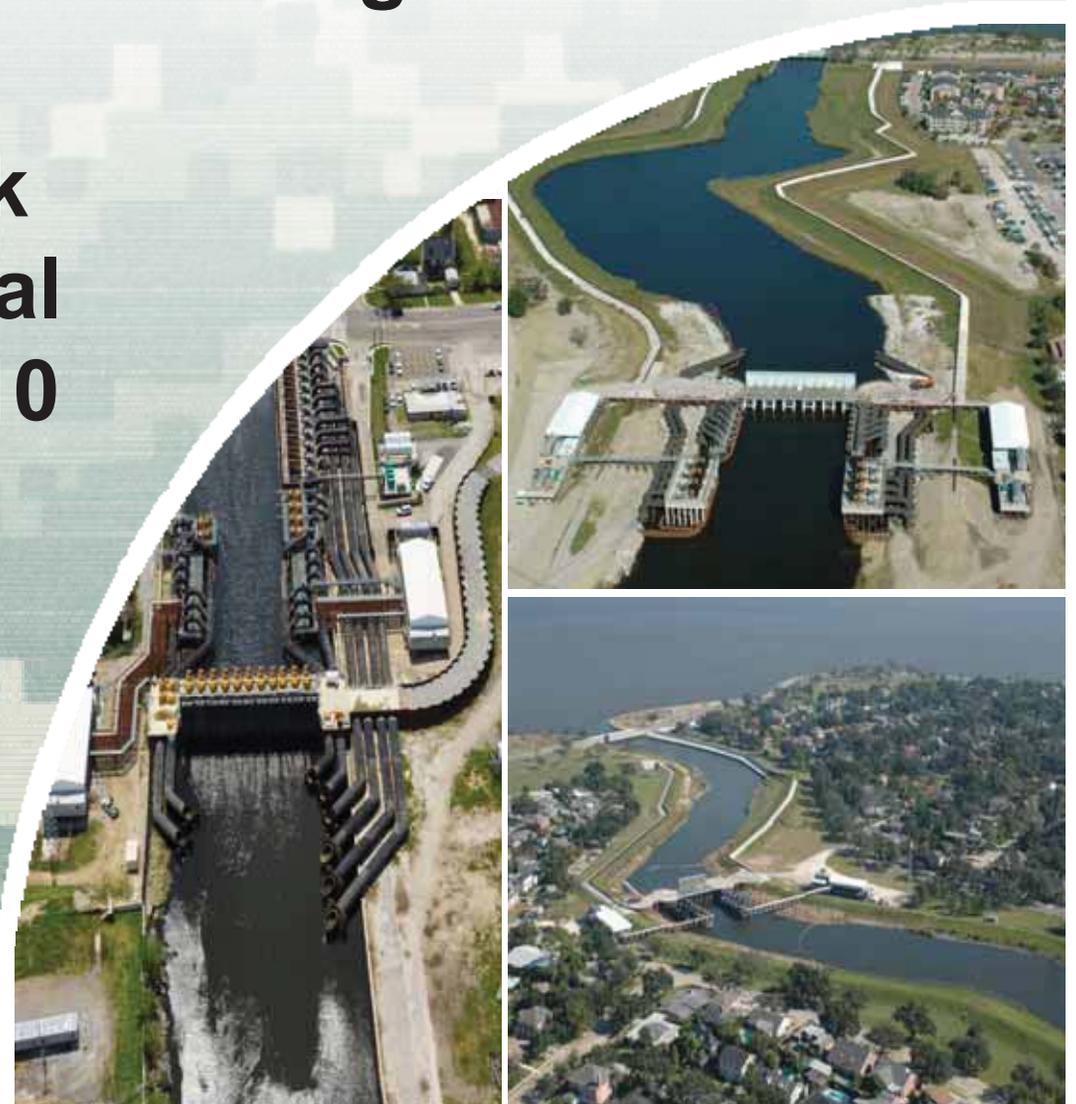


# Individual Environmental Report (IER) #27 Outfall Canal Remediation Public Meeting

Holy Trinity Greek  
Orthodox Cathedral  
September 16, 2010



US Army Corps of Engineers  
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# Agenda

- Hurricane & Storm Damage Risk Reduction System Update
- Purpose and Need
- Project Overview
- Construction Impacts
- Types of Remediation
  - ▶ Sheet pile cut-off
  - ▶ Deep soil mixing
  - ▶ Stability Berms
  - ▶ Embankment Increase
- 17<sup>th</sup> Street Canal Remediation
- Orleans Avenue Canal Remediation
- London Avenue Canal Remediation
- Recap

