



US Army Corps
of Engineers
New Orleans District





US Army Corps
of Engineers
New Orleans District

National Environmental Policy Act (NEPA)

PURPOSE

“.....Help public officials make decisions that are based on an understanding of environmental consequences and take actions that protect, restore, and enhance the environment.”

GOAL

More informed decision making through public involvement.



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National Environmental Policy Act (NEPA)

Alternative Arrangements for Hurricane Protection System (HPS)

- NEPA provides for alternative arrangements for emergencies
- The USACE implemented alternative NEPA arrangements on March 13, 2007
- Arrangements were coordinated with The Presidents Council on Environmental Quality (CEQ), Federal and State Resource Agencies and the public.

•Federal Agencies Coordinated with:

USFWS, NOAA, USGS, EPA, and NHPC occurred at HQ and Regional levels

•State Agencies Coordinated with:

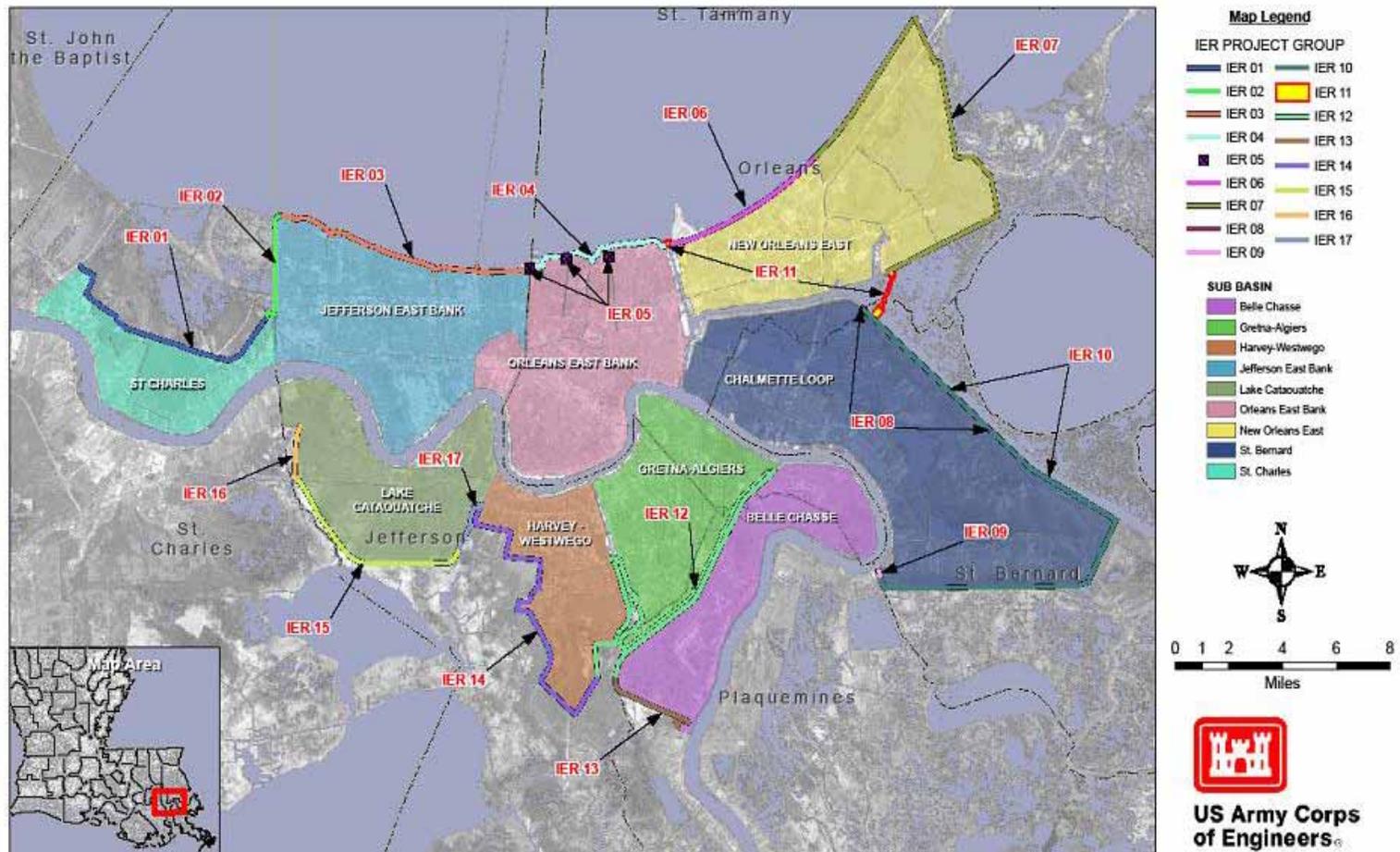
LaDNR, LaDEQ, and LaWLF



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NEPA Alternative Arrangements

Sub Basins and Representative Project Groups



One Team: Relevant, Ready, Responsive, Reliable



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NEPA Alternative Arrangements

- 17 Individual Environmental Reports (IER's)
 - Cover individual segments of the HPS
 - 3 to 14 months to complete each
 - All decisions records signed by MVN District Commander
 - Construction allowed to proceed when IER complete
- Additional IER's for Borrow and Mitigation
- Comprehensive Environmental Document (CED)
 - Addresses comprehensive impacts & mitigation for system



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Borrow for the Hurricane Protection System

Mike Brown
PM-RP Borrow, Environmental
Manager



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Why are we here tonight?

Purpose:

- IER 18: Government Furnished Borrow Material
- IER 19: Pre-Approved Contractor Furnished Borrow Material
- IER 22 and IER 23: Future sites currently investigating



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IER 18: Government Furnished Borrow



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Program Borrow Needs 150 Million Cubic Yards

	<u>Number</u>	<u>Estimated Quantity</u> <u>(Cubic yards)</u>
Program Borrow Needs		Over 100,000,000
IER 18 GF Sites Investigated	23	
IER 18 GF Sites Proposed for Borrow	12	26,494,000 (16%)
IER 18 GF Sites Investigated and Denied	11	

LEGEND

GF: Government Furnished

Denied: Due to site size, wetlands, and soil analysis.



