

1. The New Orleans District (MVN) has **largest maintenance dredging program** in the nation.
2. MVN maintains **10** major navigational channels in LA. (2800 miles of waterways)
3. **Annually** remove **67 million CY** of shoal material.
4. LA Coastal Zone generally follows the GIWW
 - a. Most Mississippi River Deep Draft Crossings (DDX) and all Shallow Draft Crossings (SDX) outside of LA Coastal Zone

MVN Beneficial Use of Dredged Material

Average Annual Totals

Maintenance Dredging = 67,663,000 CY

Fluff = 16,000,000 CY

Unavailable = 18,000,000 CY

Suitable & Available for BU = 33,663,000 CY

BENEFICIAL USE = 16,442,000 CY



BUILDING STRONG[®]

1. Although approximately 67 million cubic yards (CY) is annually removed during routine maintenance dredging in MVN, the actual number of CY's that is both suitable and available for beneficial use placement each year is a smaller number:
2. **Unsuitable** material = "Fluff". Approximately 16 million CY of "fluff" is removed annually from the Calcasieu and Atchafalaya River bar channels.
3. **Unavailable** material = dredged material that is removed from sites that are too distant from suitable beneficial use disposal areas to be affordable (primarily from the Miss River Deep Draft and Shallow Draft Crossings).
4. Subtraction of material that is unsuitable and unavailable for beneficial use placement reduces the amount that can be used beneficially to about 33 million CY's annually.
5. A recalculation of the amount of dredged material that is annually used beneficially to remove the amount that is either unsuitable or unavailable results in a percentage increase in the amount of dredged material that is annually used beneficially (to 48% instead of **24%**).

MVN Beneficial Use of Dredged Material

Average Annual Totals

LA Coastal Zone Maintenance Dredging = 55,000,000 CY

Fluff = 16,000,000 CY

Unavailable = 6,000,000 CY

Suitable & Available for BU = 33,000,000 CY

BENEFICIAL USE = 16,442,000 CY



BUILDING STRONG®

1. Although approximately 55 million CY is annually removed during routine maintenance dredging in the LA Coastal Zone by MVN, the actual number of CY's that is both suitable and available for beneficial use placement each year is a smaller number:
2. **Unsuitable** material = "Fluff". Approximately 16 million CY of "fluff" is removed annually from the Calcasieu and Atchafalaya River bar channels.
3. **Unavailable** material = dredged material that is removed from sites that are too distant from suitable beneficial use disposal areas to be affordable (primarily from Miss River DDXs, New Orleans Harbor, and Berwick Bay Harbor).
4. Subtraction of material that is unsuitable and unavailable for beneficial use placement reduces the amount that can be used beneficially in the LA Coastal Zone to about 33 million CY's annually.
5. A recalculation of the amount of dredged material that is annually used beneficially in the LA Coastal Zone to remove the amount that is either unsuitable or unavailable results in a percentage increase in the amount of dredged material that is annually used beneficially (to **50%** instead of **24%**).

**NEW ORLEANS DISTRICT
Beneficial Use of Dredged material
1976-2011**

~ 22,026 acres wetlands

~ 3,943 acres other habitats

~ 3,000 acres uplands (Southwest Pass)