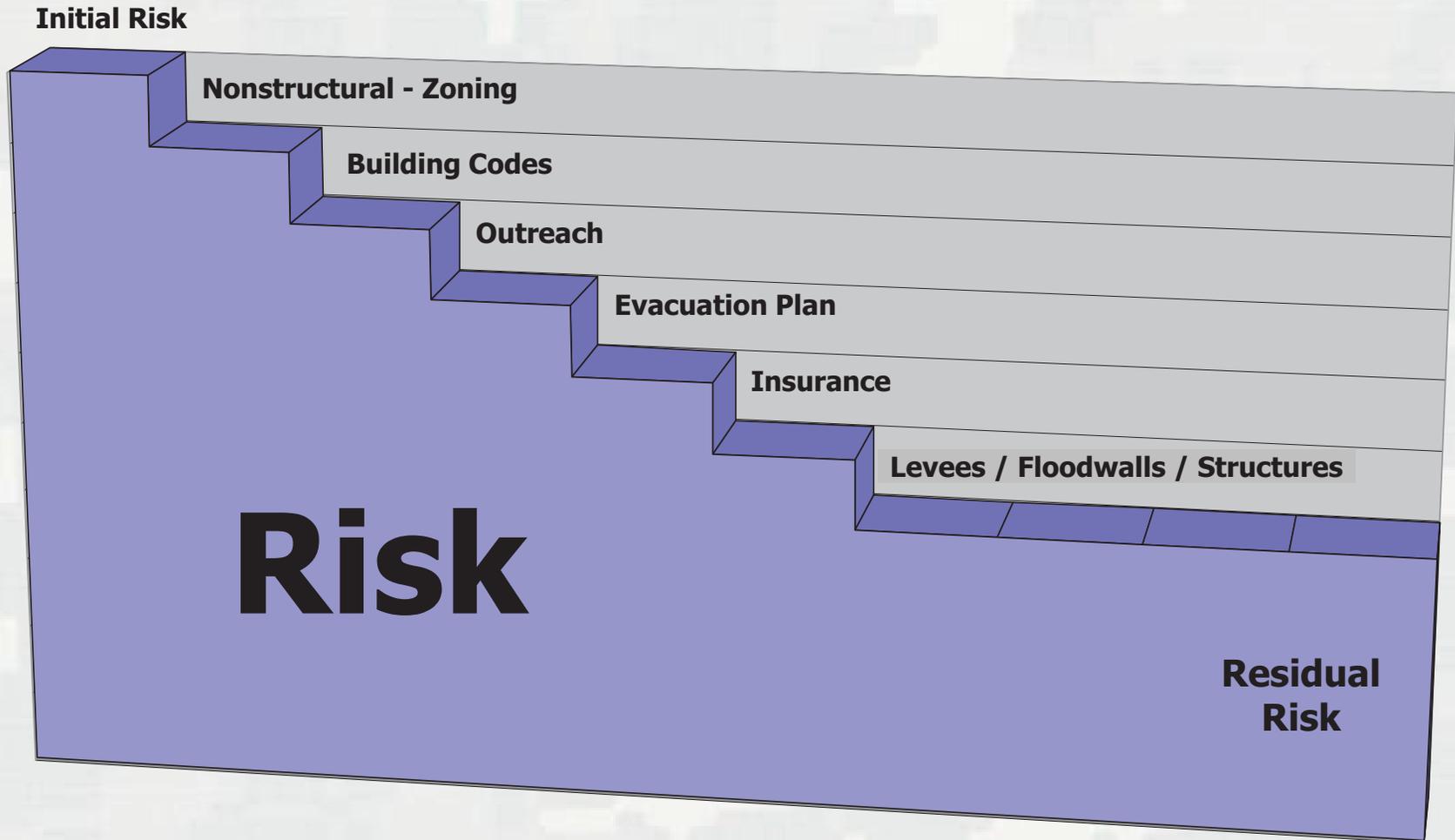


# National Environmental Policy Act “NEPA”

- Required for all major Federal actions
- Analyze potential impacts to the human and natural environment and investigate reasonable alternatives
- Analyses documented in Environmental Assessments (EA), Environmental Impact Statements (EIS), or Individual Environmental Reports (IER)
- Public involvement is KEY: We want to hear from you!
- **Goal: more informed decision making through public involvement**