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Environmental Process

- Signed right of entry
- Received wetland determination letter
- Revised borrow maps to avoid wetlands
- Coordinated with U.S. Fish and Wildlife Service



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Environmental Process

- Coordinated with Louisiana Department of Natural Resources
- Participated in a site visit to clear for geotech borings/mitigation data
- Completed Cultural Resources Report for State Historic Preservation Office & Tribes review
- Received Phase 1 Environmental Site Assessment



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Non-wet Bottomland Hardwoods Mitigation

- Required under the Section 906(b) of the Water Resources Development Act of 1986



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IER 18 Government Furnished Sites Proposed for Borrow (12)

Name	Parish	HPS Use	Initial Site Investigated (acres)	Size After Avoidance (acres)	Approx. Cubic Yards
1418/1420 Bayou Road	St. Bernard	LPV	43.4	22	439,000
1572 Bayou Road	St. Bernard	LPV	9.5	9.5	164,000
910 Bayou Road	St. Bernard	LPV	11.7	11.7	117,000
4001 Florissant	St. Bernard	LPV	11.6	11.6	214,000
Dockville	St. Bernard	LPV	144	107	1,000,000
Triumph	Plaquemines	NOV	2.6	2.6	50,000
Belle Chasse	Plaquemines	NOV	34	8	190,000
Maynard	Orleans	LPV	102	44	438,000
Cummings North	Orleans	LPV	2,000	182	4,000,000
Churchill Farms Pit A	Jefferson	WBV	123	110	1,150,000
Bonnet Carre North	St. Charles	LPV	1,115	680	16,932,000
West Bank G	Jefferson	WBV	82	82	1,800,000
		Total	3678.8	1270.4	26,494,000

LEGEND

HPS Use

LPV: Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project

NOV: New Orleans to Venice Protection Project

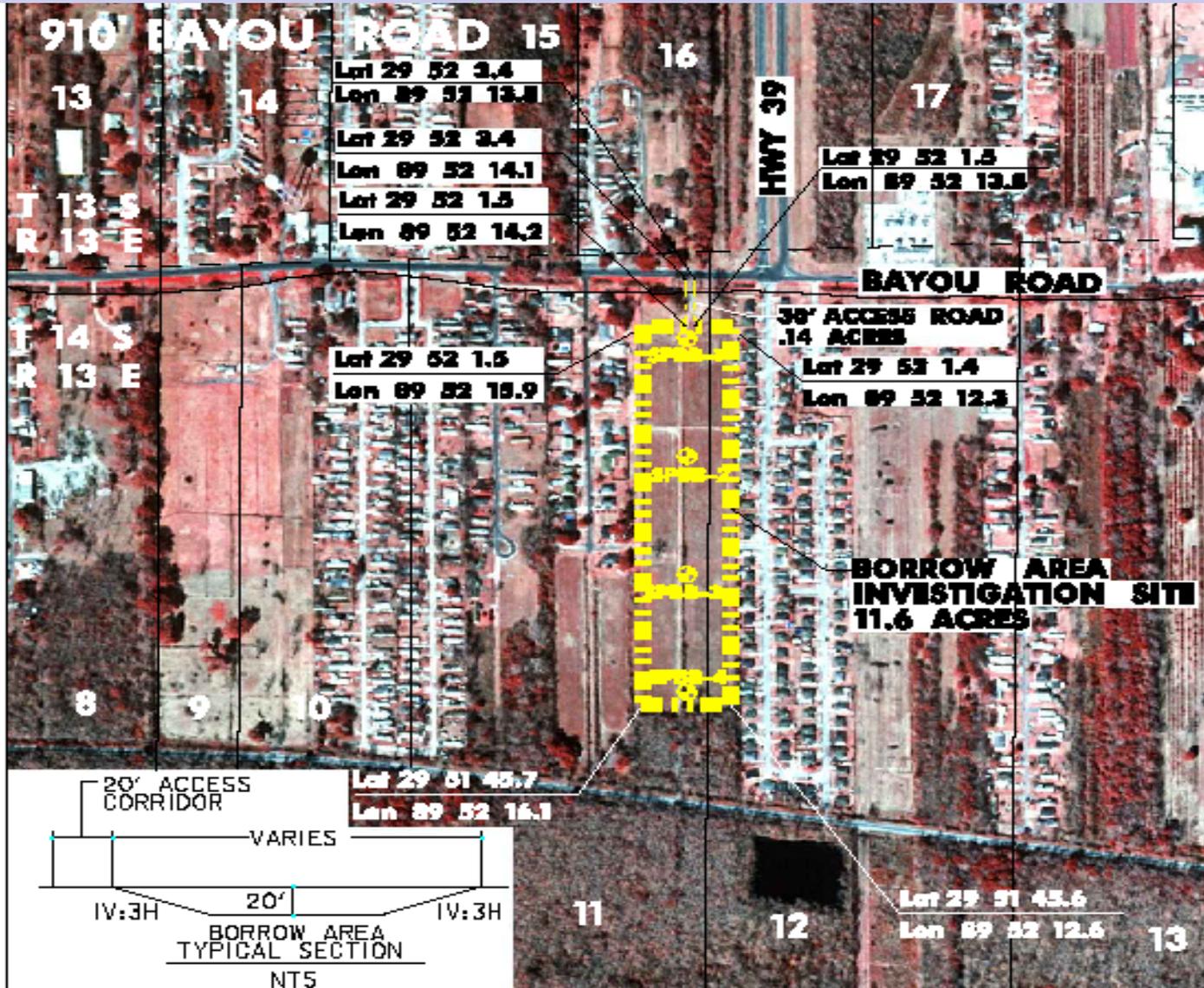
WBV: West Bank and Vicinity Hurricane Protection Project

Size After Avoidance: The total area that will be used. This is the area that avoids jurisdictional wetlands, recognized environmental conditions, cultural resources, and threatened and endangered species or their critical habitat.



