS RIV SWP LSD HOP 12-2008	1155.00	2300000.00	10/11/2007	7/28/2008	8/6/2008	8/9/2008	12/8/2008	$4,300,324.00	$5,259,400.00	WEEKS MARINE, INC.(GULF)	Covington	8/9/2008	12/4/2008	2001875.00	$5,259,400.00	$2.63
2002	MVN	MISS RIV SWP LSD HOP 15-01		2300000.00	5/4/2001	3/20/2002	3/20/2002	3/2/2002	4/29/2002	$2,087,564.00	$2,189,950.00	BEAN STUYVESANT, LLC	New Orleans	3/26/2002	4/29/2002	1594647.00	$2,181,700.00	$1.37
2004	MVN	MISS RIV SWP LSD HOP 3-2004	771.00	2300000.00	10/20/2003	6/10/2004	6/10/2004	5/2/2004	7/20/2004	$2,001,315.00	$1,372,380.00	BEAN STUYVESANT, LLC	New Orleans	6/16/2004	7/20/2004	1177394.00	$1,372,380.00	$1.17
2008	MVN	MISS RIV SWP LSD HOP 3-2008	889.00	2300000.00	10/11/2007	3/12/2008	3/12/2008	3/21/2008	5/29/2008	$3,672,105.00	$4,157,350.00	WEEKS MARINE, INC.(GULF)	Covington	3/21/2008	5/29/2008	1099406.00	$4,157,350.00	$3.78
2010	MVN	MISS RIV SWP LSD HOP 3-2010	1871098.00	1871098.00	10/15/2009	2/25/2010	3/5/2010	3/19/2010	4/29/2010	$5,168,150.00	$5,002,500.00	STUYVESANT DREDGING CO. LLC	BELLE CHASE	3/19/2010	4/29/2010	1871098.00	$3,495,000.00	$1.87
2007	MVN	MISS RIV SWP LSD HOP 6-2007	1111.00	2300000.00	10/25/2006	3/22/2007	3/22/2007	3/29/2007	5/13/2007	$2,659,976.00	$2,773,000.00	BEAN STUYVESANT, LLC	New Orleans	3/29/2007	5/13/2007	1185710.00	$3,205,000.00	$2.70
2008	MVN	MISS RIV SWP LSD HOP 7-2008	1155.00	2300000.00	10/11/2007	4/30/2008	4/30/2008	5/2/2008	7/16/2008	$3,929,592.00	$4,717,600.00	WEEKS MARINE, INC.(GULF)	Covington	5/2/2008	7/16/2008	1237834.00	$4,717,599.00	$3.81
2009	MVN	MISS RIV SWP LSD HOP 9-2009	1249.00	2300000.00	10/21/2008	6/16/2009	6/18/2009	6/26/2009	9/19/2009	$4,148,380.00	$4,997,600.00	WEEKS MARINE, INC.(GULF)	Covington	6/26/2009	9/19/2009	2181048.00	$4,997,600.00	$2.29
2004	MVN	MISS RIV SWP LSD HOPP 13-03		2300000.00	7/14/2003	5/7/2004	5/7/2004	4/12/2004	6/16/2004	$1,942,948.00	$1,475,325.00	BEAN STUYVESANT, LLC	New Orleans	5/14/2004	6/16/2004	1234446.00	$1,452,075.00	$1.18
1998	MVN	MISS RIV SWP LSD HOPP 13-98	1551.00	1000000.00	4/9/1998	6/9/1998	6/10/1998	6/18/1998	7/21/1998	$1,145,700.00	$1,238,314.00	WEEKS MARINE, INC.(GULF)	Covington	6/19/1998	7/21/1998	516609.00	$1,238,314.00	$2.40
2004	MVN	MISS RIV SWP LSD HOPP 14-03	1634.00	2300000.00	7/14/2003	5/25/2004	5/25/2004	5/30/2004	7/17/2004	$1,961,424.00	$1,456,125.00	BEAN STUYVESANT, LLC	New Orleans	5/30/2004	7/17/2004	1838676.00	$1,456,125.00	$0.79
1998	MVN	MISS RIV SWP LSD HOPP 16-98	1551.00	1000000.00	4/30/1998	7/9/1998	7/10/1998	7/20/1998	8/16/1998	$1,141,000.00	$1,260,975.00	WEEKS MARINE, INC.(GULF)	Covington	7/21/1998	8/16/1998	493680.00	$1,009,125.00	$2.04
1996	MVN	MISS RIV SWP LSD HOPPER 1-96	6713.00	6800000.00	12/1/1995	1/30/1996	2/2/1996	2/12/1996	8/8/1996	$8,000,145.00	$8,158,560.00	GULF COAST/STUYVESANT JV	KENNER	2/12/1996	8/8/1996	7062635.00	$7,657,527.00	$1.08
1999	MVN	MISS RIV SWP LSD HOPPER 2-99	2281.00	8500000.00	11/6/1998	3/3/1999	3/4/1999	1/10/1999	7/5/1999	$5,011,911.00	$5,959,765.00	BEAN HORIZON & STUYVESANT JV	BELLE CHASE	3/11/1999	7/4/1999	4382805.00	$5,704,525.00	$1.30
2002	MVN	MISS RIV SWP LSD HOPPER 3-02		2300000.00	10/5/2001	6/4/2002	6/4/2002	4/9/2002	7/10/2002	$1,929,204.00	$1,809,210.00	BEAN STUYVESANT, LLC	New Orleans	6/7/2002	7/10/2002	1061555.00	$1,508,543.13	$1.42
1996	MVN	MISS RIV SWP LSD HOPPER 3-96	1843.00	2300000.00	12/6/1995	6/4/1996	6/5/1996	6/7/1996	8/6/1996	$2,825,620.00	$2,478,835.00	GULF COAST TRAILING CO.	St. Rose	6/6/1996	8/5/1996	1353119.00	$1,868,205.00	$1.38
2001	MVN	MISS RIV SWP LSD HOPPER 4-01	1316.00	2300000.00	10/27/2000	3/1/2001	3/1/2001	3/15/2001	5/7/2001	$2,472,380.00	$1,813,150.00	WEEKS MARINE, INC.(GULF)	Covington	3/15/2001	5/7/2001	736465.00	$1,472,575.00	$2.00
2002	MVN	MISS RIV SWP LSD HOPPER 4-02		2300000.00	10/30/2001	3/26/2002	3/26/2002	4/1/2002	5/28/2002	$2,255,676.00	$2,575,040.00	WEEKS MARINE, INC.(GULF)	Covington	4/1/2002	5/28/2002	872253.00	$2,520,040.00	$2.89

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Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2003	MVN	MISS RIV SWP LSD HOPPER 4-03	1623.00	2300000.00	10/23/2002	3/26/2003	3/26/2003	4/4/2003	5/11/2003	$2,401,940.00	$2,068,600.00	BEAN STUYVESANT, LLC	New Orleans	4/4/2003	5/11/2003	866702.00	$1,609,160.00	$1.86
1995	MVN	MISS RIV SWP LSD HOPPER 5-95	805.00	2300000.00	11/23/1994	5/30/1995	5/31/1995	6/1/1995	6/21/1995	$1,559,150.00	$1,870,180.00	BEAN DREDGING CORP.	NEW ORLEANS	6/1/1995	6/21/1995	479896.00	$1,115,516.00	$2.32
1997	MVN	MISS RIV SWP LSD HOPPER 5-97	1840.00	2300000.00	11/20/1996	3/19/1997	3/19/1997	3/26/1997	7/31/1997	$2,893,130.00	$3,572,690.00	GULF COAST TRAILING CO.	St. Rose	3/26/1997	7/31/1997	1758262.00	$3,572,690.00	$2.03
2003	MVN	MISS RIV SWP LSD HOPPER 6-03	893.00	2300000.00	10/23/2002	5/19/2003	5/20/2003	5/25/2003	6/27/2003	$1,882,632.00	$1,665,895.00	BEAN STUYVESANT, LLC	New Orleans	5/20/2003	6/27/2003	1137119.00	$1,626,145.00	$1.43
1997	MVN	MISS RIV SWP LSD HOPPER 6-96	1440.00	2300000.00	12/14/1995	11/6/1996	11/8/1996	11/19/1996	1/19/1997	$2,659,712.00	$2,734,560.00	BEAN DREDGING CORP.	NEW ORLEANS	11/19/1996	1/21/1997	1914975.00	$2,734,560.00	$1.43
1998	MVN	MISS RIV SWP LSD HOPPER 6-98	930.00	2300000.00	11/20/1997	2/19/1998	2/19/1998	2/25/1998	3/29/1998	$1,936,880.00	$2,257,750.00	BEAN HORIZON CORPORATION	BELLE CHASSE	2/25/1998	3/29/1998	923696.00	$1,853,200.00	$2.01
2002	MVN	MISS RIV SWP LSD HOPPER 7-02		2300000.00	10/30/2001	4/25/2002	4/26/2002	5/14/2002	6/4/2002	$1,929,204.00	$1,955,700.00	BEAN STUYVESANT, LLC	New Orleans	4/30/2002	6/3/2002	1242329.00	$1,888,950.00	$1.52
2001	MVN	MISS RIV SWP LSD HOPPER 8-01		2300000.00	10/27/2000	5/30/2001	5/30/2001	6/2/2001	6/18/2001	$1,192,036.00	$1,123,100.00	BEAN STUYVESANT, LLC	New Orleans	6/2/2001	6/22/2001	648169.00	$1,115,600.00	$1.72
2002	MVN	MISS RIV SWP LSD HOPPER 8-02		2300000.00	10/30/2001	5/6/2002	5/6/2002	5/21/2002	6/21/2002	$2,130,860.00	$1,773,650.00	BEAN STUYVESANT, LLC	New Orleans	5/12/2002	6/21/2002	1702121.00	$1,702,500.00	$1.00
2003	MVN	MISS RIV SWP LSD HOPPER 8-03		2300000.00	10/23/2002	6/23/2003	6/23/2003	6/27/2003	8/6/2003	$1,875,600.00	$1,320,650.00	BEAN STUYVESANT, LLC	New Orleans	6/27/2003	8/7/2003	1090990.00	$1,251,000.00	$1.15
1997	MVN	MISS RIV SWP LSD HOPPER 8-97	1491.00	2300000.00	4/1/1997	4/1/1997	4/2/1997	4/5/1997	6/7/1997	$3,110,950.00	$3,544,917.00	BEAN HORIZON CORPORATION	BELLE CHASSE	4/4/1997	6/7/1997	1782256.00	$3,544,917.00	$1.99
1998	MVN	MISS RIV SWP LSD HOPPER 8-98	1316.00	2300000.00	12/3/1997	3/24/1998	3/25/1998	5/27/1998	6/19/1998	$1,971,780.00	$2,279,020.00	GULF COAST TRAILING CO.	St. Rose	4/7/1998	6/19/1998	1146093.00	$2,279,020.00	$1.99
2002	MVN	MISS RIV SWP LSD HOPPER 9-02		2300000.00	10/30/2001	5/22/2002	5/22/2002	5/28/2002	7/24/2002	$2,105,008.00	$1,829,080.00	WEEKS MARINE, INC.(GULF)	Covington	5/28/2002	7/24/2002	833103.00	$1,650,471.00	$1.98
1997	MVN	MISS RIV SWP LSD HOPPR 11-97	1820.00	2300000.00	4/23/1997	7/22/1997	7/23/1997		10/31/1997	$3,007,450.00	$2,894,705.00	GULF COAST TRAILING CO.	St. Rose	8/1/1997	11/9/1997	2166537.00	$2,894,705.00	$1.34
1998	MVN	MISS RIV SWP LSD HOPPR 12-97	363.00	2300000.00	5/12/1997	12/3/1997	12/9/1997	12/15/1997	12/30/1997	$767,368.00	$774,475.00	GULF COAST TRAILING CO.	St. Rose	12/13/1997	12/30/1997	358433.00	$764,875.00	$2.13
1990	MVN	MISS RIV SWP LSD HPP #3-90	2300000.00	3400000.00	11/27/1989	4/2/1990	4/3/1990	4/7/1990		$1,593,220.00	$1,004,561.00	BEAN DREDGING CORP.	NEW ORLEANS	4/9/1990	5/19/1990		$1,121,285.41	
1990	MVN	MISS RIV SWP LSD HPR #1	3400000.00	3400000.00	7/21/1989	11/15/1989	12/1/1989	12/21/1989		$2,371,160.00	$1,960,161.00	BEAN DREDGING CORP.	NEW ORLEANS	12/21/1989	4/9/1990		$3,306,368.00	
1991	MVN	MISS RIV SWP LSD HPR #3	2300000.00	2300000.00	1/28/1991	3/19/1991	3/20/1991	3/24/1991	5/4/1991	$1,440,585.00	$816,217.00	BEAN DREDGING/WEEKS MARINE JV	BELLE CHASSE				$0.00	
1991	MVN	MISS RIV SWP LSD HPR #6	2300000.00	2300000.00	6/3/1991	6/6/1991	6/10/1991	6/12/1991	7/20/1991	$1,456,760.00	$847,741.00	BEAN DREDGING CORP.	NEW ORLEANS				$0.00	
1994	MVN	MISS RIV SWPLSD HOP 6-94	1491.00	2300000.00	11/15/1993	5/26/1994	5/27/1994	6/2/1994	7/8/1994	$2,661,600.00	$3,132,000.00	BEAN DREDGING CORP.	NEW ORLEANS	6/2/1994	7/2/1994	1091842.00	$1,600,000.00	$1.47
1990	MVN	MISS RIV, NO HARBOR #1	2800000.00	2800000.00	12/7/1989	3/8/1990	3/15/1990	3/21/1990	4/30/1990	$1,906,720.00	$1,875,760.00	T.L. JAMES & CO., INC.	KENNER	4/3/1990	1/8/1991		$2,180,404.98	
1991	MVN	MISS RIV, NO HARBOR #1	900000.00	2000000.00	7/31/1990	11/20/1990	12/11/1990	2/1/1991	2/28/1991	$692,800.00	$512,500.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1992	MVN	MISS RIV, NO HARBOR #1	839.00	1300000.00	11/19/1991	12/19/1991	1/7/1992			$666,330.00	$575,660.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	