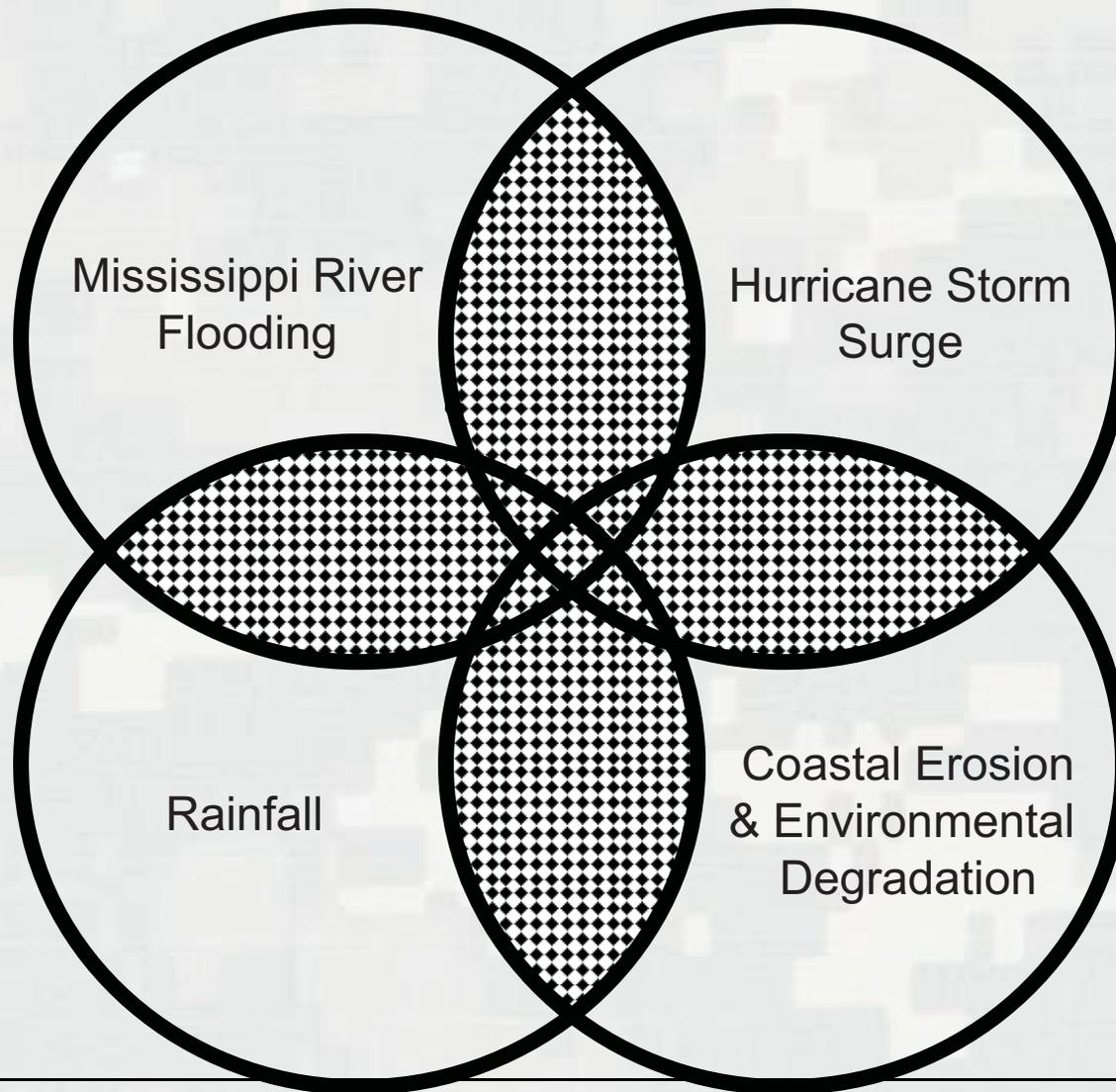


# Risk – Shared Responsibility



# The Four Major New Orleans Flood Risks

*Separate, but overlapping or related interagency systems or programs to address each!*

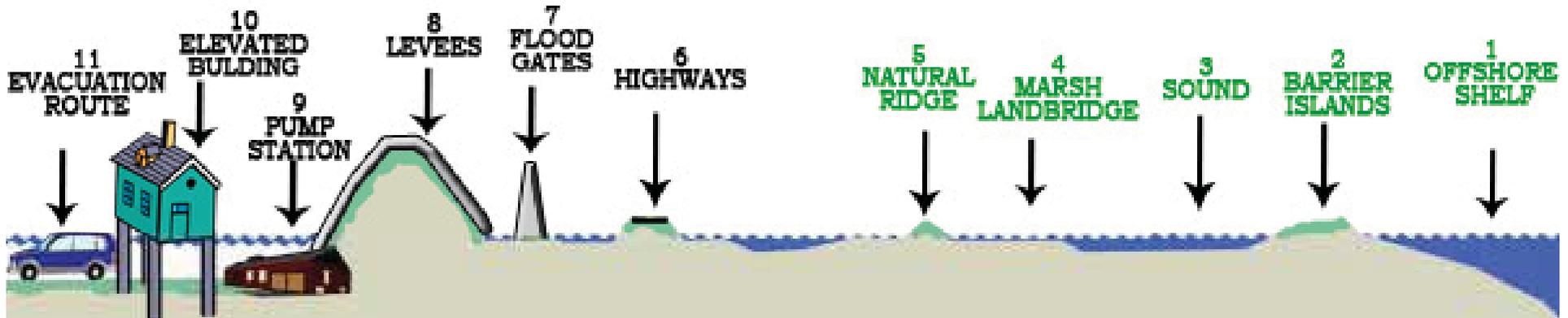


*Working  
Draft*



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# Multiple Lines of Defense



(Graphic from [www.mlods.org](http://www.mlods.org))