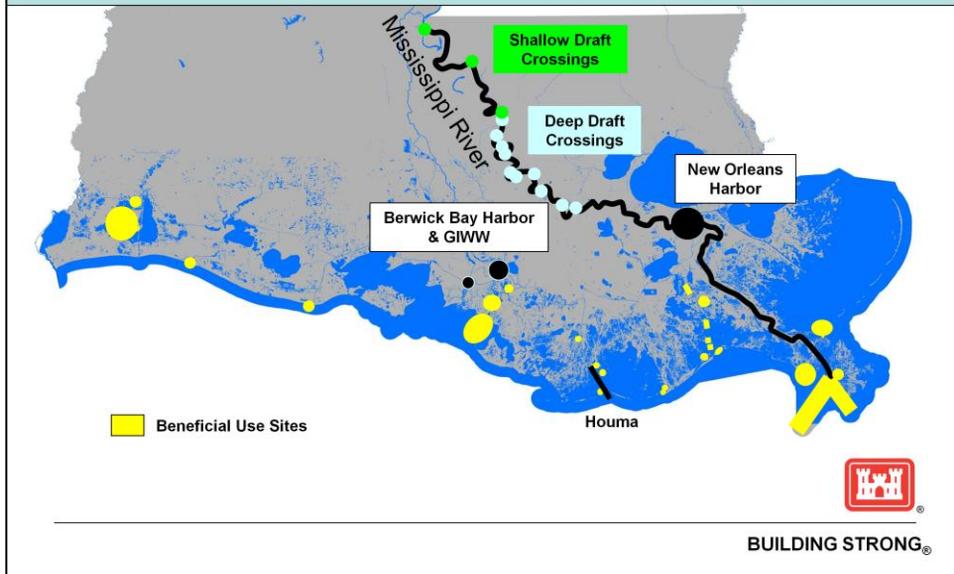
**1976- 2011 ~28,969 acres of created land
(~45 square miles of land)**



BUILDING STRONG®

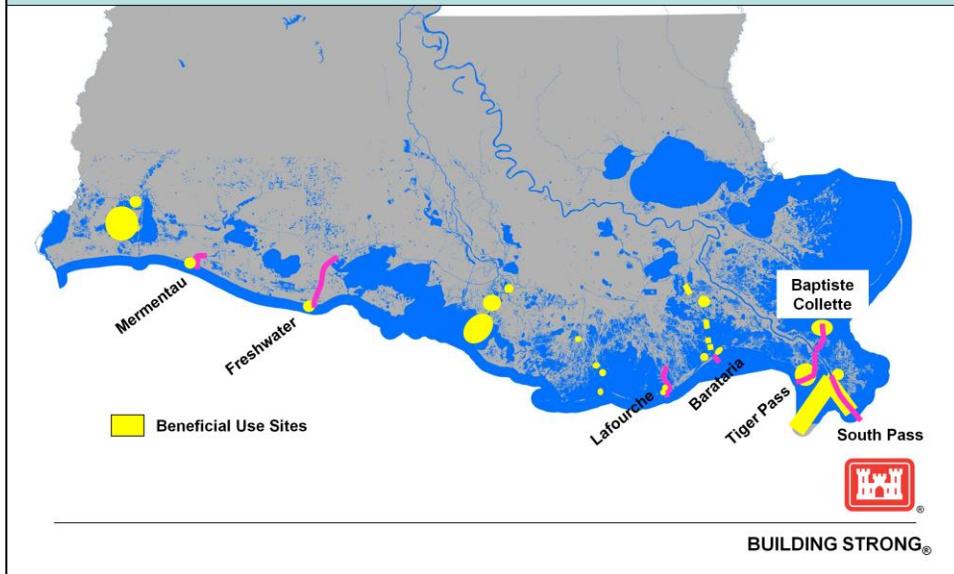
1. Other Habitats = Bird Islands, Beach/Shoreline, Barrier Islands

Projects with No Federal Standard BU Placement Sites



1. Dredging Sites remote from potential BU sites:
 - a. Miss River SDX, DDX, New Orleans Harbor, Berwick Bay Harbor, GIWW
 - b. Houma Navigation Canal: Terrebonne Bay/Cat Island Pass – oyster leases prohibit Terrebonne Bay beneficial use