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FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
1991	MVN	MISS RIV, NO HARBOR #2	2300000.00	2000000.00	2/15/1991	4/4/1991	4/5/1991	3/1/1991	6/15/1991	$1,021,170.00	$1,024,000.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1992	MVN	MISS RIV, NO HARBOR #2	987.00	1000000.00	4/17/1992	6/4/1992	6/18/1992			$630,390.00	$607,720.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1992	MVN	MISS RIV, SWP CUTTERHEAD 1	8000000.00	8000000.00	11/8/1991	12/10/1991	12/27/1991			$5,664,700.00	$6,261,000.00	GREAT LAKES DRDG & DOCK/GULF	METAIRIE	6/1/1992	9/3/1992		$4,263,302.00	
1991	MVN	MISS RIV, SWP LSD HPR #1	3400000.00	2300000.00	6/25/1990	11/15/1990	12/3/1990	12/19/1990	2/19/1990	$2,390,875.00	$1,406,160.00	BEAN DREDGING/WEEKS MARINE JV	BELLE CHASSE				$0.00	
1990	MVN	MISS RIV, SWP LSD HPR #2	3000000.00	2300000.00	11/28/1989	1/29/1990	1/30/1990	2/6/1990	3/21/1990	$1,736,730.00	$1,259,011.00	GULF COAST TRAILING CO.	St. Rose	2/7/1990	4/18/1990		$1,652,130.00	
1991	MVN	MISS RIV, SWP LSD HPR #2	2300000.00	2300000.00	11/20/1990	1/8/1991	1/9/1991	1/19/1991	3/29/1991	$1,723,100.00	$923,482.00	GULF COAST TRAILING CO.	St. Rose				$0.00	
1991	MVN	MISS RIV, SWP LSD HPR #7	762.00	1500000.00	7/19/1991	8/6/1991	8/7/1991			$946,570.00	$912,818.00	GULF COAST TRAILING CO.	St. Rose				$0.00	
1991	MVN	MISS RIV, SWP, LSD HPR #5	2300000.00	2300000.00	4/26/1991	5/2/1991	5/3/1991	5/5/1991	6/11/1991	$1,624,460.00	$1,484,185.00	BEAN DREDGING/WEEKS MARINE JV	BELLE CHASSE				$0.00	
1990	MVN	MISS RIVER SWP LSD HPR 6-90	2300000.00	2300000.00	5/29/1990	6/4/1990	6/5/1990	6/9/1990	7/22/1990	$1,563,470.00	$1,240,950.00	T.L. JAMES & CO., INC.	KENNER	6/9/1990	8/2/1990		$1,434,150.00	
2001	MVN	MISS RV N.O. HAR LSD CT 1-00		700000.00	12/27/1999	1/24/2001	1/25/2001	1/15/2000	2/28/2000	$887,452.00	$951,300.00	WEEKS MARINE, INC.(GULF)	Covington	2/1/2001	3/19/2001	334530.00	$794,260.25	$2.37
2003	MVN	MISS RV N.O. HAR LSD CT 1-02		700000.00	11/3/2001	1/30/2003	1/30/2003	2/8/2003	3/15/2003	$1,407,392.00	$935,401.00	MIKE HOOKS INC.	LAKE CHARLES	2/7/2003	2/27/2003	332318.00	$657,997.50	$1.98
1997	MVN	MISS RV N.O. HAR LSD CT 1-97	467.00	700000.00	12/16/1996	1/16/1997	1/16/1997	1/22/1997	2/11/1997	$813,071.00	$611,350.00	T.L. JAMES & CO., INC.	KENNER	1/13/1997	2/11/1997	663777.00	$604,102.09	$0.91
2001	MVN	MISS RV N.O. HAR LSD CT 2-01	419.00	2000000.00	1/9/2001	5/10/2001	5/10/2001	5/13/2001	5/29/2001	$1,257,969.00	$1,329,845.00	WEEKS MARINE, INC.(GULF)	Covington	5/15/2001	6/1/2001	556310.00	$1,113,943.12	$2.00
2002	MVN	MISS RV N.O. HAR LSD CT 2-02		2000000.00	11/3/2001	6/14/2002	6/14/2002	7/15/2002	9/15/2002	$3,237,950.00	$2,904,951.00	WEEKS MARINE, INC.(GULF)	Covington	6/17/2002	7/27/2002	888406.00	$1,619,968.20	$1.82
2003	MVN	MISS RV N.O. HAR LSD CT 2-03		2000000.00	1/15/2003	7/30/2003	7/30/2003	8/4/2003	9/21/2003	$1,529,358.00	$1,361,451.00	MIKE HOOKS INC.	LAKE CHARLES	8/8/2003	9/20/2003	450000.00	$1,141,550.96	$2.54
1998	MVN	MISS RV N.O. HAR LSD CT 2-98	0.00	2000000.00	12/16/1997	5/27/1998	5/28/1998	6/18/1998	8/6/1998	$2,028,120.00	$2,186,201.00	T.L. JAMES & CO., INC.	KENNER	6/18/1998	8/8/1998	1140410.00	$1,617,783.00	$1.42
1999	MVN	MISS RV N.O. HAR LSD CT 2-99	0.00	2000000.00	1/4/1999	6/10/1999	6/11/1999	6/17/1999	8/6/1999	$2,524,098.00	$2,355,400.00	BEAN HORIZON CORPORATION	BELLE CHASSE	6/17/1999	8/7/1999	1526000.00	$1,728,736.67	$1.13
2000	MVN	MISS RV N.O. HAR LSD CT 3-00	401.00	700000.00	12/27/1999	5/23/2000	5/24/2000	6/5/2000	6/22/2000	$783,970.00	$926,225.00	WEEKS MARINE, INC.(GULF)	Covington	6/5/2000	6/19/2000	427500.00	$857,510.25	$2.01
2002	MVN	MISS RV N.O. HAR LSD CT 3-02		700000.00	11/3/2001	1/9/2002	1/9/2002	1/19/2002	2/4/2002	$1,192,896.00	$1,005,301.00	WEEKS MARINE, INC.(GULF)	Covington	1/20/2002	2/4/2002	422274.00	$907,989.28	$2.15
2003	MVN	MISS RV N.O. HAR LSD CT 3-03	654.00	700000.00	1/15/2003	4/10/2003	4/10/2003	4/16/2003	5/8/2003	$1,231,904.00	$891,551.00	MIKE HOOKS INC.	LAKE CHARLES	4/16/2003	5/8/2003	260294.00	$735,847.08	$2.83
1997	MVN	MISS RV N.O. HAR LSD CT 4-97	995.00	2000000.00	6/4/1997	6/9/1997	6/9/1997			$1,089,756.40	$1,354,900.00	MIKE HOOKS INC.	LAKE CHARLES	6/15/1997	8/1/1997	918104.00	$1,348,605.00	$1.47
2005	MVN	MISS RV NO HAR LSD CT 1-2004		700000.00	12/8/2003	2/15/2005	2/17/2005	2/28/2005	3/29/2005	$1,960,438.00	$2,441,601.00	WEEKS MARINE, INC.(GULF)	Covington	2/28/2005	3/28/2005	1061785.00	$2,339,685.83	$2.20
2008	MVN	MISS RV NO HAR LSD CT 1-2008	880.00	1000000.00	2/11/2008	5/7/2008	5/7/2008	5/15/2008	7/4/2008	$6,227,700.00	$5,248,001.00	WEEKS MARINE, INC.(GULF)	Covington	5/16/2008	7/4/2008	794927.00	$4,251,361.00	$5.35