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910 Bayou Road



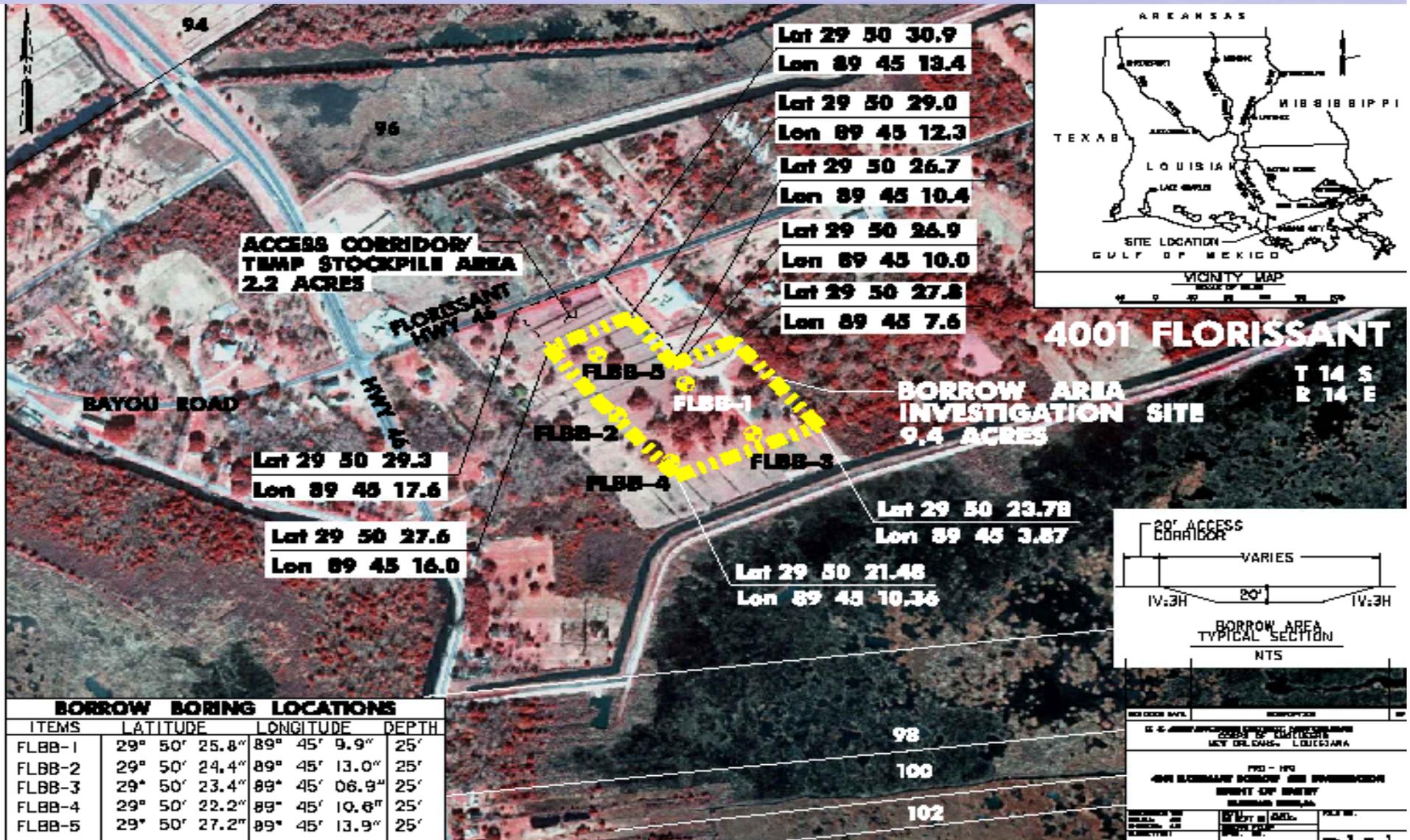
BORROW BORING LOCATIONS				
ITEMS	LATITUDE	LONGITUDE	DEPTH	
SPBB-1	29° 52' 1.0"	89° 52' 14.2"	25'	
SPBB-2	29° 51' 58.0"	89° 52' 14.2"	25'	
SPBB-3	29° 51' 51.1"	89° 52' 14.3"	25'	
SPBB-4	29° 51' 48.2"	89° 52' 14.4"	25'	

U.S. ARMY CORPS OF ENGINEERS DISTRICT OFFICE NEW ORLEANS, LOUISIANA		
PROJECT NO. 170 NEW ORLEANS ROAD JOINT SITE INVESTIGATION REPORT OF BORING BY GEORGE W. WILSON, JR.		
DRAWN BY CHECKED BY DATE	DATE OF FIELD WORK YEAR	PAGE NO. 1 OF 1



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4001 Florissant



NO. OF BORING	NO. OF FEET	NO. OF
4001 FLORISSANT BORROW AREA INVESTIGATION	SPRINT 300 SERIES	
NEW ORLEANS, LOUISIANA		
PROJECT NO. 100 - 100		
SPRINT 300 SERIES		
DATE: 08/01/00	BY: J. J. GIBSON	SCALE: 1" = 1 MILE
PROJECT: 100 - 100	DATE: 08/01/00	SHEET NO. 1 OF 1



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New Orleans District

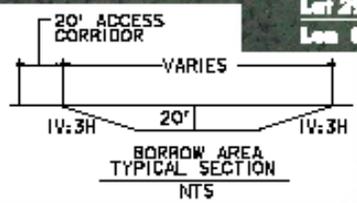
Dockville

BORROW BORING LOCATIONS			
ITEMS	LATITUDE	LONGITUDE	DEPTH
DNEB-1	29° 56' 14.477"	89° 54' 9.872"	25'
DNEB-2	29° 56' 10.820"	89° 54' 9.041"	25'
DNEB-3	29° 56' 7.331"	89° 54' 1.009"	25'
DNEB-4	29° 56' 3.508"	89° 53' 07.378"	25'
DNEB-5	29° 56' 0.647"	89° 53' 53.752"	25'
DNEB-6	29° 55' 18.83"	89° 54' 4.13"	25'
DNEB-7	29° 55' 14.091"	89° 54' 0.775"	25'
DNEB-8	29° 55' 10.434"	89° 53' 58.943"	25'
DNEB-9	29° 55' 8.777"	89° 53' 53.112"	25'
DNEB-10	29° 55' 3.139"	89° 53' 49.301"	25'
DNEB-11			
DNEB-12	29° 55' 17.382"	89° 53' 56.504"	25'
DNEB-13	29° 55' 13.706"	89° 53' 52.677"	25'
DNEB-14	29° 55' 10.040"	89° 53' 48.846"	25'
DNEB-15	29° 55' 6.254"	89° 53' 45.247"	25'
DNEB-16			
DNEB-17	29° 55' 10.52"	89° 53' 51.82"	25'
DNEB-18	29° 55' 16.976"	89° 53' 46.411"	25'
DNEB-19	29° 55' 13.487"	89° 53' 44.380"	25'
DNEB-20	29° 55' 9.037"	89° 53' 40.994"	25'
DNEB-21			
DNEB-22	29° 55' 10.40"	89° 53' 43.97"	25'
DNEB-23	29° 55' 18.591"	89° 53' 40.314"	25'
DNEB-24	29° 55' 12.821"	89° 53' 38.741"	25'
DNEB-25			
DNEB-26			
DNEB-27			
DNEB-28			
DNEB-29	29° 56' 15.278"	89° 53' 35.613"	25'
DNEB-30	29° 56' 14.857"	89° 53' 34.039"	25'