## *Elements include:*

- Coastal restoration/protection
- Structural measures
- Non-structural features

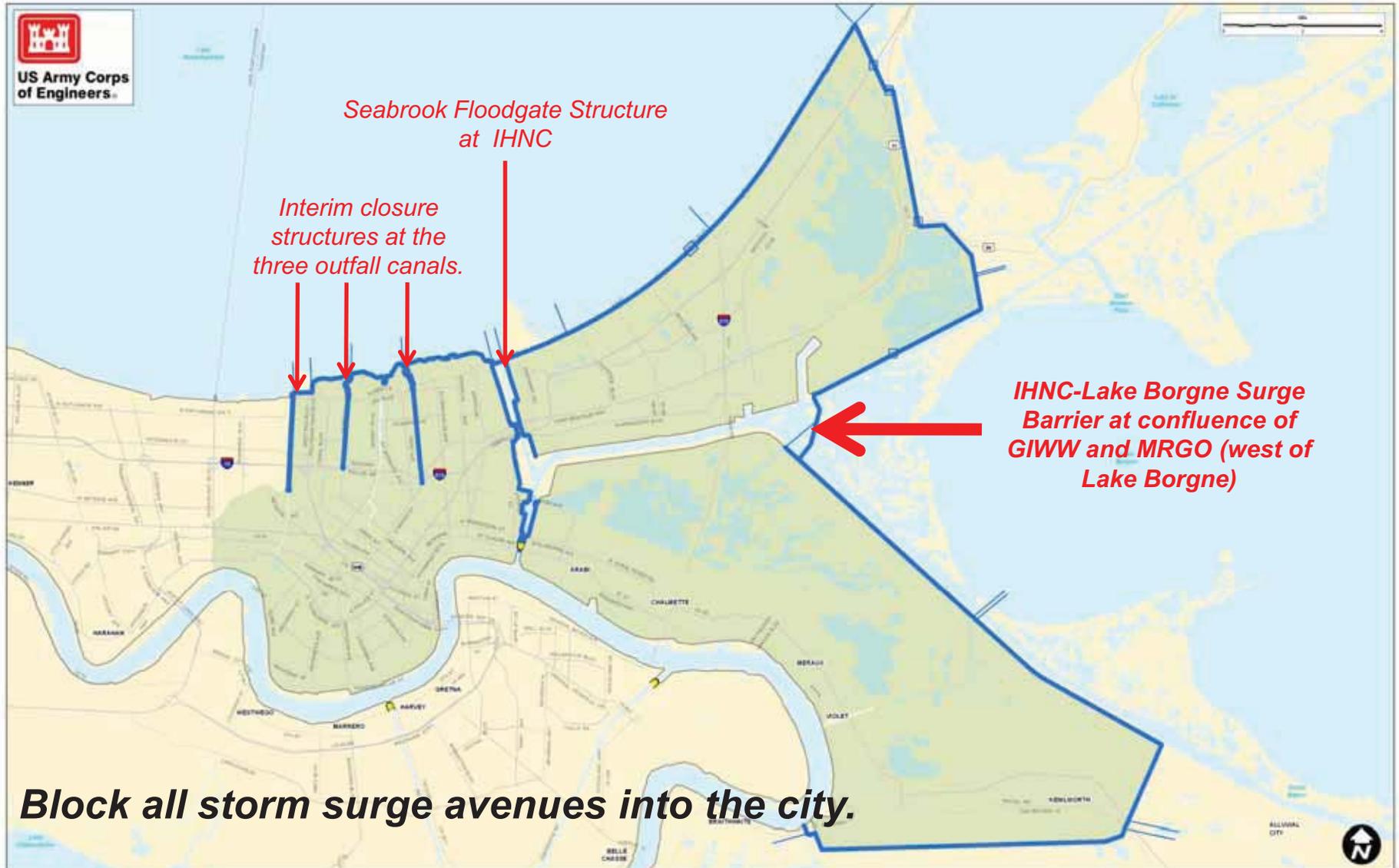


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# First Strategic Improvement

HURRICANE PROTECTION OFFICE

Internal Draft Working Document



**Block all storm surge avenues into the city.**

Internal Draft Working Document



# Second Strategic Improvement



*New Orleans East*



*St. Bernard Parish*



*Orleans Metro*

***Raise Levees and Floodwalls throughout the system.***



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# Third Strategic Improvement