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2009	MVN	MISS RV NO HAR LSD CT 1-2009	986915.00	986915.00	11/21/2008	6/25/2009	7/14/2009	8/10/2009	11/18/2009	$7,995,878.00	$8,820,251.00	WEEKS MARINE, INC.(GULF)	Covington	7/25/2009	11/18/2009	986915.00	$6,198,776.00	$6.28
2010	MVN	MISS RV NO HAR LSD CT 1-2010	1620.00	873868.00	11/17/2009	6/9/2010	6/17/2010	6/22/2010	9/1/2010	$4,998,220.00	$5,225,826.00	WEEKS MARINE, INC.(GULF)	Covington	6/22/2010	9/1/2010	873868.00	$4,495,135.26	$5.14
2011	MVN	MISS RV NO HAR LSD CT 1-2011	1108538.00	1108538.00	12/23/2010	7/18/2011	7/18/2011	7/25/2011	9/13/2011	$4,672,076.00	$2,890,251.00	WEEKS MARINE, INC.(GULF)	Covington	7/25/2011	9/13/2011	1108538.00	$3,523,574.65	$3.18
2004	MVN	MISS RV NO HAR LSD CT 2-2004	852.00	2000000.00	11/1/2003	5/14/2004	5/14/2004	5/20/2004	6/27/2004	$1,272,219.00	$1,044,051.00	MIKE HOOKS INC.	LAKE CHARLES	5/20/2004	6/27/2004	617045.00	$1,035,950.00	$1.68
2006	MVN	MISS RV NO HAR LSD CT 2-2005	736.00	1200000.00	4/15/2005	4/28/2006	4/28/2006	5/8/2006	6/10/2006	$3,658,758.00	$2,813,000.00	BEAN STUYVESANT, LLC	New Orleans	5/8/2006	6/10/2006	876420.00	$2,788,815.00	$3.18
2004	MVN	MISS RV NO HAR LSD CT 3-2004	700000.00	700000.00	11/1/2003	8/20/2004	8/20/2004	8/26/2004	9/24/2004	$1,936,728.00	$1,743,425.00	BEAN STUYVESANT, LLC	New Orleans	8/27/2004	9/24/2004	311880.00	$1,204,873.50	$3.86
2007	MVN	MISS RV NO HAR LSD CT 3-2007	950.00	700000.00	12/15/2006	7/31/2007	8/2/2007	8/13/2007	9/24/2007	$1,403,420.00	$2,291,001.00	WEEKS MARINE, INC.(GULF)	Covington	8/13/2007	9/26/2007	599185.00	$1,783,145.00	$2.98
2012	MVN	MISS RV NO HAR LSD CT 3-2011	477588.00	477588.00	12/23/2010	9/13/2012	9/18/2012	10/17/2012	11/11/2012	$2,852,301.00	$2,680,701.00	WEEKS MARINE, INC.(GULF)	Covington	10/17/2012	11/11/2012	477588.00	$2,624,000.00	$5.49
2012	MVN	MISS RV NOH CDR 2-2011	935862.00	935862.00	12/23/2010	3/6/2012	3/7/2012	3/15/2012	6/9/2012	$6,752,456.00	$4,763,701.00	MIKE HOOKS INC.	LAKE CHARLES	3/15/2012	6/9/2012	935862.00	$4,166,744.40	$4.45
2007	MVN	MISS RV PASS A LOUTRE CY CT	4000000.00	4000000.00	11/16/2006	12/19/2006	12/19/2006	1/18/2007	3/31/2007	$10,171,000.00	$8,850,000.00	BEAN STUYVESANT, LLC	New Orleans	1/16/2007	3/27/2007	3999139.00	$8,850,000.00	$2.21
2008	MVN	MISS RV PASS ALOUTRE CY CT	4000000.00	4000000.00	2/8/2008	3/18/2008	3/18/2008	4/20/2008	8/15/2008	$14,035,807.00	$9,600,000.00	WEEKS MARINE, INC.(GULF)	Covington	4/21/2008	7/28/2008	3695649.00	$9,039,841.00	$2.45
2006	MVN	MISS RV SWP LSD HOP 11-2005	900.00	2300000.00	11/15/2004	4/13/2006	4/13/2006	4/14/2006	6/3/2006	$3,306,200.00	$3,810,000.00	BEAN STUYVESANT, LLC	New Orleans	4/14/2006	6/3/2006	920025.00	$3,810,000.00	$4.14
2005	MVN	MISS RV SWP LSD HOP 1-2005	1440.00	6800000.00	11/15/2004	9/9/2005	9/9/2005			$5,802,390.00	$5,230,200.00	BEAN STUYVESANT, LLC	New Orleans	9/11/2005	11/23/2005	1169955.00	$5,230,200.00	$4.47
2005	MVN	MISS RV SWP LSD HOP 3-2005		2300000.00	11/15/2004	1/6/2005	1/7/2005	1/10/2005	3/3/2005	$2,218,332.00	$2,550,250.00	BEAN STUYVESANT, LLC	New Orleans	1/10/2005	2/28/2005	1154293.00	$2,550,250.00	$2.21
2004	MVN	MISS RV SWP LSD HOP 4-2004	1065.00	2300000.00	10/20/2003	7/9/2004	7/9/2004	7/17/2004	8/15/2004	$2,345,010.00	$1,464,375.00	BEAN STUYVESANT, LLC	New Orleans	7/17/2004	8/25/2004	1375684.00	$1,464,375.00	$1.06
2005	MVN	MISS RV SWP LSD HOP 7-2005		2300000.00	11/15/2004	2/24/2005	2/24/2005	2/28/2005	6/2/2005	$4,898,274.00	$5,750,250.00	BEAN STUYVESANT, LLC	New Orleans	2/28/2005	6/2/2005	2483215.00	$5,750,250.00	$2.32
1990	MVN	MISS RV, SWP CUTTERHEAD 1	12000000.00	12000000.00	11/14/1989	12/14/1989	1/12/1990	2/28/1990	9/30/1990	$7,621,300.00	$6,906,000.00	MIKE HOOKS INC.	LAKE CHARLES	2/21/1990	10/10/1990		$6,040,011.10	
2007	MVN	MISSISSIPPI RIV SOUTH PASS	7000000.00	7000000.00	7/18/2006	8/30/2006	8/31/2006	9/12/2006	1/14/2007	$19,514,000.00	$18,370,000.00	BEAN STUYVESANT, LLC	New Orleans	9/12/2006	1/13/2007	5681359.00	$17,742,038.00	$3.12
1997	MVK	MISSISSIPPI RIVER HARBORS	1750.00	850000.00	3/15/1997	6/24/1997	7/7/1997	7/21/1997	11/10/1997	$2,256,335.00	$1,843,720.00	RIVER/GULF MARINE LLC	MANDERVILLE	7/30/1997	11/8/1997	827000.00	$1,521,612.66	$1.84
1997	MVN	MRGO MILE 18.1 TO MILE 7.5	2500000.00	2500000.00	2/4/1997	4/2/1997	4/4/1997	4/12/1997	7/31/1997	$2,913,000.00	$3,574,000.00	T.L. JAMES & CO., INC.	KENNER	4/16/1997	7/12/1997	6669461.00	$3,657,035.89	$0.55
2002	MVN	MRGO BAR CH CY HOP 1-02	2000000.00	2000000.00	12/5/2001	12/19/2001	12/21/2001	5/1/2002	5/10/2002	$5,109,200.00	$3,854,000.00	BEAN STUYVESANT, LLC	New Orleans	12/26/2001	5/10/2002	1676583.00	$3,602,868.51	$2.15
2004	MVN	MRGO BAR CH LSD HOP 2-2004		2000000.00	7/16/2004	9/22/2004	9/23/2004	9/30/2004	2/15/2005	$8,596,525.00	$7,294,352.00	BEAN STUYVESANT, LLC	New Orleans	10/1/2004	2/16/2005	2807306.00	$7,881,902.00	$2.81
1998	MVN	MRGO BAR CH MI -3.8 TO -9.0	1300000.00	1300000.00	7/17/1997	8/6/1997	8/22/1997	9/22/1997	12/9/1997	$2,232,000.00	$1,467,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	10/19/1997	12/11/1997	1468329.00	$1,650,478.61	$1.12
2002	MVN	MR-GO BAR CHAN LHD NO. 1-01		400000.00	5/11/2001	11/27/2001	11/28/2001	7/15/2001	12/21/2001	$668,790.00	$548,900.00	BEAN STUYVESANT, LLC	New Orleans	12/14/2001	12/23/2001	220106.00	$546,400.00	$2.48