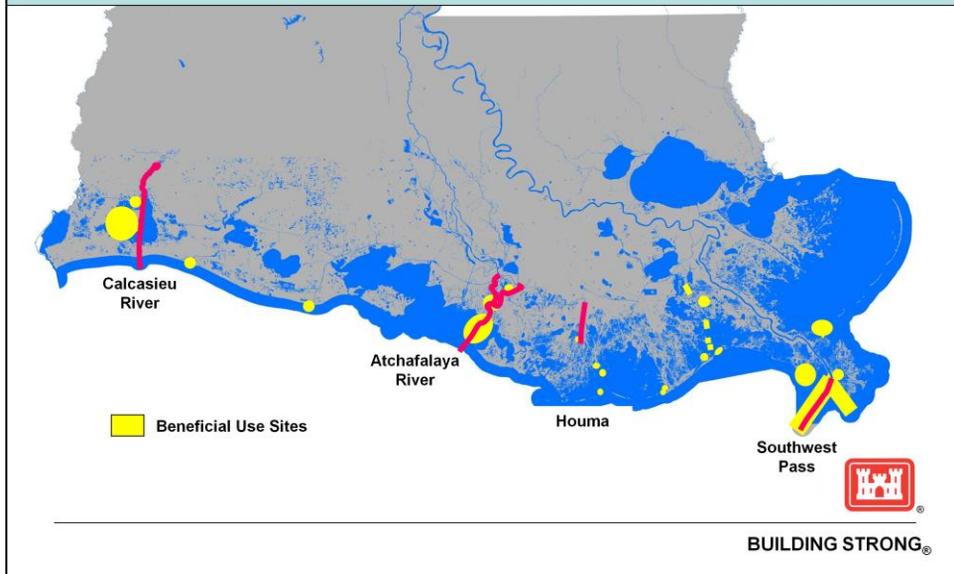
Projects with 100% Federal Standard BU Placement Sites



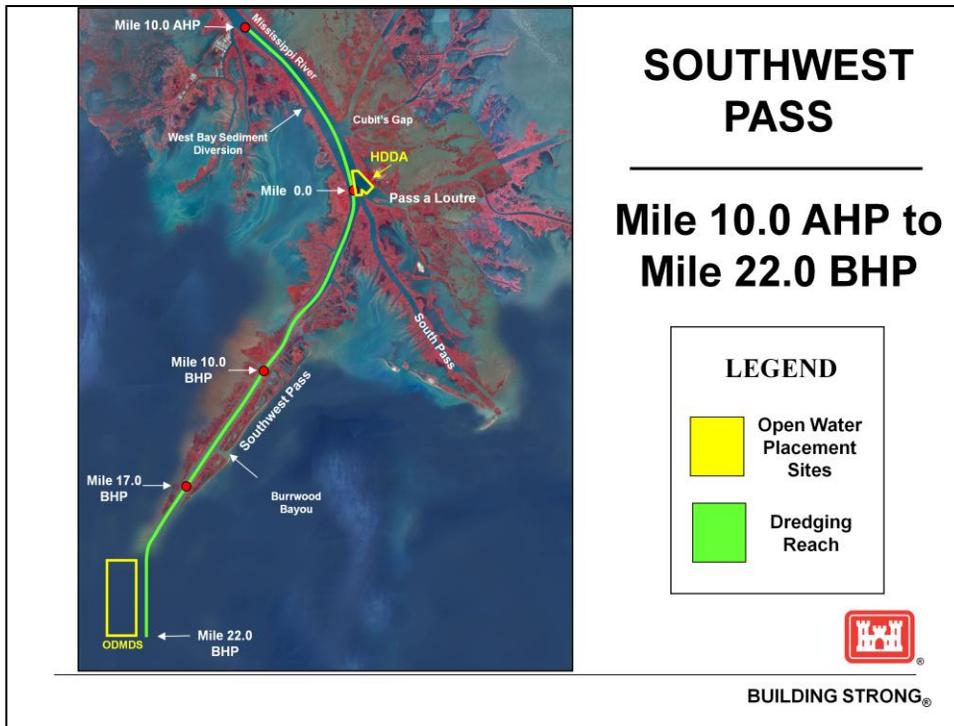
1. BU Sites are adjacent to navigation channels
 - a. Little (or no) environmental, landowner, oyster lease impediments

2. BU efforts are all “unconfined” (no retention dikes required)

Projects with Some Federal Standard BU Placement Sites



1. BU Sites adjacent to navigation channels
2. BU efforts “unconfined”
3. Non-BU primarily for Ocean Dredged Material Disposal Site (ODMDS) use (Calcasieu, Atchafalaya, Southwest Pass)
4. Southwest Pass and Calcasieu are “special” cases in this category



