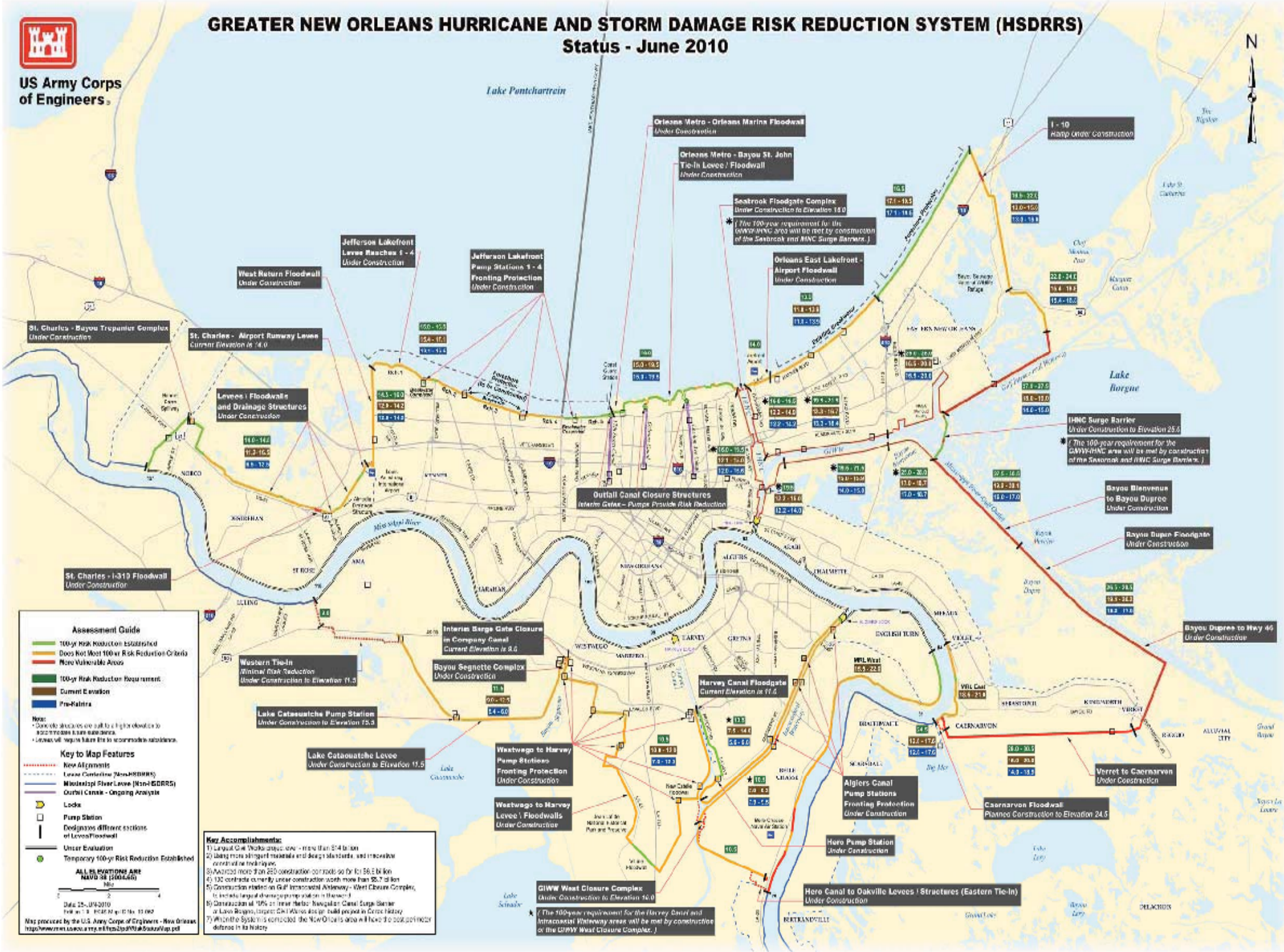
Greater New Orleans Hurricane & Storm Damage Risk Reduction System