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Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
1997	MVN	MR-GO BAR CHAN LHD NO. 1-97	2192.00	2000000.00	10/19/1996	11/19/1996	11/20/1996	11/24/1996	2/21/1997	$3,016,136.00	$3,675,695.00	GULF COAST TRAILING CO.	St. Rose	11/28/1996	2/23/1997	1708242.00	$3,675,695.00	$2.15
1999	MVN	MR-GO BAR CHAN LHD NO. 1-98	2160.00	2000000.00	5/19/1998	10/5/1998	10/5/1998	12/14/1998	1/16/1999	$3,721,470.00	$4,177,450.00	WEEKS MARINE, INC.(GULF)	Covington	10/8/1998	1/16/1999	1539787.00	$4,170,327.08	$2.71
1999	MVN	MR-GO BAR CHAN LHD NO. 2-98	823.00	2000000.00	5/20/1998	1/6/1999	1/12/1999	9/28/1998	4/18/1999	$2,195,165.00	$2,705,120.00	WEEKS MARINE, INC.(GULF)	Covington	1/17/1999	5/4/1999	1375612.00	$2,714,620.00	$1.97
1999	MVN	MR-GO BAR CHAN LHD NO. 3-98	2658.00	2000000.00	5/22/1998	10/17/1998	10/17/1998	9/28/1998	12/27/1998	$3,426,812.00	$4,212,500.00	BEAN HORIZON & STUYVESANT JV	BELLE CHASE	10/21/1998	12/28/1998	1350694.00	$4,196,427.00	$3.11
1990	MVN	MRGO BAR CHAN LSD HPR FY90	2500000.00	2300000.00	12/4/1989	7/31/1990	8/6/1990	8/10/1990	10/15/1990	$2,100,820.00	$2,497,600.00	GULF COAST TRAILING CO.	St. Rose	8/9/1990	10/11/1990		$2,497,600.00	
1996	MVN	MRGO BAR CHANNEL LSD HOPPER	948.00	2000000.00	4/12/1996	7/22/1996	8/14/1996	8/22/1996	9/25/1996	$2,432,066.00	$1,917,040.00	STUYVESANT DREDGING CO. LLC	BELLE CHASE	8/22/1996	9/25/1996	1965314.00	$1,537,393.00	$0.78
1994	MVN	MRGO BAR CHNL LSD HOP #-1	1512.00	2000000.00	7/12/1994	8/16/1994	9/2/1994	9/11/1994	11/2/1994	$2,041,185.00	$2,389,120.00	GULF COAST TRAILING CO.	St. Rose	9/11/1994	11/2/1994	1570182.00	$1,957,000.00	$1.25
1999	MVN	MR-GO MI 12 TO MI 8 CY FY99	1600000.00	1600000.00	11/24/1998	12/3/1998	12/11/1998	2/6/1999	3/6/1999	$2,082,000.00	$1,635,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	2/10/1999	3/6/1999	1368004.00	$1,429,793.40	$1.05
1996	MVN	MRGO MI 23.0 - 18.0	3300000.00	3300000.00	10/25/1995	11/28/1995	12/13/1995	12/19/1995	3/10/1996	$1,056,000.00	$1,271,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	12/18/1995	1/29/1996	3208648.00	$1,240,854.00	$0.39
1994	MVN	MRGO MILE 14 TO 6	6000000.00	6000000.00	4/14/1994	5/17/1994	6/3/1994	7/12/1994	11/2/1994	$2,633,000.00	$2,335,000.00	T.L. JAMES & CO., INC.	KENNER	7/12/1994	8/28/1994	4599581.00	$1,914,874.00	$0.42
2001	MVN	MR-GO MILE 20.0 TO MILE 12.0	4300000.00	4300000.00	10/13/2000	12/8/2000	12/8/2000	12/5/1999	9/10/2001	$3,062,900.00	$3,412,000.00	MIKE HOOKS INC.	LAKE CHARLES	1/3/2001	9/7/2001	5897073.00	$4,913,491.50	$0.83
2003	MVN	MRGO MILE 23-3.4 NC	8800000.00	8800000.00	2/23/2003	7/31/2003	8/26/2003	9/20/2003	2/8/2004	$10,887,100.00	$9,585,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/17/2003	1/30/2004	7709434.00	$9,365,849.10	$1.21
1996	MVN	MRGO MILE 27.0 - 23.0	1800000.00	1800000.00	11/24/1995	2/1/1996	2/13/1996	5/28/1996	6/20/1996	$1,352,200.00	$1,143,400.00	BEAN HORIZON CORPORATION	BELLE CHASSE	5/9/1996	6/17/1996	1446034.00	$1,152,145.85	$0.80
1999	MVN	MRGO MILE 27.0 TO 23.0 CY 99	1400000.00	1400000.00	5/27/1999	7/15/1999	8/3/1999	8/7/1999	9/13/1999	$1,628,200.00	$1,084,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	8/9/1999	9/3/1999	1246806.00	$998,211.36	$0.80
2002	MVN	MRGO MILE 27-19.8 CY	2700000.00	2700000.00	2/1/2002	2/21/2002	3/20/2002	5/14/2002	6/27/2002	$4,045,000.00	$3,191,000.00	WEEKS MARINE, INC.(GULF)	Covington	5/15/2002	6/26/2002	2403223.00	$2,884,184.69	$1.20
1992	MVN	MRGO, BAR CH LSD CUTTER	276.00	400000.00	7/16/1992	8/18/1992	9/14/1992			$416,260.00	$468,000.00	GREAT LAKES DRDG & DOCK/GULF	METAIRIE				$0.00	
1991	MVN	MRGO, MI 0 TO -9, CUTTER	4350000.00	4350000.00	8/23/1991	8/30/1991	9/5/1991			$5,605,840.00	$4,617,100.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1992	MVN	MRGO, MI -2.50 TO 14	10756719.00	10756719.00	4/24/1992	5/13/1992	5/15/1992	6/3/1993	10/27/1992	$5,067,300.00	$2,967,000.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1992	MVN	MRGO, MI 23 - 27	1200000.00	1200000.00	6/26/1992	8/19/1992	8/30/1992	11/29/1992	1/26/1993	$1,087,000.00	$927,000.00	MIKE HOOKS INC.	LAKE CHARLES	11/29/1992	2/24/1993		$0.00	
1991	MVN	MRGO, MI 9-24, LSD CUTTER	4500000.00	4500000.00	4/8/1991	4/15/1991	4/16/1991	4/25/1991	6/30/1991	$1,606,954.00	$1,466,500.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1991	MVN	MRGO, MI 9-24, LSD CUTTER	4500000.00	4500000.00	4/8/1991	4/18/1991	4/18/1991	4/25/1991	6/30/1991	$1,606,954.00	$1,349,500.00	BEAN DREDGING CORP.	NEW ORLEANS				$0.00	
2003	MVN	MRGO, WID								$98,900.00	$98,900.00	WEEKS MARINE, INC.(GULF)	Covington	6/17/2003	6/21/2003	350000.00	$98,900.00	$0.28
1995	MVN	MRGO,MICHOUD CANAL	2400000.00	2400000.00	7/28/1995	8/30/1995	9/12/1995	10/16/1995	2/4/1996	$3,451,500.00	$2,925,000.00	T.L. JAMES & CO., INC.	KENNER	12/5/1995	2/3/1996	1970988.00	$2,870,837.00	$1.46
1993	MVN	MS RIV GULF OUT MI 56.8-49.9	5700000.00	5700000.00	10/30/1992	12/21/1992	1/15/1993	2/4/1993	6/30/1993	$3,583,000.00	$3,508,000.00	BEAN DREDGING CORP.	NEW ORLEANS	3/17/1993	6/30/1993	4620905.00	$3,938,048.35	$0.85

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FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
1993	MVN	MS RIV GULF OUT, MI 23-14	11900000.00	11900000.00	5/28/1993	6/29/1993	6/29/1993	7/1/1993	12/23/1993	$6,101,000.00	$7,282,000.00	BEAN DREDGING CORP.	NEW ORLEANS	7/1/1993	12/21/1993	5859899.00	$3,118,624.00	$0.53
1993	MVN	MS RIV SWP LSD HOPPER 4-93	2270.00	2300000.00	1/29/1993	5/2/1993	5/3/1993	5/6/1993	7/1/1993	$2,601,100.00	$3,248,330.00	GULF COAST TRAILING CO.	St. Rose	5/6/1993	7/1/1993	1450641.00	$2,003,863.00	$1.38
1993	MVN	MS RIV SWP LSD HOPPER 6-93	2519.00	6800000.00	1/21/1992	12/28/1992	1/15/1993	1/3/1993	4/29/1993	$3,995,260.00	$3,782,550.00	GULF COAST/BEAN DREDGING JV	NEW ORLEANS	1/3/1993	4/29/1993	3895830.00	$3,782,550.00	$0.97
1993	MVK	MS RIVER HRBS, YAZOO RIVER	1783.00	1700000.00	3/1/1993	4/1/1993	4/12/1993			$1,150,010.87	$1,211,730.00	MIKE HOOKS INC.	LAKE CHARLES			0.00	$159,866.87	
1993	MVN	MS RIVER SWP CUTTERHEAD 1	6000000.00	6000000.00	12/11/1992	4/12/1993	4/13/1993	4/29/1993	10/3/1993	$4,897,100.00	$5,047,000.00	MIKE HOOKS INC.	LAKE CHARLES	4/29/1993	10/3/1993	3932820.00	$3,694,802.09	$0.94
1993	MVN	MS RIVER, NEW ORLEANS HBR 1	1209.00	700000.00	11/16/1992	12/16/1992	12/17/1992	1/10/1993	3/4/1993	$852,360.00	$723,440.00	MIKE HOOKS INC.	LAKE CHARLES	1/10/1993	3/4/1993	1213543.00	$726,707.00	$0.60
1993	MVN	MS RIVER, NEW ORLEANS HBR 2	0.00	2000000.00	2/26/1993	5/25/1993	5/26/1993	6/3/1993	10/2/1993	$2,147,700.00	$2,169,450.00	T.L. JAMES & CO., INC.	KENNER	6/3/1993	10/2/1993	2518259.00	$2,181,501.00	$0.87
1993	MVN	MS RIVER, SWP LSD HOPPER 2	3195.00	2300000.00	1/27/1993	4/20/1993	4/21/1993	5/1/1993	9/7/1993	$3,213,050.00	$2,786,040.00	BEAN DREDGING CORP.	NEW ORLEANS	5/1/1993	9/7/1993	3430996.00	$2,786,040.00	$0.81
1993	MVN	MS RIVER, SWP LSD HOPPER 5	1474.00	2300000.00	2/1/1993	8/24/1993	8/25/1993	9/1/1993	11/18/1993	$2,266,000.00	$2,351,030.00	GULF COAST TRAILING CO.	St. Rose	9/1/1993	11/13/1993	792045.00	$1,342,990.00	$1.70
1991	MVK	MS RV HRBRS,YAZOO,PEARL	1700000.00	1700000.00	3/4/1991	4/16/1991	5/17/1991	5/17/1991	4/1/1992	$1,297,354.00	$1,249,970.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
1998	MVN	MS RV SWP LSD CT 1-97 A'LOU	1447.00	3000000.00	12/17/1996	7/21/1997	8/13/1997			$3,612,820.00	$3,360,000.00	T.L. JAMES & CO., INC.	KENNER	11/24/1997	2/21/1998	1051661.00	$3,058,404.00	$2.91
1998	MVN	N.O. HARB LSD CUTT/WATER INJ	967.00	7000000.00	12/16/1996	1/21/1998	1/22/1998	1/28/1998	3/26/1998	$851,201.00	$738,175.00	GULF COAST TRAILING CO.	St. Rose	1/28/1998	3/26/1998	650482.00	)	$1.13
2014	MVN	NOH & VAR BAR CHANN 3-14	776721.00	776721.00	11/21/2013	7/16/2014	7/18/2014	7/27/2014	9/16/2014	$5,667,435.00	$5,835,700.00	WEEKS MARINE, INC.(GULF)	Covington	7/27/2014	9/16/2014	776721.00	$0.00	
2014	MVN	NOH HOU LAF BAP CDR 2-14	2389251.00	2389251.00	11/21/2013	4/15/2014	4/16/2014	5/6/2014	9/4/2014	$7,012,608.00	$5,449,300.00	MIKE HOOKS INC.	LAKE CHARLES	5/6/2014	9/4/2014	2389251.00	$6,935,096.01	$2.90
2013	MVN	NOH HOU LAF BAPCDR 3-2013	1271539.00	1271539.00	11/20/2012	7/10/2013	7/11/2013	7/21/2013	10/3/2013	$8,116,705.00	$6,068,201.00	WEEKS MARINE, INC.(GULF)	Covington	7/21/2013	10/3/2013	1271539.00	$5,423,171.22	$4.27
1992	MVN	ORL, PAL, BR HARBOR	985.00	650000.00	7/22/1992	8/25/1992	9/30/1992	9/29/1992	11/7/1992	$722,420.00	$671,725.00	T.L. JAMES & CO., INC.	KENNER	9/29/1992	11/7/1992		$0.00	
1996	MVK	OUACHITA & BLACK RIVERS	1500.00	750000.00	2/27/1996	4/2/1996	4/23/1996	5/15/1996	7/15/1996	$1,234,400.00	$1,432,000.00	T.L. JAMES & CO., INC.	KENNER	5/30/1996	8/18/1996	0.00	$1,577,155.94	
1998	MVK	OUACHITA & BLACK RIVERS	1785.00	850000.00	3/10/1998	4/9/1998	4/30/1998	6/1/1998	10/15/1998	$1,558,173.00	$1,735,000.00	RIVER/GULF MARINE LLC	MANDERVILLE	6/17/1998	10/24/1998	881222.00	$1,935,303.68	$2.20
1990	MVK	OUACHITA/BLACK	1700000.00	1700000.00	2/13/1990	3/20/1990	3/22/1990	7/15/1990	4/30/1991	$1,284,832.00	$1,129,820.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
2012	MVN	OUT VEN BAP COLL CY 2012	1406320.00	1406320.00	10/28/2011	7/17/2012	7/20/2012	9/7/2012	12/20/2012	$5,793,250.00	$4,902,250.00	MIKE HOOKS INC.	LAKE CHARLES	9/7/2012	12/20/2012	1406320.00	$5,555,686.00	$3.95
2012	MVN	OUT VEN TIGER PASS CY 2012	2261295.00	2261295.00	12/16/2011	4/12/2012	4/17/2012	6/22/2012	11/5/2012	$8,534,210.00	$7,709,000.00	MIKE HOOKS INC.	LAKE CHARLES	6/22/2012	11/5/2012	2261295.00	$8,549,208.75	$3.78
1992	MVN	OUTLET @ VEN, BAP COLLETTE	1100000.00	1100000.00	4/21/1992	5/21/1992	6/16/1992			$827,400.00	$873,800.00	GREAT LAKES DRDG & DOCK/GULF	METAIRIE				$0.00	
1995	MVN	OUTLETS @ VEN BAP COLLETE #1	600000.00	600000.00	12/22/1994	3/15/1995	4/7/1995	5/13/1995	6/27/1995	$890,000.00	$918,000.00	BEAN DREDGING CORP.	NEW ORLEANS	5/2/1995	5/17/1995	424574.00	$821,516.00	$1.93
1996	MVN	OUTLETS @ VEN BAP COLLETE #1	600000.00	600000.00	12/28/1995	5/21/1996	6/17/1996	7/27/1996	9/16/1996	$741,000.00	$954,999.99	BEAN HORIZON CORPORATION	BELLE CHASSE	7/31/1996	9/16/1996	575620.00	$970,123.99	$1.69