1. O&M primarily accomplished using Hopper Dredges
 - a. Nature of shoaling due to efforts in maintaining full authorized channel dimensions all year round
 - b. Cutterhead Dredges are not used in Head of Passes and Jetties reaches where the channel bends (navigation safety issues)
 - c. Hopper Dredges dump in ODMDS and the Head of Passes hopper dredge disposal area (HDDA)
 - No direct BU
2. HDDA maintenance dredging = 100% BU (cutterhead dredge)
 - a) Necessary to maintain disposal capacity of HDDA for hopper dredge use in Head of Passes reach
 - b) Indirect BU for Southwest Pass O&M

MISSISSIPPI RIVER DEEP DRAFT CROSSINGS



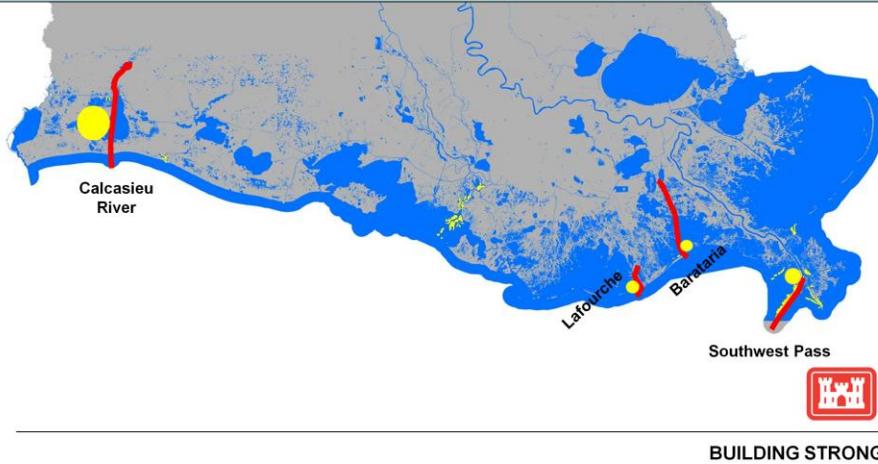
9

BUILDING STRONG®

1. The estimated cost to transport 1 million CY Dredged Material from Belmont Crossing to the LaBranche Wetlands site is about **\$26 million** (using either of the 2 transportation alternatives investigated)
 - Belmont Crossing is the annually dredged site located nearest to the LaBranche Wetlands site (approximately 31 miles distance following the Miss River alignment & crossing the Bonnet Carre Spillway property)
 - Pumping dredged material from the crossing to this site via cutterhead dredge pipeline not economically feasible due to amount of pipeline & booster pumps required (also doubtful if any dredging contractor has sufficient pipeline to meet this need – would need to purchase additional pipeline, which would further drive up the costs)
2. Plan 1 uses 25 hopper barges and 3 booster pumps in addition to a hopper dredge working at the crossing: barges travel Miss River to Bonnet Carre Spillway and then dredged material is pumped from barges across spillway property northwards to reach the eroded marsh LaBranche Wetlands placement site (total distance of about 31 miles).
3. Plan 2 uses 84 hopper barges and no booster pumps in addition to a hopper dredge working at the crossing: barges travel Miss River to IHNC Lock and then travel across Lake Pontchartrain to reach the LaBranche Wetlands placement site (total distance of about 84 miles).

CWPPRA - O&M Program

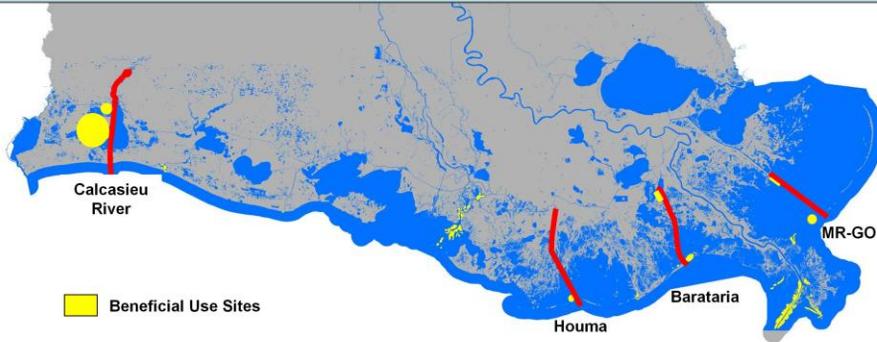
1. **531 acres** of coastal habitat restored under **CWPPRA**
2. **3,634,850 CY** of dredged material from 4 projects (1996 – 2007)
3. **\$17,791,694** (average = \$33,506 per acre)