*Repair 61 pump stations.*



*Storm proof 49 pump stations.*



*Construct 5 safe houses.*

***Repair and storm proof key pump stations.***

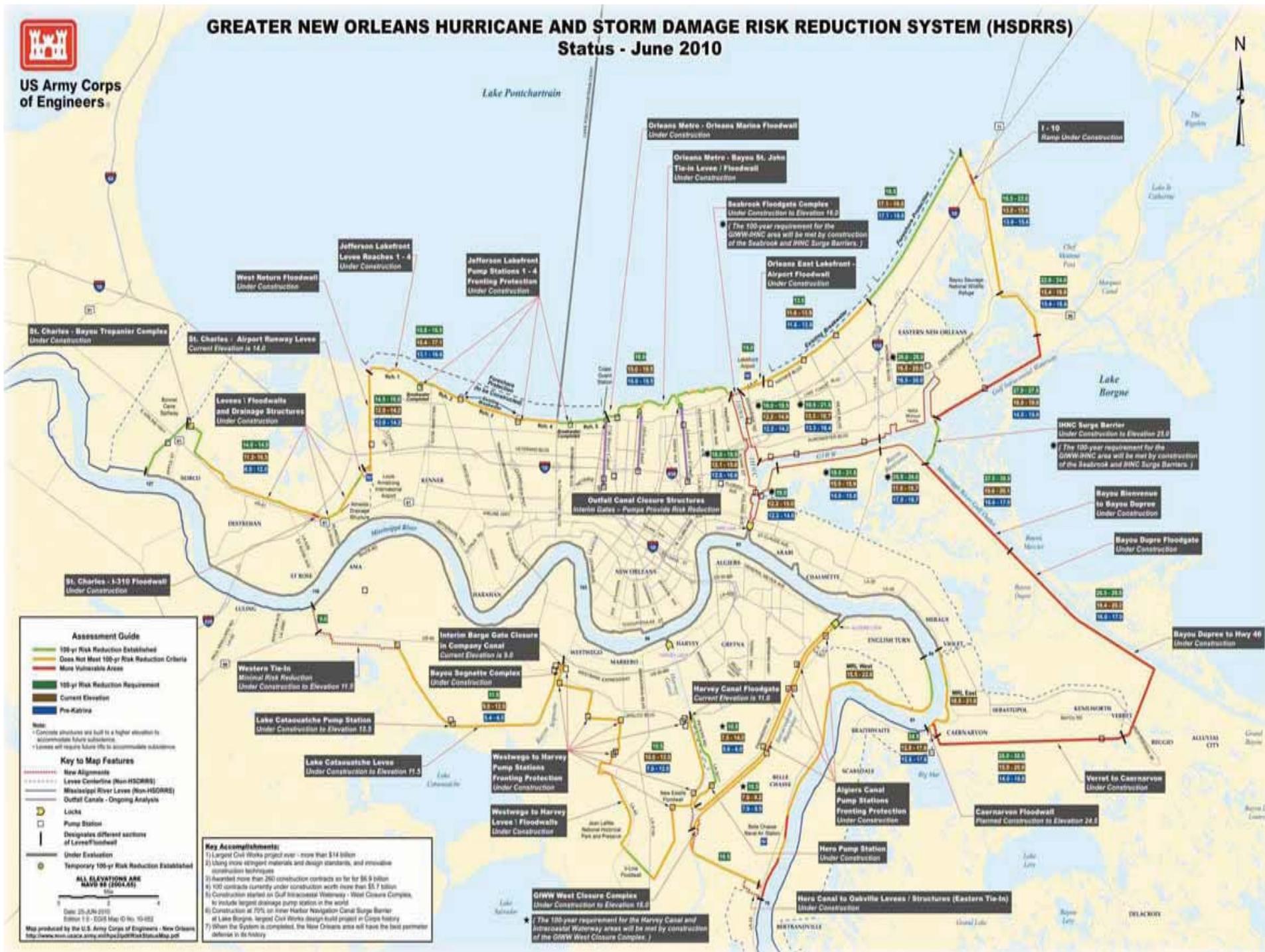


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US Army Corps of Engineers

# GREATER NEW ORLEANS HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM (HSDRRS) Status - June 2010



**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

**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 on for for \$6.9 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 70% on inner Harbor Navigation Canal Surge Barrier at 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

**ALL ELEVATIONS ARE NAVD 83 (EGM44S)**

Map produced by the U.S. Army Corps of Engineers - New Orleans  
http://www.nwr.usace.army.mil/gis/gisportal/StatusMap.pdf



# Purpose and Need



To ensure that the canal walls can support the requirements of the Sewerage and Water Board of New Orleans in removing rain water from the city, now and in the future.



# Project Overview

- **Construction would begin by the end of 2010**
- **All construction would be done within the existing Right of Way**
  
- **17<sup>th</sup> Street Canal**
  - ▶ **Deep Soil Mixing for strengthening the canal levees**
  - ▶ **Adding embankment at crown to reduce stick-up.**
  
- **Orleans Avenue Canal**
  - ▶ **Stability Berms and Deep Soil Mixing for strengthening the canal levees**
  - ▶ **Adding embankment at crown to reduce stick-up.**
  
- **London Avenue Canal**
  - ▶ **Sheet piles for seepage**
  - ▶ **Adding embankment at crown to reduce stick-up.**
  
- **Construction would be complete by June 2011.**



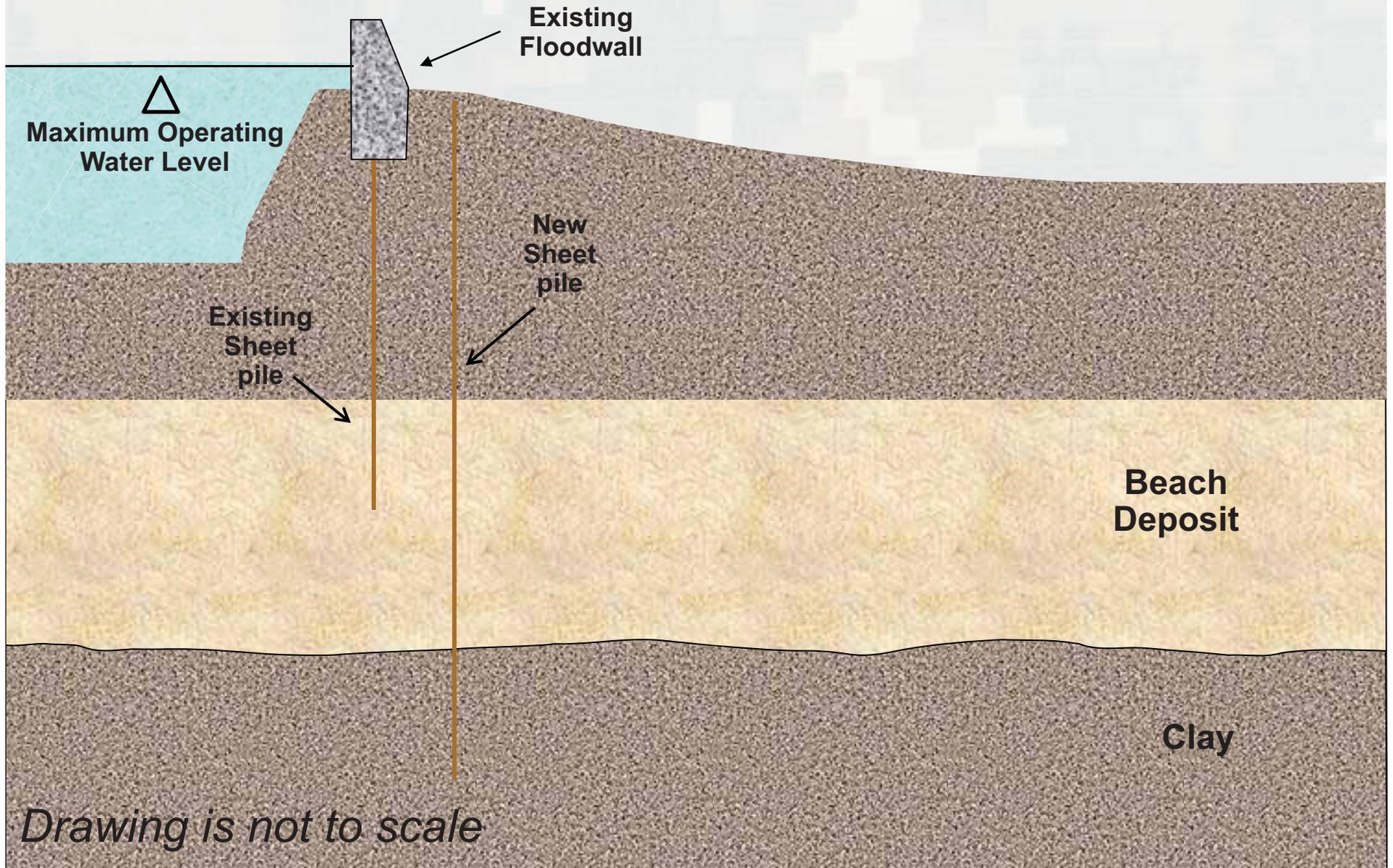
# What To Expect During Construction

- **Construction impacts**
  - ▶ Elevated noise levels from motors, pumps, generators, etc.
  - ▶ Increased truck traffic (trucks will utilize approved haul routes)
  - ▶ Road access will be limited at times
  - ▶ Extended work hours (6 days per week up to 12 hours per day)
  