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1995	MVN	OUTLETS @ VEN BAP COLLETE #2	800000.00	800000.00	4/17/1995	8/10/1995	8/25/1995	9/12/1995	10/27/1995	$970,100.00	$830,000.00	BEAN DREDGING CORP.	NEW ORLEANS	8/31/1995	9/21/1995	515455.00	$787,318.00	$1.53
1991	MVN	OUTLETS @ VEN, BAP COLL	1100000.00	1100000.00	6/5/1991	7/10/1991	7/24/1991	10/9/1992	11/10/1992	$809,800.00	$915,000.00	GREAT LAKES DRDG & DOCK/GULF	METAIRIE	10/9/1992	11/10/1992		$0.00	
1991	MVN	OUTLETS @ VEN, TIGER PASS	2300000.00	2300000.00	6/25/1991	7/25/1991	8/20/1991			$1,302,000.00	$1,712,000.00	MIKE HOOKS INC.	LAKE CHARLES				$0.00	
1994	MVN	OUTLETS @ VENICE BAP COLLETE	800000.00	800000.00	5/9/1994	6/23/1994	7/15/1994	8/15/1994	9/16/1994	$1,123,000.00	$1,364,000.00	GREAT LAKES DRDG & DOCK/GULF	METAIRIE	8/15/1994	9/18/1994	799677.00	$1,183,709.00	$1.48
1994	MVN	OUTLETS @ VENICE TIGER PASS	2300000.00	2300000.00	9/15/1993	10/20/1993	11/4/1993	12/1/1993	1/26/1994	$2,156,000.00	$1,854,000.00	T.L. JAMES & CO., INC.	KENNER	12/9/1993	1/26/1994	2313255.00	$1,792,411.00	$0.77
1996	MVN	OUTLETS @ VENICE TIGER PASS	2000000.00	2000000.00	7/1/1996	8/6/1996	8/21/1996	9/21/1996	3/2/1997	$2,280,400.00	$1,840,000.00	BEAN HORIZON CORPORATION	BELLE CHASSE	9/22/1996	3/11/1997	1999846.00	$0.00	
2011	MVN	OUTLETS VEN BAPT COLLET 2-10	699214.00	699214.00	8/27/2009	8/31/2011	9/2/2011	10/9/2011	12/12/2011	$3,398,750.00	$1,722,500.00	MIKE HOOKS INC.	LAKE CHARLES	10/9/2011	12/12/2011	699214.00	$2,517,720.60	$3.60
2008	MVN	OUTLETS VEN BAPT COLLETTE	800000.00	800000.00	8/11/2006	3/20/2008	3/21/2008	5/2/2008	7/11/2008	$3,403,600.00	$3,783,600.00	MIKE HOOKS INC.	LAKE CHARLES	5/1/2008	7/4/2008	884394.00	$4,402,258.00	$4.98
2006	MVN	OUTLETS VENICE TIGER PASS	2000000.00	2000000.00	3/3/2006	4/21/2006	4/28/2006	6/7/2006	9/8/2006	$5,130,100.00	$5,440,000.00	MIKE HOOKS INC.	LAKE CHARLES	6/22/2006	8/13/2006	2250102.00	$5,822,729.50	$2.59
2010	MVN	OUTLETS VENICE TIGER PASS	1217293.00	1217293.00	7/6/2006	9/25/2009	9/28/2009	12/22/2009	3/7/2010	$3,179,500.00	$3,700,000.00	WEEKS MARINE, INC.(GULF)	Covington	12/22/2009	3/7/2010	1217293.00	$6,560,037.30	$5.39
1993	MVN	OUTLT @ VENICE BAPTISTE COLL	773757.00	773757.00	5/7/1993	6/8/1993	6/29/1993	9/11/1993		$918,000.00	$1,050,000.00	BEAN DREDGING CORP.	NEW ORLEANS	9/11/1993	10/10/1993	404240.00	$799,999.00	$1.98
1995	MVN	PASS MANCHAC - NORTH PASS	90000.00	90000.00	1/6/1995	2/7/1995	3/7/1995	4/12/1995	5/20/1995	$382,000.00	$338,200.00	RIVER ROAD CONSTRUCTION INC	MANDEVILLE	4/24/1995	5/29/1995	111074.00	$385,616.00	$3.47
1995	MVK	PEARL RIVER	1783.00	2000000.00	2/1/1995	3/1/1995		6/27/1995	10/31/1995	$1,116,182.00	$1,977,250.00	RIVER ROAD CONSTRUCTION INC	MANDEVILLE	6/28/1995	7/20/1995	50000.00	$534,870.00	$10.70
2006	MVN	PILOTTOWN ANCHORAGE	1500000.00	1500000.00	11/10/2005	3/16/2006	3/21/2006	5/27/2006	8/7/2006	$7,543,800.00	$7,715,500.00	BEAN STUYVESANT, LLC	New Orleans	5/27/2006	8/1/2006	1397914.00	$7,292,671.40	$5.22
2013	MVN	PILOTTOWN ANCHORAGE AREA MD	2672133.00	2672133.00	12/19/2012	2/5/2013	2/13/2013	3/4/2013	10/2/2013	$14,287,300.00	$11,962,750.00	MIKE HOOKS INC.	LAKE CHARLES	3/4/2013	10/2/2013	2672133.00	$0.00	
1990	MVN	POINTE-AU-CHIEN	130000.00	130000.00	8/17/1990	10/17/1990	11/15/1990			$1,121,654.00	$1,201,837.00	T.L. JAMES & CO., INC.	KENNER				$0.00	
2005	MVN	PORT FOUCHON NAV CHAN	800000.00	800000.00	7/26/2004	10/25/2004	11/5/2004		1/16/2005	$2,326,600.00	$2,286,000.00	WEEKS MARINE, INC.(GULF)	Covington	11/6/2004	12/14/2004	779798.00	$2,243,979.84	$2.88
2001	MVN	PORT FOURCHON	1650000.00	1650000.00	1/11/2001	4/13/2001	4/27/2001	6/28/2001	10/6/2001	$3,336,100.00	$3,955,000.00	WEEKS MARINE, INC.(GULF)	Covington	6/28/2001	8/7/2001	1958664.00	$3,869,718.00	$1.98
2006	MVN	PORT FOURCHON NAV CHAN	625000.00	625000.00	2/22/2006	3/23/2006	3/31/2006	4/20/2006	6/1/2006	$2,282,850.00	$2,847,500.00	WEEKS MARINE, INC.(GULF)	Covington	4/17/2006	5/13/2006	569162.00	$2,707,905.00	$4.76
2003	MVN	PT FOURCHON ATCH RIV BAR	321.00	400000.00	11/9/2001	11/25/2002	11/25/2002		12/31/2002	$949,148.00	$1,115,400.00	MIKE HOOKS INC.	LAKE CHARLES	11/27/2002	12/12/2002	388534.00	$1,110,080.00	$2.86
1994	MVK	QUACHITA & BLACK RIVERS	1783.00	1000000.00	2/16/1994	3/17/1994	4/15/1994	6/22/1994	10/31/1994	$1,184,093.00	$1,435,922.00	T.L. JAMES & CO., INC.	KENNER	6/22/1994	12/15/1994	1980542.00	$2,727,839.56	$1.38
2012	MVN	SWP HDDA CUTTERHEAD	8000000.00	8000000.00	4/16/2012	6/11/2012	6/15/2012	9/10/2012	3/17/2013	$32,660,520.00	$25,093,000.00	WEEKS MARINE, INC.(GULF)	Covington	9/10/2012	3/17/2013	8000000.00	$25,075,000.00	$3.13
2005	MVN	TIGER PASS CY CUTTER 2005	1500000.00	1500000.00	8/23/2004	12/14/2004	12/16/2004	1/12/2005	4/21/2005	$3,239,300.00	$2,680,000.00	MIKE HOOKS INC.	LAKE CHARLES	1/12/2005	3/20/2005	1565868.00	$2,436,945.76	$1.56
2000	MVN	TIGER PASS MI 7.3 TO 14 CY99	1000000.00	1000000.00	7/12/1999	8/24/1999	9/23/1999	10/25/1999	3/15/2000	$3,536,200.00	$2,753,000.00	MIKE HOOKS INC.	LAKE CHARLES	11/4/1999	2/10/2000	2189671.00	$2,801,534.69	$1.28