T 13 S
R 13 E



DOCKVILLE

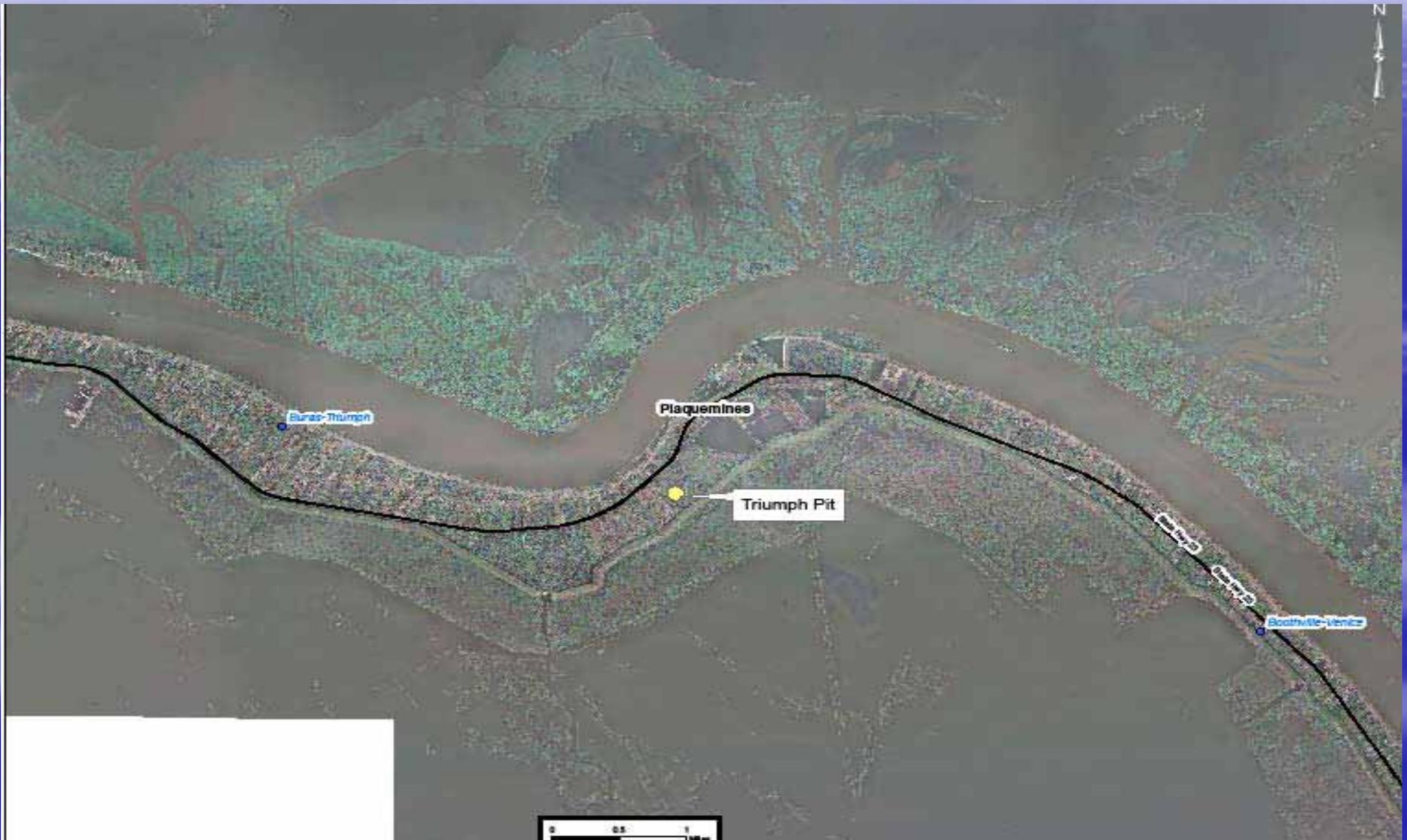


SECTION NO.	REVISION	BY
U.S. ARMY CORPS OF ENGINEERS DISTRICT OFFICE NEW ORLEANS, LOUISIANA		
RD - 190 DOCKVILLE BORROW SITE INSPECTION REPORT OF ENTRY		
DATE	BY	FOR
2007-08-14	J. J. [unclear]	2007-08-14
PROJECT NO.	SCALE	SHEET NO.
100-100-100	AS SHOWN	1 OF 1



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Triumph





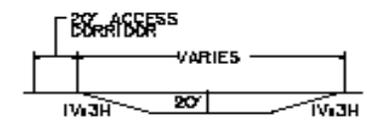
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Maynard



BORROW BORING LOCATIONS

ITEMS	LATITUDE	LONGITUDE	DEPTH
MBBA-11	30° 01' 15.003"	89° 56' 39.090"	25'
MBBA-12	30° 01' 13.157"	89° 56' 35.277"	25'
MBBA-13	30° 01' 10.343"	89° 56' 41.030"	25'
MBBA-14	30° 01' 8.075"	89° 56' 48.966"	25'
MBBA-15	30° 01' 6.277"	89° 56' 38.631"	25'
MBBA-16	30° 01' 5.418"	89° 56' 40.384"	25'
MBBA-17	30° 00' 58.641"	89° 56' 48.099"	25'