- **Corps' efforts to minimize impacts**
  - ▶ Roads will be watered (to minimize dust)
  - ▶ Working with Department of Public Works on temporary road closures
  - ▶ Using Press-In Sheet Pile to minimize noise and vibration



# Sheet Pile Cutoff on Protected Side

*For Seepage*



# Silent Press-In Method of Sheet Pile Installation for Seepage Cut-off



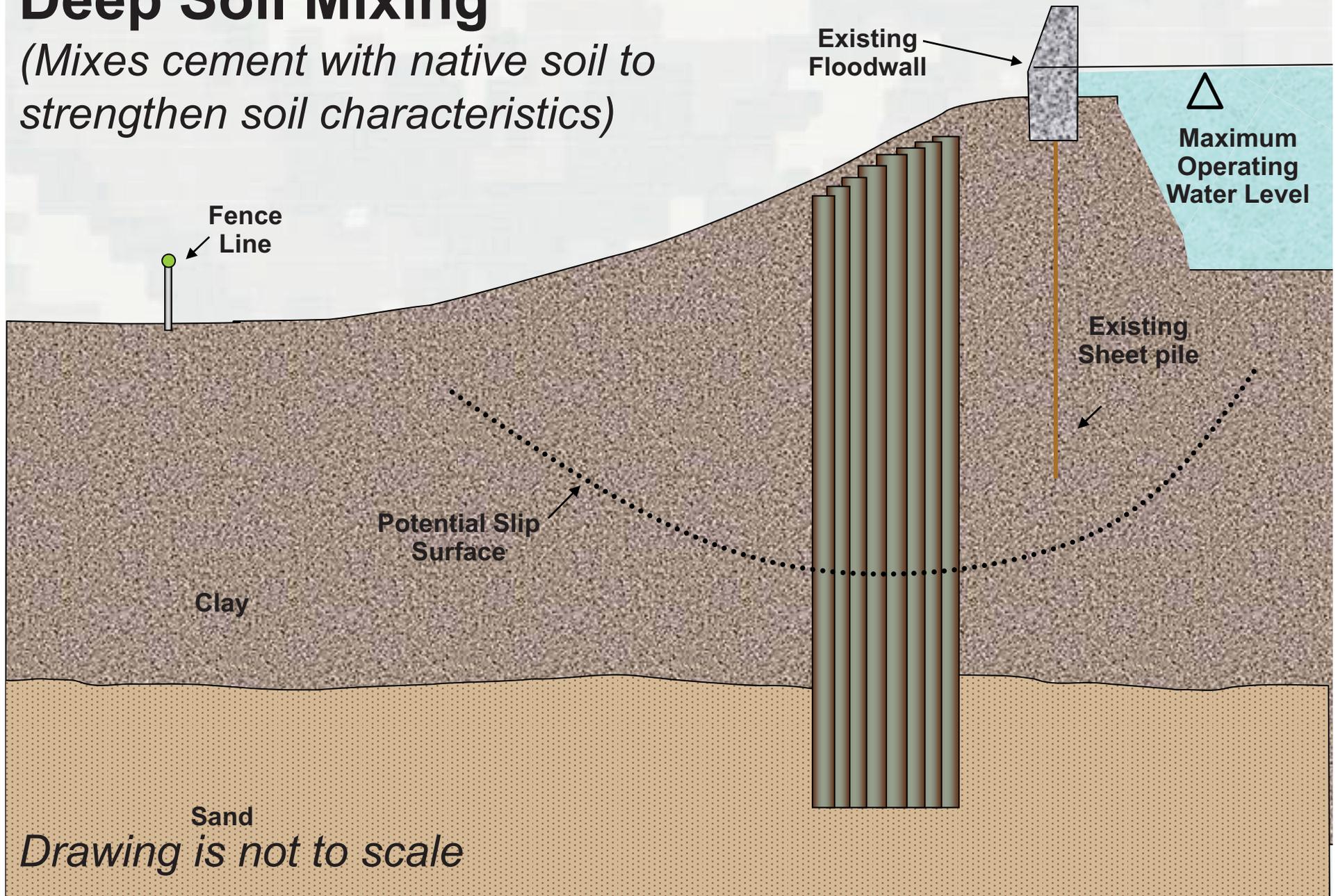
17 September 2010

15

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# Deep Soil Mixing

*(Mixes cement with native soil to strengthen soil characteristics)*

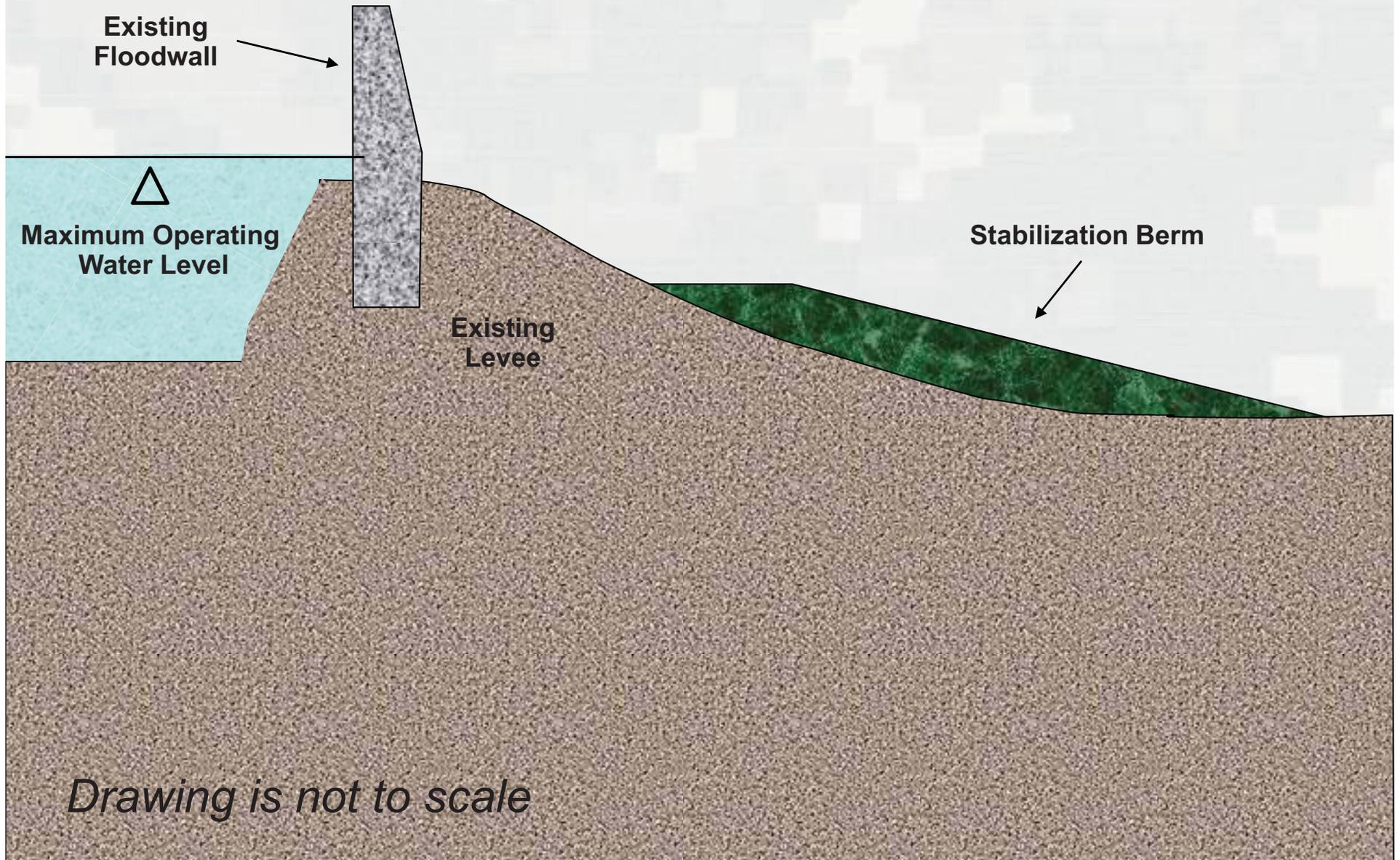


# Deep Soil Mixing For Soil Strengthening



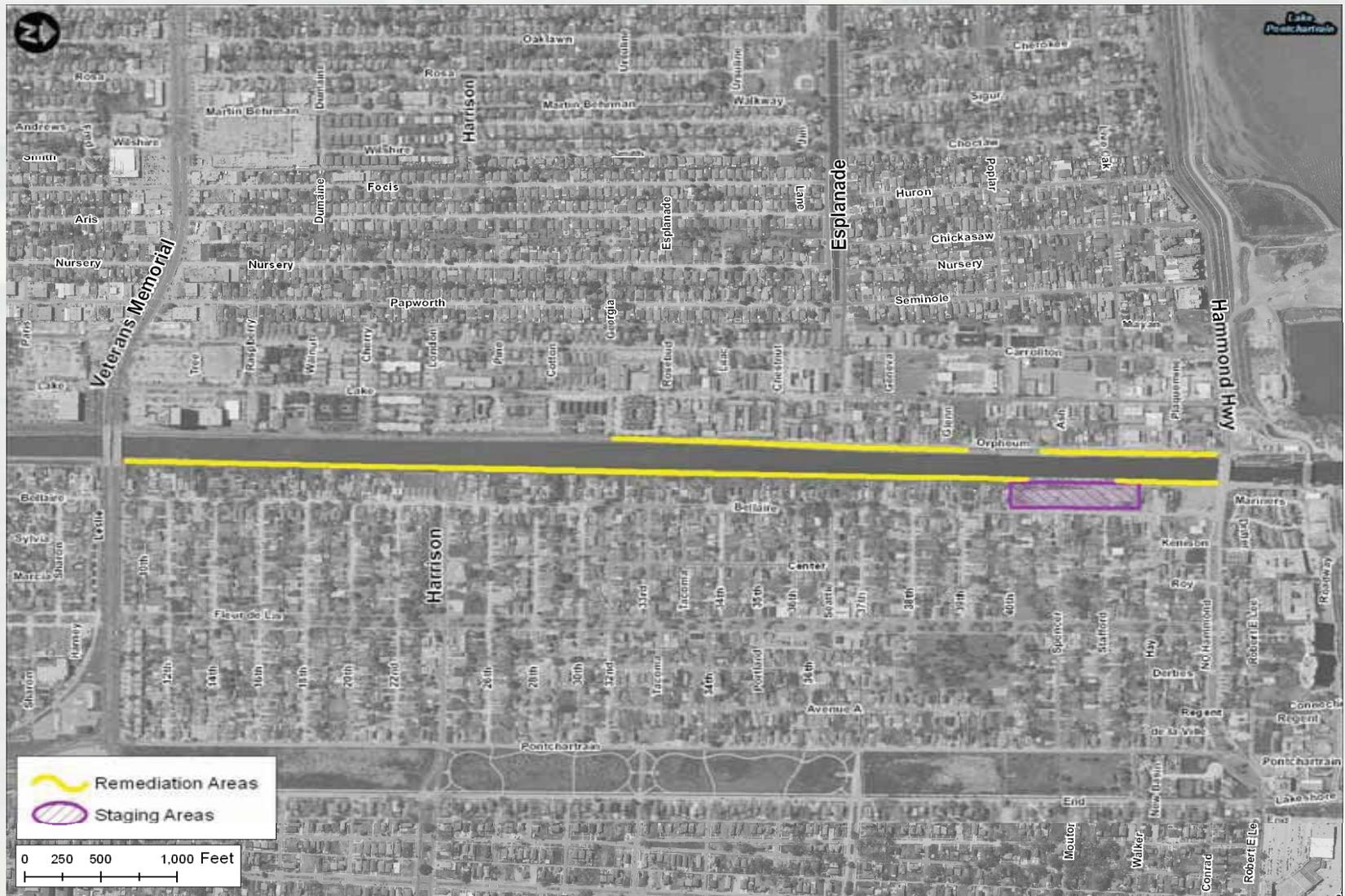
# Stabilization Berm on Protected Side

*To Strengthen the Canal Levees (increase Factor of Safety of the Embankment)*



# 17<sup>th</sup> Street Canal

## Deep Soil Mixing and Embankment Increase



# Orleans Avenue Canal Stability Berms or Deep Soil Mixing





# Remediation of Outfall Canals

- 17<sup>th</sup> Street Canal - 9,970' of Remediation
  - ▶ 3,985' Deep soil mixing for stability
  - ▶ 5,985' Deep soil mixing for stability and embankment increase
  
- Orleans Avenue Canal - 9,074' Remediation
  - ▶ 9,074' Stability Berm or deep soil mixing for stability
  
- London Avenue Canal - 6,050' of Remediation
  - ▶ 1,300' Sheet pile for seepage
  - ▶ 1,116' Embankment increase
  - ▶ 3,634' Sheet pile for seepage and embankment increase



# Recap

- ▶ Construction would begin at the end of 2010 and be complete by June 2011.
- ▶ Dust will be minimized by watering the roads.
- ▶ Noise and Vibrations will be minimized by using the Sheet Pile Press-In Method.