Table B.2
Navigation Data Center - Dredge Data

FY	DISTCODE	JOBNAME	EST_QUAN	EQ_CU_YD	ADV_DATE	BOPENDAT	AWARDDAT	ESTSTART	ESTEND	TOT_EST	TOT_BID	CONTRNAM	CITY	ACT_ARR	ACT_DEP	ACTUALCY	ACTUAL_CST	Cost/CY
2003	MVN	TIGER PASS MI 7.3-14.0	1500000.00	1500000.00	8/30/2002	9/10/2002	9/10/2002	9/22/2002	12/14/2002	$2,929,400.00	$2,359,000.00	MIKE HOOKS INC.	LAKE CHARLES	10/5/2002	12/11/2002	1473323.00	$2,260,387.42	$1.53
1997	MVK	UPPER YAZOO ITEM 3-B1	1666000.00	1666000.00	7/21/1997	9/9/1997	9/23/1997	2/1/1998	9/1/1998	$7,784,550.00	$7,514,435.00	FIRTH CONSTRUCTION, INC.	BATON ROUGE				$0.00	
1998	MVN	WEST BELLE PASS HEADLAND RES	2500000.00	2500000.00	11/14/1997	1/9/1998	1/23/1998	5/11/1998	7/1/1998	$5,560,380.00	$4,834,155.00	T.L. JAMES & CO., INC.	KENNER	5/11/1998	6/13/1998	1490000.00	$4,216,738.94	$2.83
1992	MVN	WW, EMPIRE TO GULF MI7.5-9.6	140000.00	140000.00		4/4/1992	5/5/1992			$267,220.00	$396,560.00	GRILLOT CO. INC.	BELLE CHASSE				$0.00	

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
001.MC.05	New Orleans East Landbridge Restoration	Marsh Creation	Creation of approximately 33,400 acres of marsh in the New Orleans East Landbridge to create new wetland habitat and restore degraded marsh.
001.MC.06a	Breton Marsh Creation - Component A	Marsh Creation	Creation of approximately 12,000 acres of marsh in the Breton Marsh east of Delacroix Island to create new wetland habitat and restore degraded marsh.
001.MC.07a	Lake Borgne Marsh Creation - Component A	Marsh Creation	Creation of approximately 5,900 acres of marsh along the south shoreline of Lake Borgne near Proctors Point to create new wetland habitat and restore degraded marsh.
001.MC.08a	Central Wetlands Marsh Creation - Component A	Marsh Creation	Creation of approximately 2,800 acres of marsh in Central Wetlands near Bayou Bienvenue to create new wetland habitat and restore degraded marsh.
001.MC.101	Uhlan Bay Marsh Creation	Marsh Creation	Creation of approximately 700 acres of marsh on the east bank of Plaquemines Parish around Uhlan Bay to create new wetland habitat and restore degraded marsh.
001.MC.102	Pointe a la Hache Marsh Creation	Marsh Creation	Creation of approximately 19,100 acres of marsh on the east bank of Plaquemines Parish near Pointe a la Hache to create new wetland habitat and restore degraded marsh.
001.MC.104	East Bank Land Bridge Marsh Creation	Marsh Creation	Creation of approximately 2,300 acres of marsh in Plaquemines Parish between Grand Lake and Lake Lery to create new wetland habitat and restore degraded marsh.
001.MC.105	Spanish Lake Marsh Creation	Marsh Creation	Creation of approximately 800 acres of marsh in Plaquemines Parish along the eastern shore of Spanish Lake to create new wetland habitat and restore degraded marsh.
001.MC.106	St. Tammany Marsh Creation	Marsh Creation	Creation of approximately 6,700 acres of marsh in St. Tammany Parish along the northern shore of Lake

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
			Pontchartrain to create new wetland habitat and restore degraded marsh.
001.MC.107	Tiger Ridge/Maple Knoll Marsh Creation	Marsh Creation	Creation of approximately 4,700 acres of marsh in Plaquemines Parish near Tiger Ridge to create new wetland habitat and restore degraded marsh.
001.MC.108	Guste Island Marsh Creation	Marsh Creation	Creation of approximately 700 acres of marsh in St. Tammany Parish along the northwest Lake Pontchartrain shoreline to create new wetland habitat and restore degraded marsh.
001.MC.13	Golden Triangle Marsh Creation	Marsh Creation	Creation of approximately 3,900 acres of marsh in Golden Triangle Marsh between the MRGO and GIWW to create new wetland habitat and restore degraded marsh.
001.SP.01	Manchac Landbridge Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 5,500 ft. of the west side of Lake Pontchartrain north of Pass Manchac near Stinking Bayou to preserve shoreline integrity and reduce wetland degradation from wave erosion.
001.SP.101	Unknown Pass to Rigolets Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 2,000 ft. of the east side of the New Orleans Landbridge from Unknown Pass to the Rigolets to preserve shoreline integrity and reduce wetland degradation from wave erosion.
001.SP.104	LaBranche Wetlands Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 11,100 ft. of the southern shore of Lake Pontchartrain near the LaBranche wetlands to preserve shoreline integrity and reduce wetland degradation from wave erosion.

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
000.BH.00	Barrier Island Program	Barrier Island Restoration	Barrier islands and headlands will be addressed through CPRA's Barrier Island Program.
000.BH.00	Barrier Island Program	Barrier Island Restoration	Barrier islands and headlands will be addressed through CPRA's Barrier Island Program.
002.MC.04a	Lower Barataria Marsh Creation - Component A	Marsh Creation	Creation of approximately 7,400 acres of marsh in Jefferson Parish on the east shore of Little Lake and Turtle Bay to create new wetland habitat and restore degraded marsh.
002.MC.05e	Large-Scale Barataria Marsh Creation - Component E	Marsh Creation	Creation of approximately 12,900 acres of marsh in the Barataria Basin south of the Pen to the Barataria Landbridge to create new wetland habitat and restore degraded marsh.
002.SP.100	Lake Hermitage Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 6,500 ft. around the southern shore of Lake Hermitage to preserve shoreline integrity and reduce wetland degradation from wave erosion.
002.SP.102	East Snail Bay Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 7,300 ft. of the northeastern shore of Snail Bay south of Little Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.
002.SP.103	West Snail Bay Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 16,600 ft. of the western shoreline of Snail Bay south of Little Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
002.SP.106	Bayou Perot Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 5,900 ft. of the western shore of Bayou Perot to preserve shoreline integrity and reduce wetland degradation from wave erosion.
004.MC.01	South Grand Chenier Marsh Creation	Marsh Creation	Creation of approximately 6,600 acres of marsh south of Highway LA 82 near Grand Chenier to create new wetland habitat and restore degraded marsh.
004.MC.04	Mud Lake Marsh Creation	Marsh Creation	Creation of approximately 5,200 acres of marsh at Mud Lake south of West Cove, Calcasieu Lake to create new wetland habitat and restore degraded marsh.
004.MC.07	West Rainey Marsh Creation	Marsh Creation	Creation of approximately 9,700 acres of marsh at Rainey Marsh near the southeast bank of the Freshwater Bayou Canal to create new wetland habitat and restore degraded marsh.
004.MC.10	Southeast Calcasieu Lake Marsh Creation	Marsh Creation	Creation of approximately 9,000 acres of marsh southeast of Calcasieu Lake to create new wetland habitat and restore degraded marsh.
004.MC.100	Freshwater Bayou North Marsh Creation	Marsh Creation	Creation of approximately 8,900 acres of marsh in Vermilion Parish west of Freshwater Bayou to create new wetland habitat and restore degraded marsh.
004.MC.101	Freshwater Bayou South Marsh Creation	Marsh Creation	Creation of approximately 6,800 acres of marsh in Vermilion Parish west of Freshwater Bayou to create new wetland habitat and restore degraded marsh.
004.MC.102	White Lake Marsh Creation	Marsh Creation	Creation of approximately 10,600 acres of marsh in Vermilion Parish east of White Lake to create new wetland habitat and restore degraded marsh.

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
004.MC.103	Little Chenier Marsh Creation	Marsh Creation	Creation of approximately 900 acres of marsh in Cameron Parish south of Grand Lake to create new wetland habitat and restore degraded marsh.
004.MC.104	Calcasieu Lake West Bank Marsh Creation	Marsh Creation	Creation of approximately 8,900 acres of marsh in Cameron Parish west of Calcasieu Lake to create new wetland habitat and restore degraded marsh.
004.MC.105	West Brown Lake Marsh Creation	Marsh Creation	Creation of approximately 8,400 acres of marsh in Cameron Parish south of Black Lake to create new wetland habitat and restore degraded marsh.
004.MC.107	West Sabine Refuge Marsh Creation	Marsh Creation	Creation of approximately 10,300 acres of marsh east of Sabine Lake to create new wetland habitat and restore degraded marsh.
004.MC.13	Cameron Meadows Marsh Creation	Marsh Creation	Creation of approximately 3,700 acres of marsh at Cameron Meadows north of Johnsons Bayou to create new wetland habitat and restore degraded marsh.
004.MC.16	East Pecan Island Marsh Creation	Marsh Creation	Creation of approximately 10,200 acres of marsh between Pecan Island and the west bank of the Freshwater Bayou Canal to create new wetland habitat and restore degraded marsh.
004.MC.19	East Calcasieu Lake Marsh Creation	Marsh Creation	Creation of approximately 16,800 acres of marsh in the eastern Cameron-Creole watershed to create new wetland habitat and restore degraded marsh.
004.MC.23	Calcasieu Ship Channel Marsh Creation	Marsh Creation	Creation of approximately 3,100 acres of marsh south of Calcasieu Lake near Cameron to create new wetland habitat and restore degraded marsh.
004.SP.03	Freshwater Bayou Canal Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 7,500 ft. of the south bank of Freshwater Bayou Canal at Little Vermilion

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
			Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.
004.SP.05a	Gulf Shoreline Protection (Calcasieu River to Rockefeller)	Shoreline Protection	Shoreline protection through rock breakwaters of critical areas designed to an elevation of 3.5 ft. NAVD88 along the Gulf shoreline between Calcasieu River and Freshwater Bayou to preserve shoreline integrity and reduce wetland degradation from wave erosion.
000.BH.00	Barrier Island Program	Barrier Island Restoration	Barrier islands and headlands will be addressed through CPRA's Barrier Island Program.
000.BH.00	Barrier Island Program	Barrier Island Restoration	Barrier islands and headlands will be addressed through CPRA's Barrier Island Program.
03a.MC.03p	Terrebonne Bay Rim Marsh Creation Study	Marsh Creation	Planning, engineering, and design of marsh creation features to provide benefits to communities in Terrebonne Parish and the Morganza to the Gulf protection system.
03a.MC.07	Belle Pass-Golden Meadow Marsh Creation	Marsh Creation	Creation of approximately 23,200 acres of marsh from Belle Pass to Golden Meadow to create new wetland habitat and restore degraded marsh.
03a.MC.09b	North Terrebonne Bay Marsh Creation - Component B	Marsh Creation	Creation of approximately 5,400 acres of marsh south of Montegut between Bayou St. Jean Charles and Bayou Pointe Aux Chenes to create new wetland habitat and restore degraded marsh.
03a.MC.100	South Terrebonne Marsh Creation	Marsh Creation	Creation of approximately 23,600 acres of marsh south of Dulac between Bayou Dularge and Houma Navigation Canal to create new wetland habitat and restore degraded marsh.