St. Bernard Construction Status

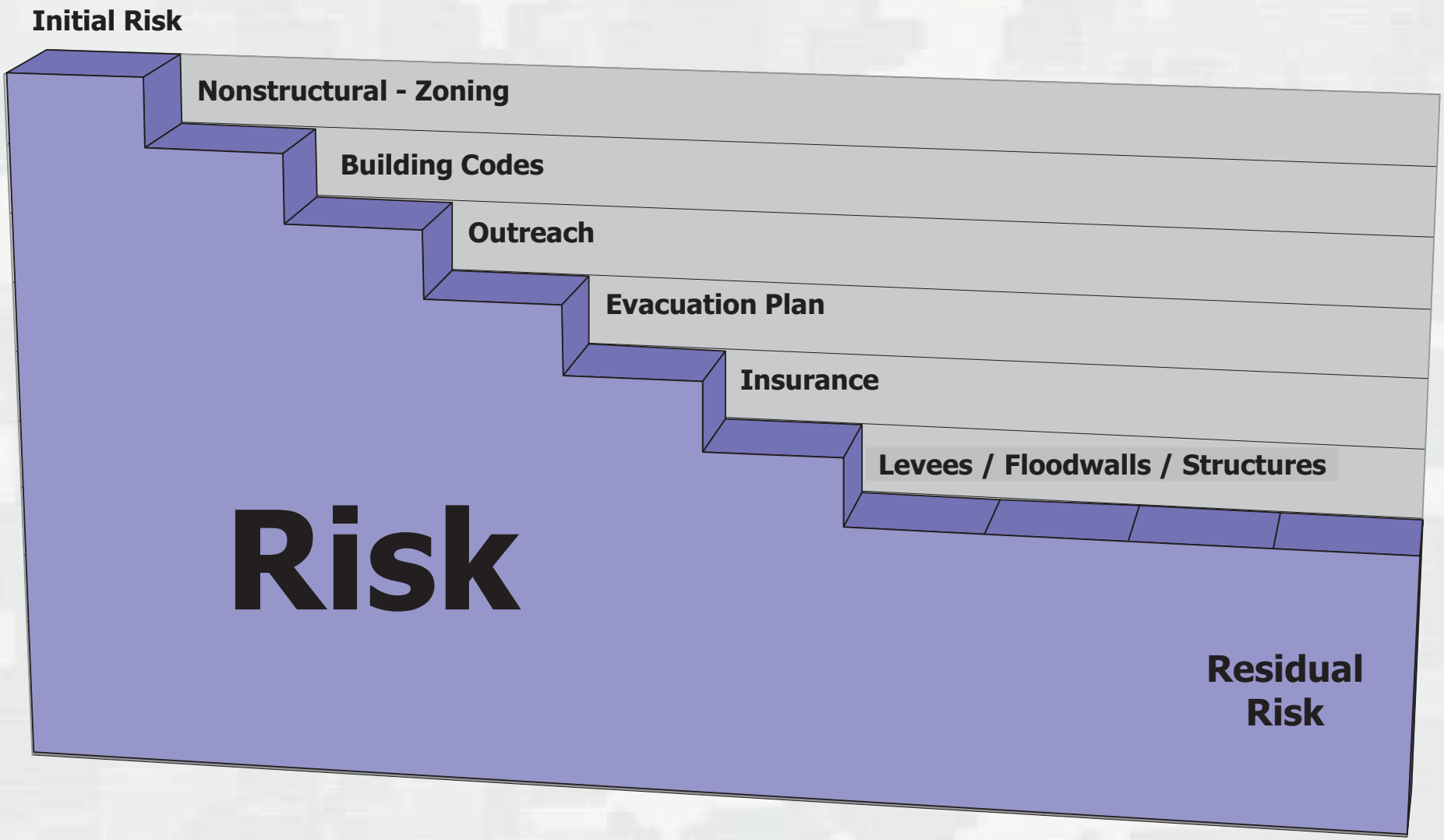
Chris Gilmore, Sr. Project Manager
Hurricane Protection Office