After the work is complete, the canal walls will be able to support the requirements of the Sewage and Water Board of New Orleans in removing rain water from the city now & in the future.



# Currently Available for Public Review

- **IER 27 – Outfall Canal Remediation**
  - Public review Sept. 2 through Oct. 1, 2010
- **IER 12 Supplemental – Westbank N Disposal Site**
  - Public review Sept. 3 through Oct. 2, 2010
- **IER 31 – Contractor Furnished Borrow Material #7**
  - Public review Sept. 17 through Oct. 16, 2010
- **Comments can be submitted by:**
  - Calling 504-862-1544
  - E-mailing [mvnenvironmental@usace.army.mil](mailto:mvnenvironmental@usace.army.mil)
  - Or at any time at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)



# **Upcoming Public Meetings**

*Open House 6 p.m. - Presentation 6:30 p.m.*

**Wednesday, Oct. 13, 2010**

**IHNC Levees and Floodwalls**

**IER 11.b Supplemental Tier 2**

**St. Gabriel the Archangel Catholic Church**

**Parish Hall 5010 Piety Drive**

**New Orleans, LA 70126**



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# Opportunities for Public Input

- Regular Public Meetings throughout the Hurricane and Storm Damage Risk Reduction System (HSDRRS) Area
- Make sure to sign in tonight to get on our meeting notification mailing list
- Comments can be submitted at any time at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)
- Individual Environmental Reports (IER) 30-day Public Review

Questions and comments regarding Hurricane Risk Reduction Projects should be addressed to:

Patricia Leroux  
PM-RS  
P.O. Box 60267  
New Orleans, LA 70160-0267  
Telephone: 504-862-1544

[E-mail: mvnenvironmental@usace.army.mil](mailto:mvnenvironmental@usace.army.mil)



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# Web-based Resources

[www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)

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

**NOLA Environmental**  
NEW ORLEANS, LOUISIANA  
Environmental Compliance Data Bank  
[www.nolaenvironmental.gov](http://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...

**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)

**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))

**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

**FEATURED PROJECT**

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

**US Army Corps of Engineers**  
Team New Orleans  
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USACE Custom Search Search

**Pump Stations**  
Operating an unrecycled 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.

**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 - 8/19/09 >>>

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

Nola Environmental  
Find meeting presentations & more >>>

**TOP HEADLINES**

**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](mailto:askthecorps@usace.army.mil).

Corps revises London Ave. Outfall Canal ICS operating procedures  
Revised 06/27/2008

RSS (What is RSS?)

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

**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 Chalmette Lock. Watch >>>

**CONSTRUCTION IMPACTS HOTLINE**  
**877-427-0345**



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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](https://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](http://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](http://www.facebook.com), search New Orleans District.