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
03a.MC.101	North Lake Mechant Marsh Creation	Marsh Creation	Creation of approximately 12,100 acres of marsh between Lake Decade and Lake Mechant to create new wetland habitat and restore degraded marsh.
03a.SP.100	North Lake Boudreaux Shoreline Protection	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 15,400 ft. of the northern shore of Lake Boudreaux east of Hog Point to preserve shoreline integrity and reduce wetland degradation from wave erosion.
03b.MC.03	Marsh Island Marsh Creation	Marsh Creation	Creation of approximately 13,500 acres of marsh on Marsh Island to create new wetland habitat and restore degraded marsh.
03b.MC.07	East Rainey Marsh Creation	Marsh Creation	Creation of approximately 6,300 acres of marsh in the eastern portion of Rainey Marsh to create new wetland habitat and restore degraded marsh.
03b.MC.09	Point Au Fer Island Marsh Creation	Marsh Creation	Creation of approximately 13,000 acres of marsh on Point Au Fer Island to create new wetland habitat and restore degraded marsh.
03b.MC.101	Southeast Marsh Island Marsh Creation	Marsh Creation	Creation of approximately 1,200 acres of marsh on the eastern tip of Marsh Island to create new wetland habitat and restore degraded marsh.
03b.SP.01	Freshwater Bayou Shoreline Protection (Belle Isle Canal to Lock)	Shoreline Protection	Shoreline protection through rock breakwaters designed to an elevation of 3.5 ft. NAVD88 along approximately 36,000 ft. of the east bank of Freshwater Bayou Canal from Belle Isle Canal to Freshwater Bayou Lock to preserve shoreline integrity and reduce wetland degradation from wave erosion.

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
03b.SP.06a	Vermilion Bay and West Cote Blanche Bay Shoreline Protection (Critical Areas)	Shoreline Protection	Shoreline protection through rock breakwaters of critical areas on the east shoreline of Vermilion Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.
000.BH.00	Barrier Island Program	Barrier Island Restoration	Barrier islands and headlands will be addressed through CPRA's Barrier Island Program.
001.DI.02	Lower Breton Diversion	Sediment Diversion	Sediment diversion of 50,000 cfs into Lower Breton Sound to build and maintain land (modeled at 50,000 cfs for river flows at 1,000,000 cfs; variable flows above 200,000 cfs calculated using a linear function up to 1,000,000 cfs; and open with variable flow rate [larger than 50,000 cfs, estimated using linear extrapolation] for river flow above 1,000,000 cfs. No operation below 200,000 cfs).
001.DI.100	Manchac Landbridge Diversion	Sediment Diversion	A structure in the existing western spillway guide levee to divert 2,000 cfs thereby increasing freshwater exchange with adjacent wetlands.
001.DI.101	Ama Sediment Diversion	Sediment Diversion	Sediment diversion into Upper Barataria near Ama to provide sediment for emergent marsh creation and freshwater to sustain existing wetlands, 50,000 cfs capacity (modeled at 50,0000 cfs when the Mississippi River flow equals 1,000,000 cfs; open with a variable flow rate calculated using a linear function from 0 to 50,000 cfs for river flow between 200,000 cfs and 1,000,000 cfs, diverts exactly 50,000 cfs when the Mississippi River flow is 1,000,000 cfs; and open with a variable flow rate [larger than 50,000 cfs, estimated using linear extrapolation]

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
			for river flow above 1,000,000 cfs. No operation below 200,000 cfs).
001.DI.102	Union Freshwater Diversion	Sediment Diversion	Diversion into West Maurepas swamp near Burnside to provide sediment for emergent marsh creation and freshwater and fine sediment to sustain existing wetlands, 25,000 cfs capacity (modeled at 25,000 cfs when Mississippi River flow equals 400,000 cfs; closed when river flow is below 200,000 cfs or above 600,000 cfs; a variable flow rate calculated using a linear function from 0 to 25,000 cfs for river flow between 200,000 cfs and 400,000 cfs and held constant at 25,000 cfs for river flow between 400,000 cfs and 600,000 cfs).
001.DI.104	Mid-Breton Sound Diversion	Sediment Diversion	Sediment diversion into Mid-Breton Sound in the vicinity of White's Ditch to build and maintain land, 35,000 cfs capacity (modeled at 35,000 cfs when the Mississippi River flow equals 1,000,000 cfs; flow rate calculated using a linear function for river flow from 200,000 cfs to 1,000,000 cfs; flows variable above 1,000,000 cfs; 5,000 cfs minimum flow maintained when Mississippi River flow is below 200,000 cfs).
001.DI.18	Central Wetlands Diversion	Sediment Diversion	Diversion into Central Wetlands near Violet to provide sediment for emergent marsh creation and freshwater to sustain

Table B.3
CPRA - MP 2017 Restoration Projects

Prj_No	Prj_Name	Prj_Type	Description
			existing wetlands, 5,000 cfs capacity (modeled at a constant flow of 5,000 cfs, independent of the Mississippi River flow).
001.DI.21	East Maurepas Diversion	Sediment Diversion	Diversion into East Maurepas near Angelina to provide sediment for emergent marsh creation and freshwater to sustain existing wetlands, 2,000 cfs capacity (modeled at a constant flow of 2,000 cfs, independent of the Mississippi River flow).
002.DI.102	Mid-Barataria Diversion	Sediment Diversion	Sediment diversion into Mid-Barataria near Myrtle Grove to build and maintain land, 75,000 cfs capacity (modeled at 5,000 cfs for Mississippi River flows below 200,000 cfs; variable flows to capacity between 200,000 and 1,250,000 cfs calculated using a linear function; diverts exactly 75,000 cfs when flows are at 1,250,000 cfs).
03a.DI.01	Bayou Lafourche Diversion	Sediment Diversion	Diversion of the Mississippi River into Bayou Lafourche to increase freshwater flow down Bayou Lafourche with 1,000 cfs capacity (modeled with continuous operation at 1,000 cfs, independent of Mississippi River flow).
03a.DI.05	Atchafalaya River Diversion	Sediment Diversion	Sediment diversion off the Atchafalaya River to benefit the Penchant Basin and southwest Terrebonne marshes with 30,000 cfs capacity (modeled at 26% of the Atchafalaya River flow upstream of the confluence with Bayou Shaffer).
03b.DI.04	Increase Atchafalaya Flow to Terrebonne	Sediment Diversion	Dredging of the Gulf Intracoastal Waterway (GIWW) and construction of a bypass structure at the Bayou Boeuf Lock from the Atchafalaya River to Terrebonne marshes with 20,000 cfs capacity.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
LAF.01N	Lafourche - Lower	Nonstructural Risk Reduction	Lafourche - Lower Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
LAF.02N	Lafourche - Larose/Golden Meadow	Nonstructural Risk Reduction	Lafourche - Larose/Golden Meadow Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STM.02N	St. Mary - Glencoe	Nonstructural Risk Reduction	St. Mary - Glencoe Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STM.03N	St. Mary - Patterson	Nonstructural Risk Reduction	St. Mary - Patterson Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
JEF.02N	Jefferson - Lafitte/Barataria	Nonstructural Risk Reduction	Jefferson - Lafitte/Barataria Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
PLA.01N	Plaquemines - West Bank	Nonstructural Risk Reduction	Plaquemines - West Bank Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
PLA.02N	Plaquemines - Braithwaite	Nonstructural Risk Reduction	Plaquemines - Braithwaite Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
JEF.01N	Jefferson - Grand Isle	Nonstructural Risk Reduction	Jefferson - Grand Isle Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
LAF.03N	Lafourche - Raceland	Nonstructural Risk Reduction	Lafourche - Raceland Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
VER.01N	Vermilion	Nonstructural Risk Reduction	Vermilion Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
IBE.02N	Iberia - Atchafalaya	Nonstructural Risk Reduction	Iberia - Atchafalaya Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
SMT.01N	St. Martin	Nonstructural Risk Reduction	St. Martin Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
STC.01N	St. Charles - Hahnville/Luling	Nonstructural Risk Reduction	St. Charles - Hahnville/Luling Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
SJB.03N	St. John the Baptist - Edgard	Nonstructural Risk Reduction	St. John the Baptist - Edgard Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
CAM.01N	Cameron	Nonstructural Risk Reduction	Cameron Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
ORL.02N	Orleans - Lake Catherine	Nonstructural Risk Reduction	Orleans - Lake Catherine Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
ORL.01N	Orleans - Rigolets	Nonstructural Risk Reduction	Orleans - Rigolets Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
CAL.01N	Calcasieu	Nonstructural Risk Reduction	Calcasieu Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STB.02N	St. Bernard	Nonstructural Risk Reduction	St. Bernard Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
VER.02N	Vermilion - Abbeville/Delcambre	Nonstructural Risk Reduction	Vermilion - Abbeville/Delcambre Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
TER.02N	Terrebonne - Houma	Nonstructural Risk Reduction	Terrebonne - Houma Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STT.01N	St. Tammany	Nonstructural Risk Reduction	St. Tammany Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
PLA.03N	Plaquemines - Grand Bayou	Nonstructural Risk Reduction	Plaquemines - Grand Bayou Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STB.01N	St. Bernard - Yscloskey/Delacroix	Nonstructural Risk Reduction	St. Bernard - Yscloskey/Delacroix Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
IBE.01N	Iberia - Lower	Nonstructural Risk Reduction	Iberia - Lower Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STM.05N	St. Mary - Lower	Nonstructural Risk Reduction	St. Mary - Lower Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STM.04N	St. Mary - Franklin/Charenton	Nonstructural Risk Reduction	St. Mary - Franklin/Charenton Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STM.01N	St. Mary - Morgan City	Nonstructural Risk Reduction	St. Mary - Morgan City Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.4
CPRA - MP 2017 Nonstructural Project Areas

Prj_No	Prj_Name	Prj_Type	Description
PLA.05N	Plaquemines - Phoenix/Pointe A La Hache	Nonstructural Risk Reduction	Plaquemines - Phoenix/Pointe A La Hache Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
TER.01N	Terrebonne - Lower	Nonstructural Risk Reduction	Terrebonne - Lower Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STC.05N	St. Charles - Salvador	Nonstructural Risk Reduction	St. Charles - Salvador Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.
STJ.02N	St. James - Vacherie	Nonstructural Risk Reduction	St. James - Vacherie Nonstructural Risk Reduction: Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 ft., elevating residential properties where 100-year flood depths are 3-14 ft., and acquiring residential properties where 100-year flood depths are greater than 14 ft.