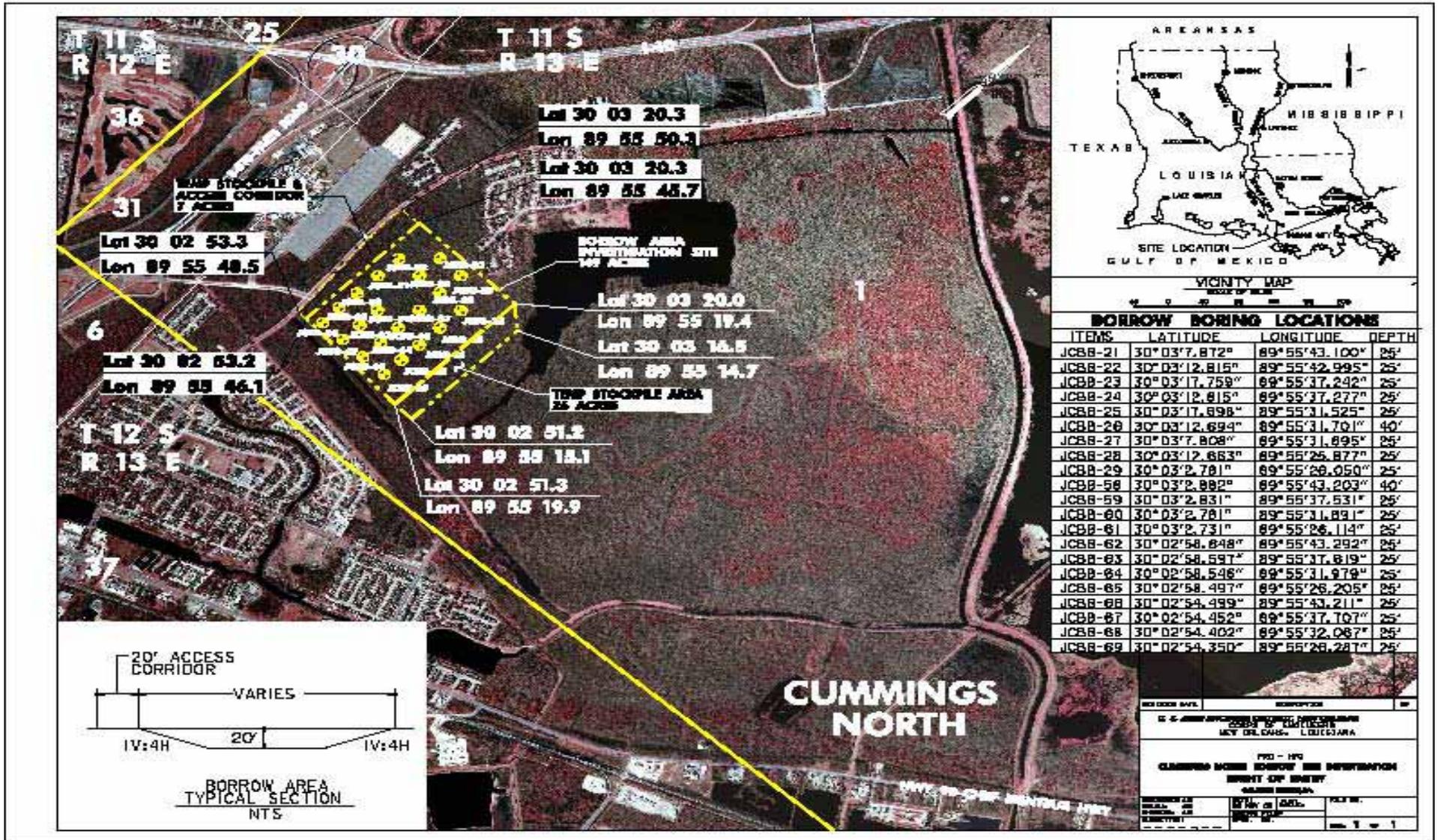


NO.	DATE	DESCRIPTION	BY
ENGINEER U.S. ARMY CORP. OF ENGINEERS NEW ORLEANS DISTRICT CIVIL ENGINEER			
APPROVED FOR CONSTRUCTION MAJOR OF ENGINEERS U.S. ARMY CORP. OF ENGINEERS			
DATE	BY	SCALE	FILE NO.



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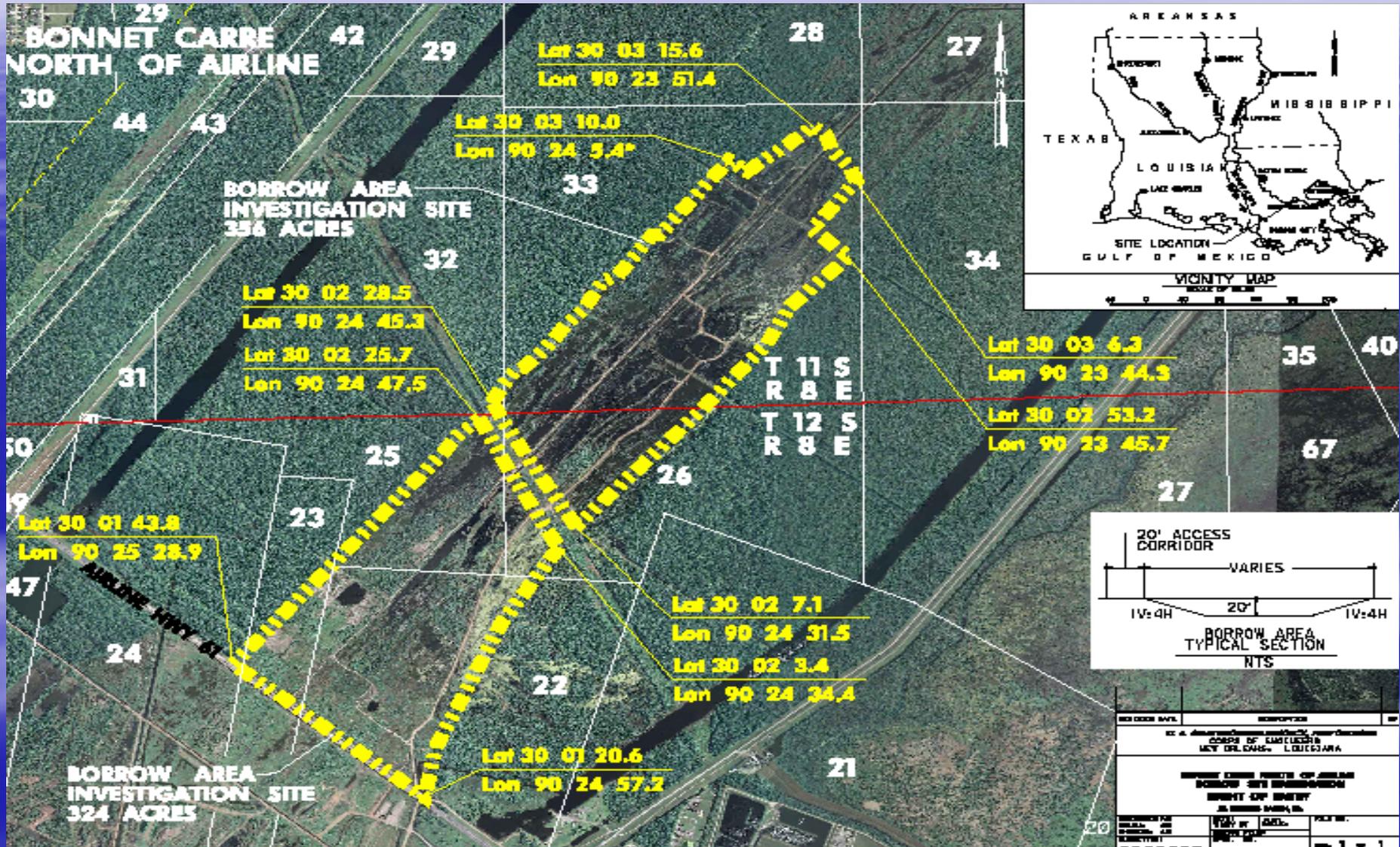
Cummings North