1. CWPPRA projects partnering with Federal navigation channel maintenance dredging jobs:
 - a) Calcasieu River (Sabine National Wildlife Refuge)– 2
 - b) LaFourche/Port Fourchon – 1
 - c) Barataria Bay Waterway – 1
 - d) Southwest Pass – 1

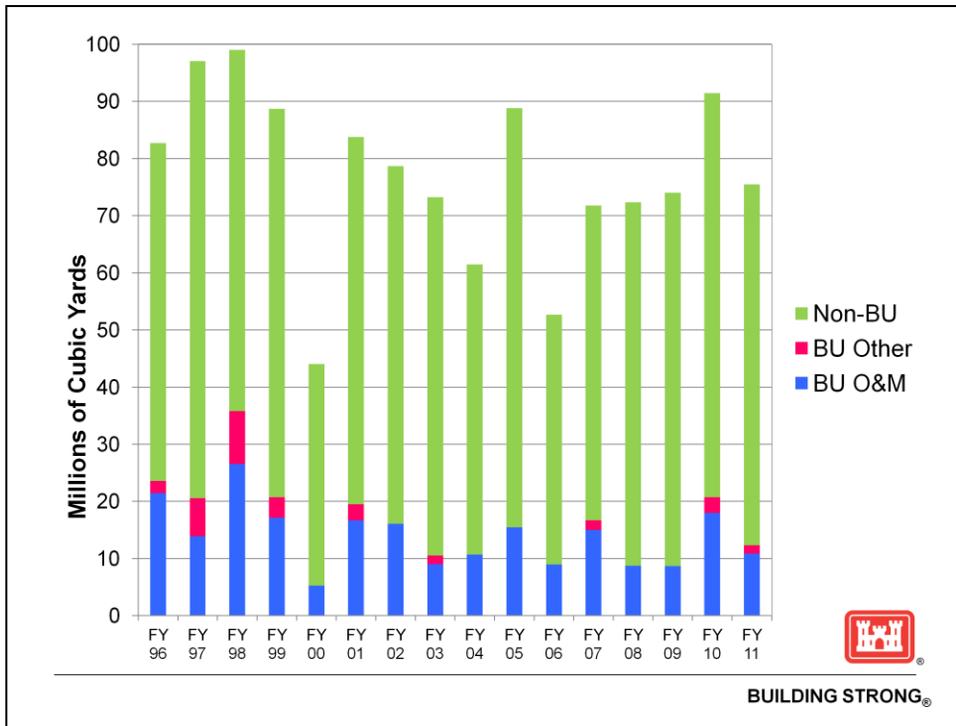
Continuing Authorities Program

1. **1504 acres** of coastal habitat restored using **Section 204 & 1135**
2. **13,166,597 CY** of dredged material from 4 projects (1991 – 2003)
3. **\$5,485,852** (average = \$3648 per acre)



BUILDING STRONG®

1. Calcasieu River:
 - a) Section 204 /1135 Projects – 5
2. Houma Navigation Canal:
 - a) Section 1135 Project – 1
3. Barataria Bay Waterway:
 - a) Section 204 Project – 3
4. MRGO:
 - a) Section 204 Project - 3



1. Decrease in Incremental Cost funding for BU since 1990s (via CWPPRA and Continuing Authorities Program)
 - a) Greater reliance on O&M funds to pay for BU of dredged material
 - b) However, O&M funding has not commensurately increased during this time: flat-lined or decreased instead