Table B.5
CPRA - MP 2017 Structural Projects

Prj_No	Prj_Name	Prj_Type	Description
001.HP.04	Greater New Orleans High Level	Structural Protection	Improvements of existing Hurricane and Storm Damage Risk Reduction System levees surrounding the East Bank of Greater New Orleans to elevations between 19 and 35 ft. NAVD88. Project features approximately 202,000 ft. of earthen levee and approximately 242,100 ft. of T-wall.
001.HP.05	West Shore Lake Pontchartrain	Structural Protection	Construction of a levee to an elevation between 16 and 19 ft. NAVD88 in the Laplace area. Project features approximately 91,000 ft. of earthen levee, approximately 5,000 ft. of T-wall, (1) 18-ft. sluice gate, (1) 25-ft. sluice gate, (2) 25-ft. swing gates, (1) 150-ft. roller gate, and (4) pump stations with a total capacity of 2,150 cfs.
001.HP.08	Lake Pontchartrain Barrier	Structural Protection	Construction of closure gates and weirs to an elevation of 2 ft. NAVD88 across the passes at Chef Menteur and the Rigolets for storm surge risk reduction within the Lake Pontchartrain Basin. Project features approximately 5,200 ft. of earthen levee, 630 ft. of a combi-wall weir constructed to 2 ft., a 150-ft. closure gate at each pass for navigation, and multiple vertical lift gates to maintain tidal exchange through the passes.
001.HP.13	Slidell Ring Levees	Structural Protection	Construction of a levee to an elevation of 16 ft. NAVD88 for storm surge risk reduction around Slidell. Project features approximately 31,000 ft. of earthen levee and 14,500 ft. of T-wall.
002.HP.06	Upper Barataria Risk Reduction	Structural Protection	Construction of a levee to an elevation between 12.5 and 15 ft. NAVD88 along Highway 90 between the West Bank and Larose. Project includes 204,300 ft. of earthen levee, 8,200 ft. of T-wall, (4) 10-ft. sluice gates, (1) 250-ft. barge gate,

Table B.5
CPRA - MP 2017 Structural Projects

Prj_No	Prj_Name	Prj_Type	Description
			(2) 40-ft. swing gates, and (8) pump stations with a total capacity of 6,837 cfs.
004.HP.15	Abbeville and Vicinity	Structural Protection	Construction of a levee to an elevation of 23.5 ft. NAVD88 in the area south of Delcambre, Erath, and Abbeville roughly following Highway 330. Project features approximately 102,700 ft. of earthen levee, approximately 2,800 ft. of T-wall, (2) 56-ft. sector gates, (3) 30-ft. stop logs, (1) 20-ft. stop log, and (1) 20-ft. sluice gate.
03a.HP.02b	Morganza to the Gulf	Structural Protection	Construction of a levee to an elevation between 15 and 26.5 ft. NAVD88 around Houma and Terrebonne Ridge communities from Larose to Humphreys Canal. Project features 471,500 ft. of earthen levee, 39,600 ft. of T-wall, (22) 6-ft. sluice gates, (1) 30-ft. stop log, (2) 20-ft. stop logs, (13) 56-ft. sector gates, (1) 250-ft. sector gate, (1) 175-ft. sector gate, (1) 125-ft. sector gate, (1) 110-ft. sector gate, (1) 30-ft. sector gate, (1) 110-ft. lock gate, (1) 30-ft. roller gate, (4) 40-ft. roller gates, (1) 56-ft. barge gate, (1) 30-ft. barge gate, and (4) pump stations.
03a.HP.20	Larose to Golden Meadow	Structural Protection	Improvements to the existing Larose to Golden Meadow levee system, including raising to an elevation between 12 and 21 ft. NAVD88. Project features approximately 249,900 ft. of earthen levee and approximately 6,700 ft. of T-wall.

Table B.5
CPRA - MP 2017 Structural Projects

Prj_No	Prj_Name	Prj_Type	Description
03b.HP.08	Amelia Levee Improvements	Structural Protection	Construction of a levee to an elevation of 18 ft. NAVD88 along the GIWW between Lake Palourde and the Bayou Boeuf Lock near Amelia. Project features approximately 46,400 ft. of earthen levee, approximately 13,400 ft. of T-wall, (4) 40-ft. roller gates, (1) 250-ft. barge gate, (1) 110-ft. barge gate, and a 5,000 cfs pump station.
03b.HP.10	Morgan City Back Levee	Structural Protection	Construction of a levee to an elevation between 10 and 12 ft. NAVD88 to protect the northern side of Morgan City. Project features approximately 30,600 ft. of earthen levee, approximately 4,600 ft. of T-wall, (1) 40-ft. swing gate, (1) 30-ft. barge gate, and (1) pump station with a total capacity of 1,604 cfs.
03b.HP.12	Franklin and Vicinity	Structural Protection	Improvements of existing levees to an elevation between 12.5 and 18 ft. NAVD88 from the Wax Lake Outlet to the Charenton Canal as well as the Bayou Sale polder. Project features approximately 204,600 ft. of earthen levee, approximately 8,700 ft. of T-wall, (2) 16-ft. sluice gates, and (1) 40-ft. roller gate.
03b.HP.13	Bayou Chene	Structural Protection	Construction of a structure across Bayou Chene near Amelia.
03b.HP.14	Iberia/St. Mary Upland Levee	Structural Protection	Construction of a levee to an elevation between 15.5 to 20 ft. NAVD88 in Iberia and St. Mary Parishes between the Delcambre Canal and the Charenton Canal. Project features approximately 158,300 ft. of earthen levee, approximately 15,100 ft. of T-wall, (3) 110-ft. barge gates, (5) 30-ft. barge gates, (8) 24-ft. sluice gates, (11) 16-ft. sluice gates, (11) 8-

Table B.5
CPRA - MP 2017 Structural Projects

Prj_No	Prj_Name	Prj_Type	Description
			ft. sluice gates, (2) 40-ft. swing gates, (2) 40-ft. roller gates, and (7) pump stations with a total capacity of 16,320 cfs.

Table B.6
DOTD - Ports within Louisiana

Port	Intermodal Number	Intermodal Criteria
Caddo Bossier Port	1	Shallow Draft Port
Alexandria Regional Port Authority	2	Shallow Draft Port
Columbia Port	3	Shallow Draft Port
Pointe Coupee Port, Harbor and Terminal	4	Emerging Port
Port of Krotz Springs	5	Shallow Draft Port
Lake Providence Port	6	Shallow Draft Port
Madison Parish Port	7	Shallow Draft Port
Vinton Harbor & Terminal District	8	Shallow Draft Port
Lake Charles Harbor & Terminal - South Side Terminal	9	Shallow Draft Port
Mermentau	11	Shallow Draft Port
Abbeville Port	12	Emerging Port
Twin Parish Port	13	Shallow Draft Port
Port of Iberia	14	Shallow Draft Port
Port of West St. Mary	15	Shallow Draft Port
Morgan City Harbor & Terminal District	16	Shallow Draft Port
Terrebonne Port Commission	17	Emerging Port
Terrebonne Port Commission	17	Emerging Port
Greater Lafourche Port	18	Shallow Draft Port
South Tangipahoa Parish Port	19	Shallow Draft Port
Lake Charles Harbor & Terminal District	20	Deep Draft Port
Greater Baton Rouge Port	21	Deep Draft Port
Port of South Louisiana	22	Deep Draft Port
Port of New Orleans/ Henry Clay Warf	23	Deep Draft Port
Port of St. Bernard	24	Deep Draft Port

Table B.6
DOTD - Ports within Louisiana

Port	Intermodal Number	Intermodal Criteria
Plaquemines Port Marine Spill Response Corp.	25	Deep Draft Port
Red River Parish Port	26	Shallow Draft Port
Natchitoches Parish Port	27	Shallow Draft Port
West Cameron Parish Port	28	Emerging Port
Avoyelles Parish Port	30	Shallow Draft Port
Cane River Waterway	31	Emerging Port
Grant Parish Port	32	Emerging Port
Greater Ouachita Port	33	Emerging Port
Tensas Parish Port	34	Emerging Port
Vidalia Port	35	Emerging Port
Concordia Parish Port	36	Emerging Port
East Cameron Parish Port	37	Emerging Port
Jennings Navigation	38	Emerging Port
Grand Isle Port	39	Emerging Port
Jefferson Parish Economic Development and Port	40	Emerging Port
Greater Lafourche Port	null	null

APPENDIX C

As mentioned herein, the team utilized the ArcGIS API for JavaScript to map data identified by the team. Therefore, an HTML file is provided along with this report. The following is a list of layers the team included within the map along with descriptions of each.

- Locks – A layer of USACE operated locks nationwide
- CPRA-Sediment Diversion – A layer of CPRA sediment diversion projects within the 2017 Master Plan
- CPRA-Restoration Protection – A layer of CPRA restoration protection projects within the 2017 Master Plan
- Disposal Areas – A layer of disposal areas historically used by USACE for disposal of dredged material
- Cumulative Dredge Data – A layer of USACE dredge data that consolidates historical data for a particular maintained channel and/or a particular reach of a maintained channel (consolidation was done by project name)
- Dredge Data (RAW) – A layer of USACE dredge data
- Dredge Data (EDIT) – A layer of USACE dredge data, edited to improve accuracy of data
- Channel Alignments – A layer of line data for USACE maintained channels
- Channel Stationing - A layer of stationing for USACE maintained channels
- Ports – A layer of ports within Louisiana
- Framework – A layer of channel frameworks utilized by USACE which also contains a link to survey data, for channels that have survey data available
- Mile Markers – A layer of USACE mile markers for federally authorized channels

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