August 4, 2010

US Army Corps of Engineers
BUILDING STRONG®


GREATER NEW ORLEANS HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM (HSDRRS)
Status - June 2010
US Army Corps of Engineers
N
Lake Pontchartrain
Lake Borgne
Orleans Metro - Orleans Marina Floodwall
Under Construction
Orleans Metro - Bayou St. John Tie-In Levee / Floodwall
Under Construction
Seabrook Floodgate Complex
Under Construction to Elevation 16.0
(The 100-year requirement for the GIWW-IHNC area will be met by construction of the Seabrook and IHNC Surge Barriers.)
Orleans East Lakefront - Airport Floodwall
Under Construction
I - 10
Ramp Under Construction
Jefferson Lakefront Levee Reaches 1 - 4
Under Construction
Jefferson Lakefront Pump Stations 1 - 4 Fronting Protection
Under Construction
West Return Floodwall
Under Construction
St. Charles - Bayou Trepanier Complex
Under Construction
St. Charles - Airport Runway Levee
Current Elevation is 14.0
Levees / Floodwalls and Drainage Structures
Under Construction
IHNC Surge Barrier
Under Construction to Elevation 25.6
(The 100-year requirement for the GIWW-IHNC area will be met by construction of the Seabrook and IHNC Surge Barriers.)
Outfall Canal Closure Structures
Interim Gates – Pumps Provide Risk Reduction
Bayou Bienvenue to Bayou Dupree
Under Construction
Bayou Dupre Floodgate
Under Construction
St. Charles - I-310 Floodwall
Under Construction
Interim Barge Gate Closure in Company Canal
Current Elevation is 9.6
Western Tie-In
Minimal Risk Reduction
Under Construction to Elevation 11.5
Bayou Segnette Complex
Under Construction
Harvey Canal Floodgate
Current Elevation is 11.6
Bayou Dupree to Hwy 46
Under Construction
Lake Cataouatche Pump Station
Under Construction to Elevation 15.5
Lake Cataouatche Levee
Under Construction to Elevation 11.5
Westwego to Harvey Pump Stations Fronting Protection
Under Construction
Westwego to Harvey Levee / Floodwalls
Under Construction
Algiers Canal Pump Stations Fronting Protection
Under Construction
Verret to Caernarvon
Under Construction
Caernarvon Floodwall
Planned Construction to Elevation 24.5
Hero Pump Station
Under Construction
GIWW West Closure Complex
Under Construction to Elevation 16.0
(The 100-year requirement for the Harvey Canal and Intracoastal Waterway areas will be met by construction of the GIWW West Closure Complex.)
Hero Canal to Oakville Levees / Structures (Eastern Tie-In)
Under Construction
Assessment Guide
100-yr Risk Reduction Established
Does Not Meet 100-yr Risk Reduction Criteria
More Vulnerable Areas
100-yr Risk Reduction Requirement
Current Elevation
Pre-Katrina
Key to Map Features
New Alignments
Levee Centerline (Non-HSDRRS)
Mississippi River Levee (Non-HSDRRS)
Outfall Canals - Ongoing Analysis
Locks
Pump Station
Designates different sections of Levee/Floodwall
Under Evaluation
Temporary 100-yr Risk Reduction Established
ALL ELEVATIONS ARE NAVD 88 (2004.65)
Key Accomplishments:
1) Largest Civil Works project ever - more than $14 billion
2) Using more stringent materials and design standards, and innovative construction techniques.
3) Awarded more than 250 construction contracts so far for $6.5 billion
4) 100 contracts currently under construction worth more than $5.7 billion
5) Construction started on Gulf Intracoastal Waterway - West Closure Complex, to include largest drainage pump station in the world
6) Construction at 10% on Inner Harbor Navigation Canal Surge Barrier or Lake Borgne, largest Civil Works design build project in Corps history
7) When the System is completed the New Orleans area will have the best perimeter defense in its history
Map produced by the U.S. Army Corps of Engineers - New Orleans