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Bonnet Carre North



NO. ORDER DATE	REVISION	BY
U.S. Army Corps of Engineers DISTRICT OFFICE NEW ORLEANS, LOUISIANA		
PROJECT NAME BORROW AREA INVESTIGATION SITE		
DATE	BY	SCALE
10/1/00	JAC	AS SHOWN
SHEET NO. 1 OF 1		



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Westbank G





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IER 19: Contractor Furnished Borrow



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Contractor Furnished Environmental Process

- Signed right of entry
- Obtained regulatory Wetland Determination
- Obtained Section 10-404 Permit Secondary Use/ Proof of Mitigation
- Secured Coastal Zone Permit/Letter of no objection



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Contractor Furnished Environmental Process

- Received concurrence from U.S. Fish and Wildlife Service
- Coordinated Cultural Resources Report with State Historic Preservation Office & Tribes
- Provided Phase 1 Environmental Site Assessment to ASTM 1527-05



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Contractor Furnished Borrow

	<u>Sites</u>	<u>Estimated Quantity (Cubic yards)</u>
Program Borrow Needs		over 100,000,000 million yards
IER 19 Contractor Furnished Sites Proposed for Borrow	9	8,390,000 (6%)



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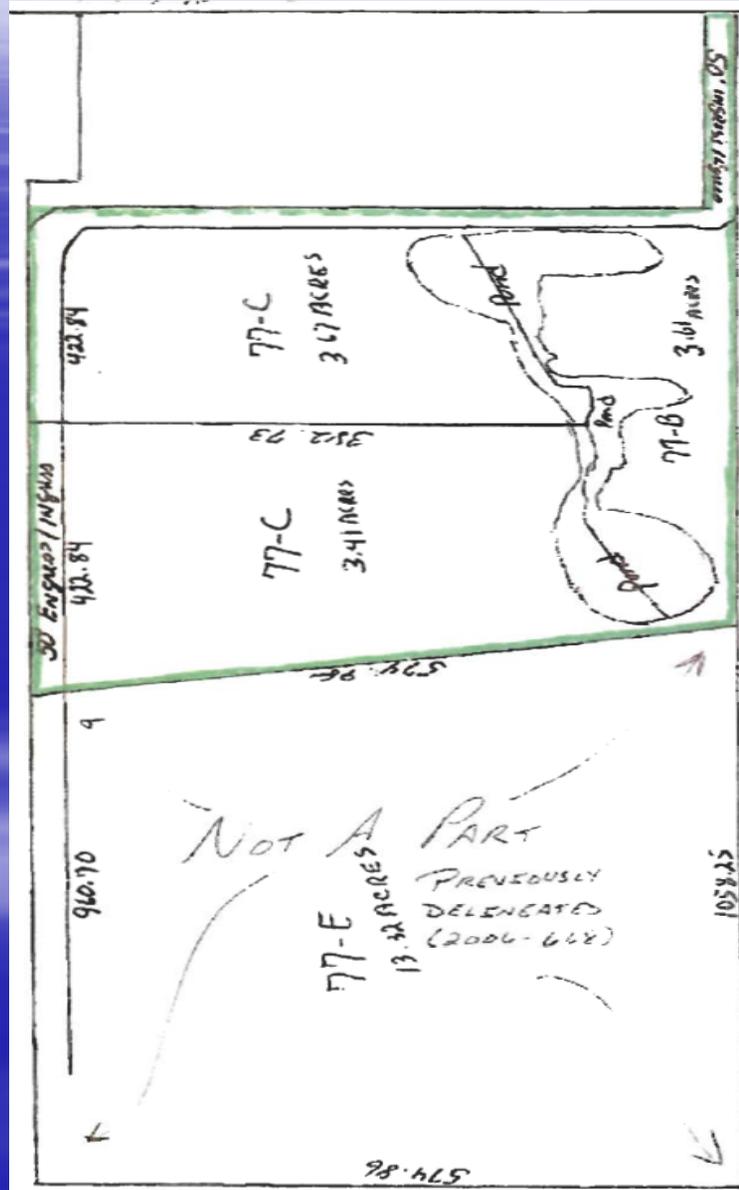
IER 19 Contractor Furnished Sites Proposed for Borrow (9)

Name	Parish	Initial Site Investigated (acres)	Approx. Cubic Yards
Sylvia Guilliot	St. Bernard	10.7	270,000
Gatien Navy Hope	St. Bernard	7.5	200,000
DK Aggregates	St. Bernard	58.5	1,400,000
Kimble #2	Plaquemines	10.4	120,000
River Birch Phase 1	Jefferson	9.7	200,000
River Birch Phase 2	Jefferson	79.4	3,500,000
Pearlington Dirt Phase 1	Mississippi	98	1,000,000
Eastover	Orleans	36.6	900,000
St. Gabriel Redevelopment	Iberville	122.6	800,000