Risk – Shared Responsibility



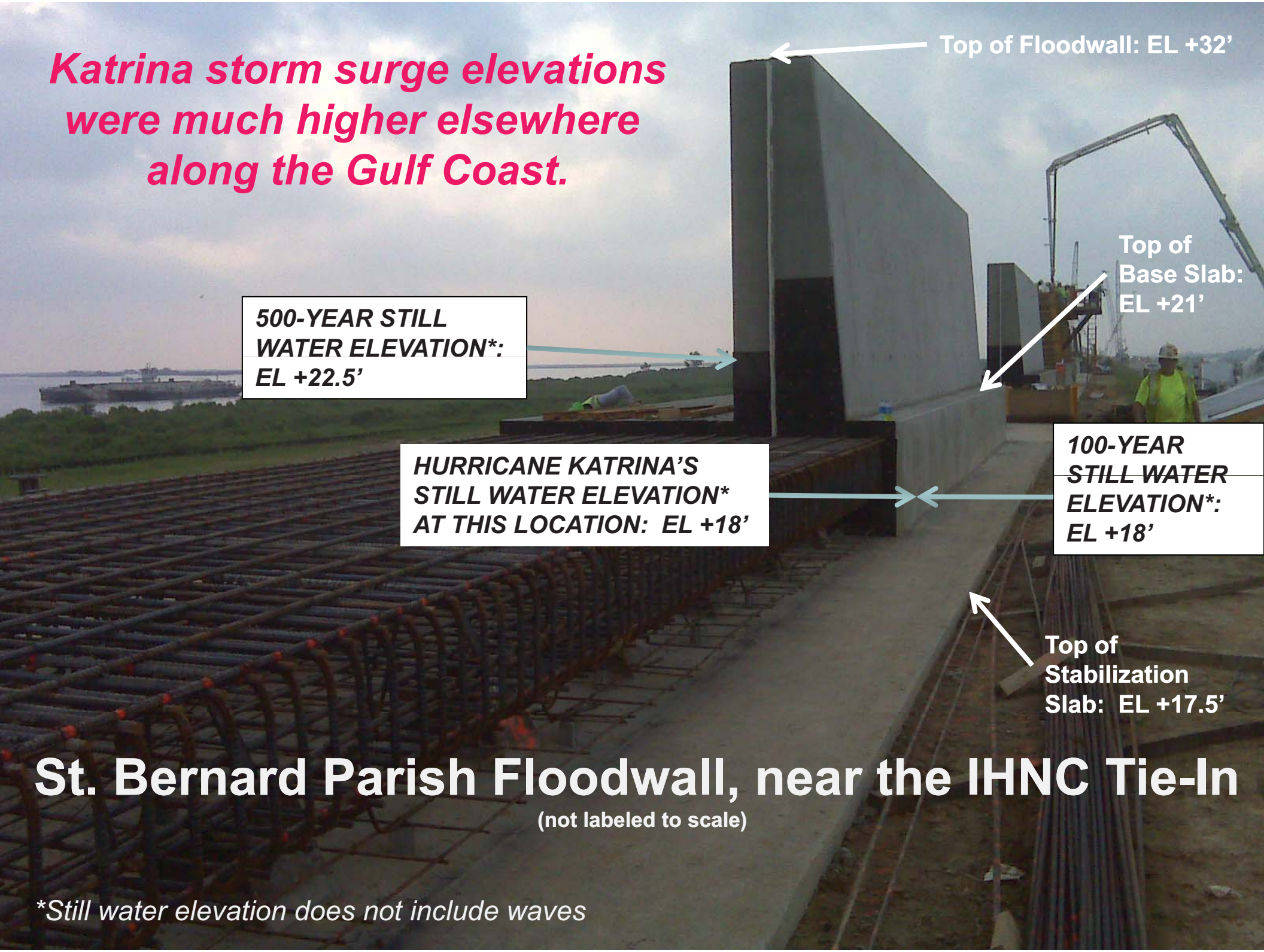
Inner Harbor Navigation Canal
Lake Borgne Surge Barrier

The barrier wall will be substantially complete by the height of this hurricane season.

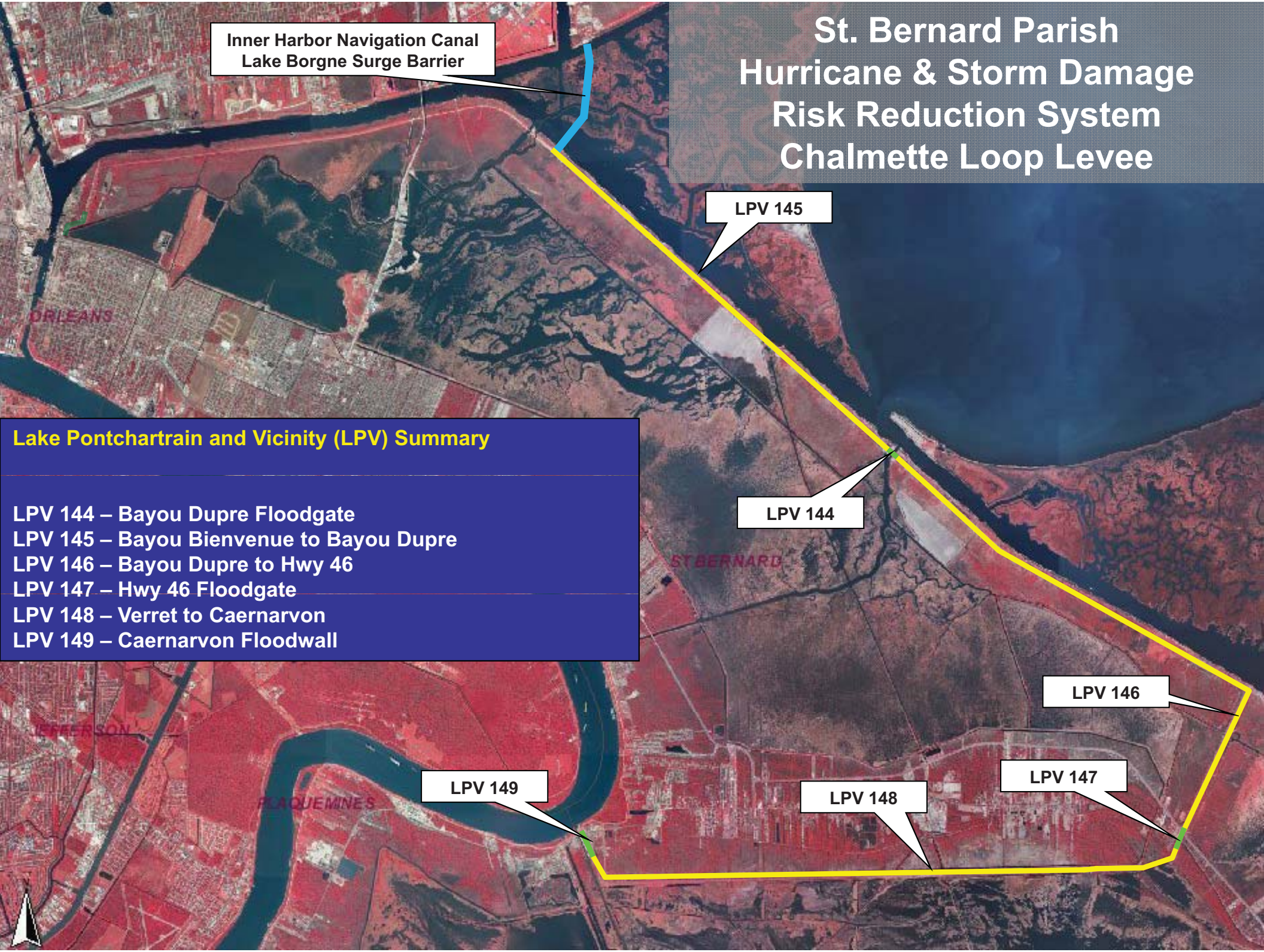
Bayou Bienvenue Cofferdam at the Surge Barrier

Cofferdams will be in place at Bayou Bienvenue and the Gulf Intracoastal Waterway sector gate by the height of this hurricane season.

Levee Overtopping during Hurricane Katrina


Katrina storm surge elevations were much higher elsewhere along the Gulf Coast.
Top of Floodwall: EL +32'
Top of Base Slab: EL +21'
500-YEAR STILL WATER ELEVATION*: EL +22.5'
HURRICANE KATRINA'S STILL WATER ELEVATION* AT THIS LOCATION: EL +18'
100-YEAR STILL WATER ELEVATION*: EL +18'
Top of Stabilization Slab: EL +17.5'
St. Bernard Parish Floodwall, near the IHNC Tie-In
(not labeled to scale)
*Still water elevation does not include waves

St. Bernard Parish Hurricane & Storm Damage Risk Reduction System Chalmette Loop Levee



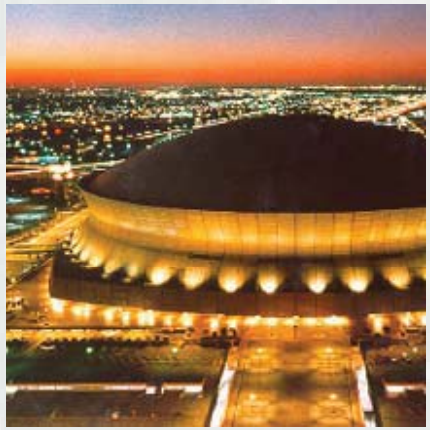
Lake Pontchartrain and Vicinity (LPV) Summary

LPV 144 – Bayou Dupre Floodgate
LPV 145 – Bayou Bienvenue to Bayou Dupre
LPV 146 – Bayou Dupre to Hwy 46
LPV 147 – Hwy 46 Floodgate
LPV 148 – Verret to Caernarvon
LPV 149 – Caernarvon Floodwall

St. Bernard Parish Construction Facts

- Number of St. Bernard Parish residents employed = Approx. 250.
- Amount of Sheet Pile Used = Approx. 115,000 linear feet, ranging in length from 20 feet to 40 feet.
- Amount of H-piles Used = Approx. 42,000 piles, ranging in length from 90 to 155 feet.
- Amount of Concrete Used = Approx. 300,000 cubic yards, or 6.5 million square feet.
- Amount of Rebar Used = Approx. 25,000 tons.