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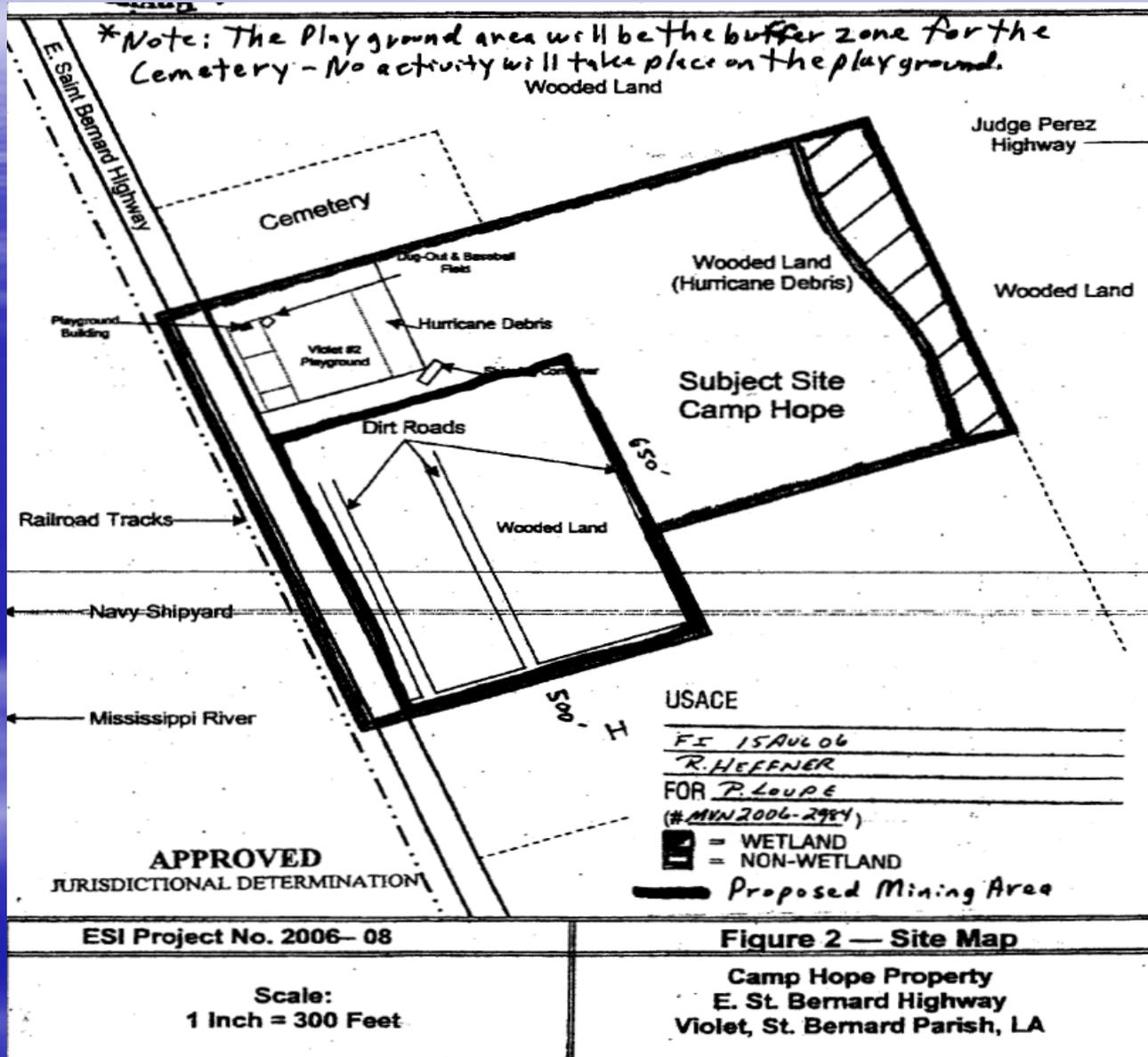
Sylvia Guilliot