*Approximately 300,000 cubic yards of concrete is being used to construct the entire 23-mile Chalmette Loop, which is approximately 1.75 times the amount of concrete used to construct the Superdome.**



=

1.75 Superdomes

Chalmette Loop

*Approximately 169,000 cubic yards of concrete was incorporated into the Superdome.

Amount of Metal Material

- An estimated 207,000 tons of steel is being used to construct the floodwalls in St. Bernard Parish. That number includes only H-piles, and does not include the steel sheet piles or rebar used in construction.

- We are using 28 times the amount of metal used to construct the Eiffel Tower.

X 28 =

LPV 144 - Bayou Dupre Sector Gate

- Work consists of constructing a new sector gate at Bayou Dupre and building T-wall tie-ins.
- Approximately 9% complete
- Contract awarded to Tetra Tech EC, Inc.
- Award Amount = $36.3 Million
- Bayou Dupre is currently closed to all marine traffic and will remain closed until summer 2011.

KOBELCO
KOBELCO

LPV 145 - Bayou Bienvenue to Bayou Dupre

- **Work consists of constructing a T-wall on top of the existing levee**
- **Project will tie into the southern end of the IHNC Surge Barrier**
- **Approximately 40% complete**
- **Contract awarded to Chalmette Levee Constructors**
- **Award Amount = $380.9 Million**

K LINE

Base Slab Rebar

Rebar Cage in Stem

UN RGROUND
AS LINE

BUILDING STRONG®

LPV 146 - Bayou Dupre to Hwy 46

- Work consists of constructing a T-wall on top of the existing levee
- Project will tie into Hwy 46 near the Verret Fire Station
- Approximately 15% complete
- Contract awarded to St. Bernard Levee Partners
- Award Amount = $280.5 Million

MAXIM
Link-Belt
CAT

LPV 147 - Hwy 46 Floodgates

- Work consists of constructing floodgates across Hwy 46 and T-walls to tie into the LPV 146 and LPV 148.02 reaches
- Approximately 6% complete
- Contract awarded to Integrated Pro Services, Inc.
- Award Amount = $5.3 Million

504
463-1782
S
JLG LIFT
NES Rentals
SUPER DUTY

2919

LPV 148.02 – Verret to Caernarvon

- Work consists of constructing a T-wall on top of the existing levee
- Project will tie into the new Caernarvon Floodwall
- Approximately 2% complete
- Contract awarded to Cajun Constructors, Inc.
- Award Amount = $237.7 Million

CAJUN
218
CAJUN

LPV 149 - Caernarvon Floodwall

- **Project includes building new T-walls along an offset alignment, constructing new floodgates across Highway 39 and the Norfolk Southern Railroad tracks and building a new sector gate across the Caernarvon Canal.**
- **Approximately 2% complete**
- **Contract awarded to Conti Federal Services, Inc.**
- **Contract Amount$ 49.6 Million**

KM070090
KOMATSU
PC
270
KOMATSU

Web-based Resources

www.nolaenvironmental.gov

NOLA Environmental

NEW ORLEANS, LOUISIANA
Environmental Compliance Data Bank
www.nolaenvironmental.gov

PROJECTS | MEETINGS | LIBRARY | DATA VIEWER | GET INVOLVED | RELATED LINKS

Welcome to NOLA Environmental! This site has been set up to share with the public the efforts being made by the U.S. Army Corps of Engineers and other federal and state agencies in south Louisiana regarding the environmental compliance for proposed federal and state Hurricane Risk Reduction Projects. Additional information pertaining to other federal and state agencies' hurricane recovery efforts in southeast Louisiana will also be posted on the site as it becomes available.

The U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District implemented Alternative Arrangements on March 13, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (40 CFR § 1506.11) Learn more...

FEATURED PROJECT

USACE-MVN Emergency Alternative Arrangements
Greater New Orleans
Hurricane and Storm Damage
Risk Reduction System Projects

Announcements

- Draft IER 30 Public Comment Period 8/14 - 9/12
- Federal Register Notice of EPA's Modification of the 1985 Clean Water Act Section 404(c) Final Determination for Bayou aux Carpes is now available (7/28)
- East Baton Rouge EA #431 Drafts Public Comment Period 7/22 - 8/20
- Draft IER 29 Public Comment Period 7/22 - 8/20
- The Decision Record for IER 5 has been signed by the District Commander (June 30, 2009)
- The Decision Record for IERS 1 has been signed by the District Commander (June 29, 2009)

More...

Upcoming

- 09/12/2009 - Public Meeting (Plaquemines Parish Federal Levees (St. Jude to Venice))
- 09/12/2009 - Public Meeting (Plaquemines Parish Federal Levees (St. Jude to Venice))

More...

Newly Available

NEW >> NOLA Environmental Basic Data Viewer

- 03 Sept 09 Public Meeting Presentation Plaquemines Parish Pump Stations; GIWW West Closure Complex
- News Release 02 September 09 Corps to discuss upcoming Belle Chasse construction

More...

http://www.mvn.usace.army.mil

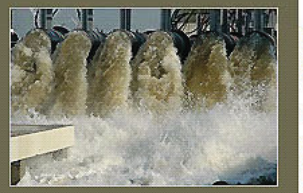
ABOUT US | SERVICES | BUSINESS | CAREERS | REFERENCES | PRESS ROOM | CONTACT US | LINKS

US Army Corps of Engineers
Team New Orleans
BUILDING STRONG®

Google Custom Search | Search

Pump Stations
Operating an improved system
Pumping plays a critical role in preventing flooding from any significant rainfall event. The Corps ensures that pumps are outfitted to remain operable during and after future storm events.

Get the full story >>



PUBLIC INFORMATION

6 Hurricane & Storm Damage Risk Reduction
How the Corps is reducing risk >>

Public Meetings
8/26/09 - New Orleans, LA >>
8/31/09 - New Orleans, LA >>
9/2/09 - New Orleans, LA >>

Pre-Proposal Conference - 8/14/09 >>

Building a Stronger Corps - A Snapshot of How the Corps is Applying Lessons Learned from Katrina>>

Nola Environmental
Find meeting presentations & more>>

NOLA Environmental

TOP HEADLINES

Corps revises London Ave. Outfall Canal ICS operating procedures

RSS (What is RSS?)

ASK THE CORPS

The Corps wants to hear from you!

Q. *Where can I find information related to bidding on contracts advertised by the Corps?*

A. *For more information on Corps contracts and registering your business, please click here.*

Submit questions or comments to askthecorps@usace.army.mil.

FEATURED VIDEOS

Inner Harbor Navigation Canal
Reduces risk to New Orleans East, Metro New Orleans, the 9th Ward & St. Bernard from storm surge. Watch >>

Seabrook Floodgate
Three construction site alternatives are presented in this video for a navigable surge barrier planned for the IHNC area near the

Last updated 09/09/2009 DISCLAIMER PUBLIC INQUIRIES PRIVACY AND SECURITY FOIA INFORMATION QUALITY ACT ACCESSIBILITY

CONSTRUCTION IMPACTS HOTLINE
877-427-0345

US Army Corps of Engineers
New Orleans District

Social Web Networking Communities

and what they mean to you

twitter is an online messaging and social networking system that allows people to share their daily life experiences minute-by-minute, hour-by-hour, and/or day-by-day via their computer or mobile phone. Team New Orleans is joining in and taking on the opportunity to tweet with the public and offer reports on developments, additions, changes, and upcoming public meetings and events that will affect local communities. Check it out by going to **twitter.com/teamneworleans**.

Flickr is an online community platform for global photo management and sharing applications via the web. Team New Orleans has become a part of the movement and is using Flickr to visually explain our projects. Check out our photos at **www.flickr.com/photos/37671998@N05**.

flickr

facebook is a global social networking Web site that links people from across the world and is currently ranked as the most popular of its kind. Team New Orleans is following in the trend and is using Facebook to update the public about projects, events, activities and public meetings. Become friends with Team New Orleans by visiting **www.facebook.com, search New Orleans District**.

Visit the following links to follow us on Facebook, Twitter and Flickr:

http://www.facebook.com/people/New-Orleans-District/100000017439096

http://twitter.com/teamneworleans

http://www.flickr.com/photos/37671998@N05