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Gatien Navy Camp Hope

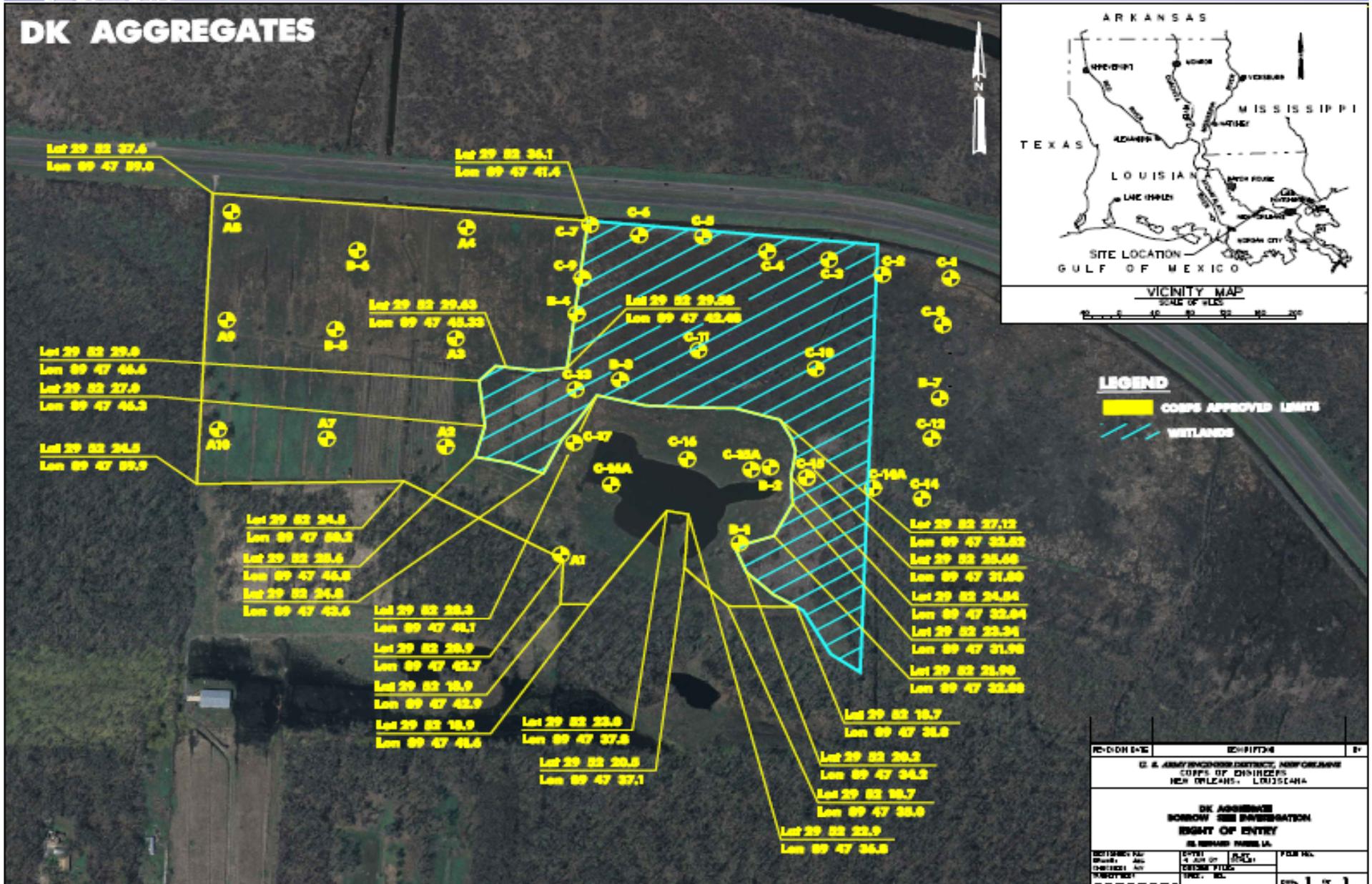




US Army Corps of Engineers

DK Aggregates

DK AGGREGATES

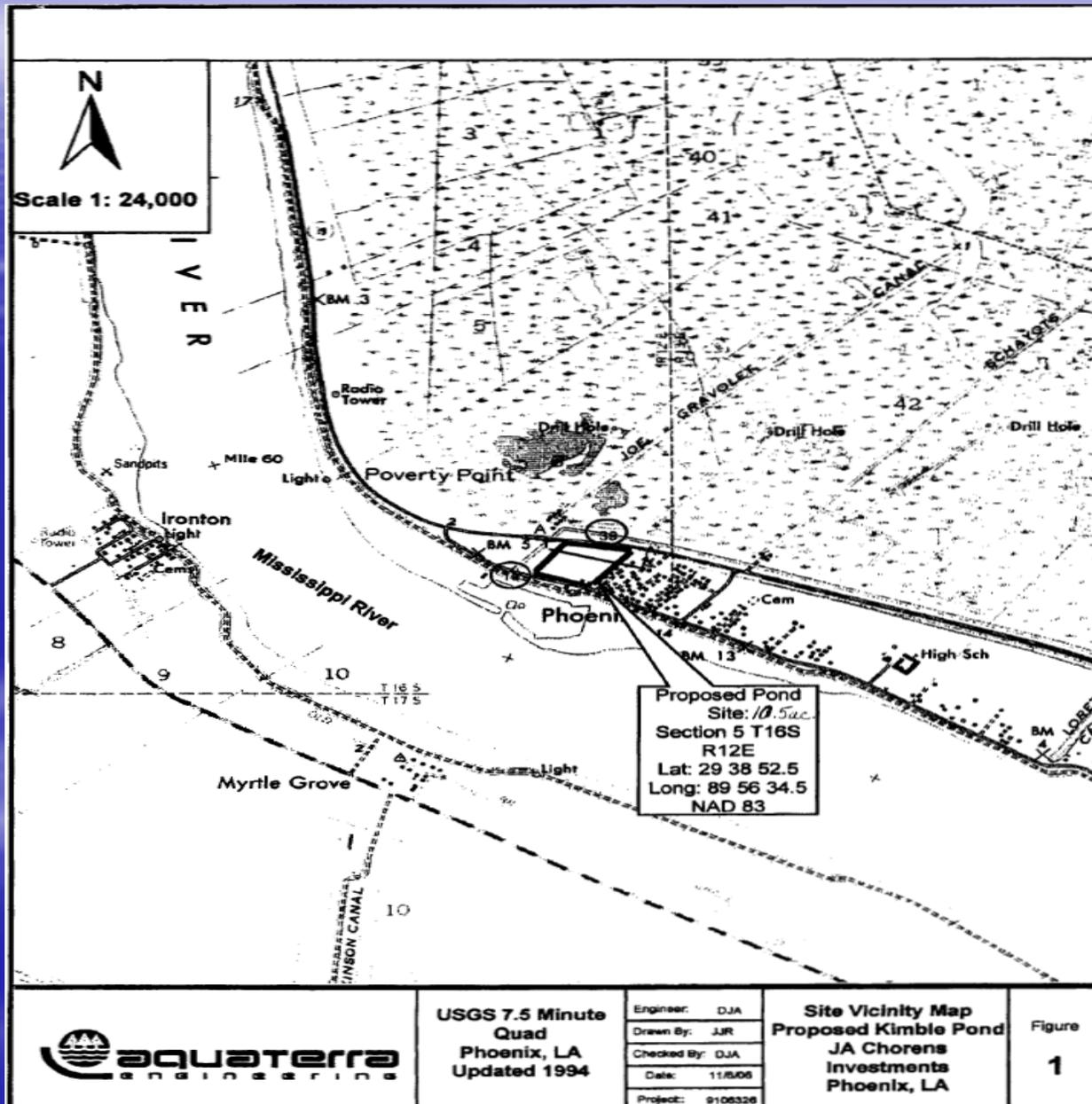


PROJECT NO.	SECTION	DATE
U. S. ARMY ENGINEERING DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA		
DK AGGREGATE BORROW SITE INVESTIGATION RIGHT OF ENTRY 28 89888 8888 1A		
DESIGNED BY	CHECKED BY	DATE
DRAWN BY	SCALE	
PROJECT	TRAC. NO.	SHEET 1 OF 1



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Kimble #2





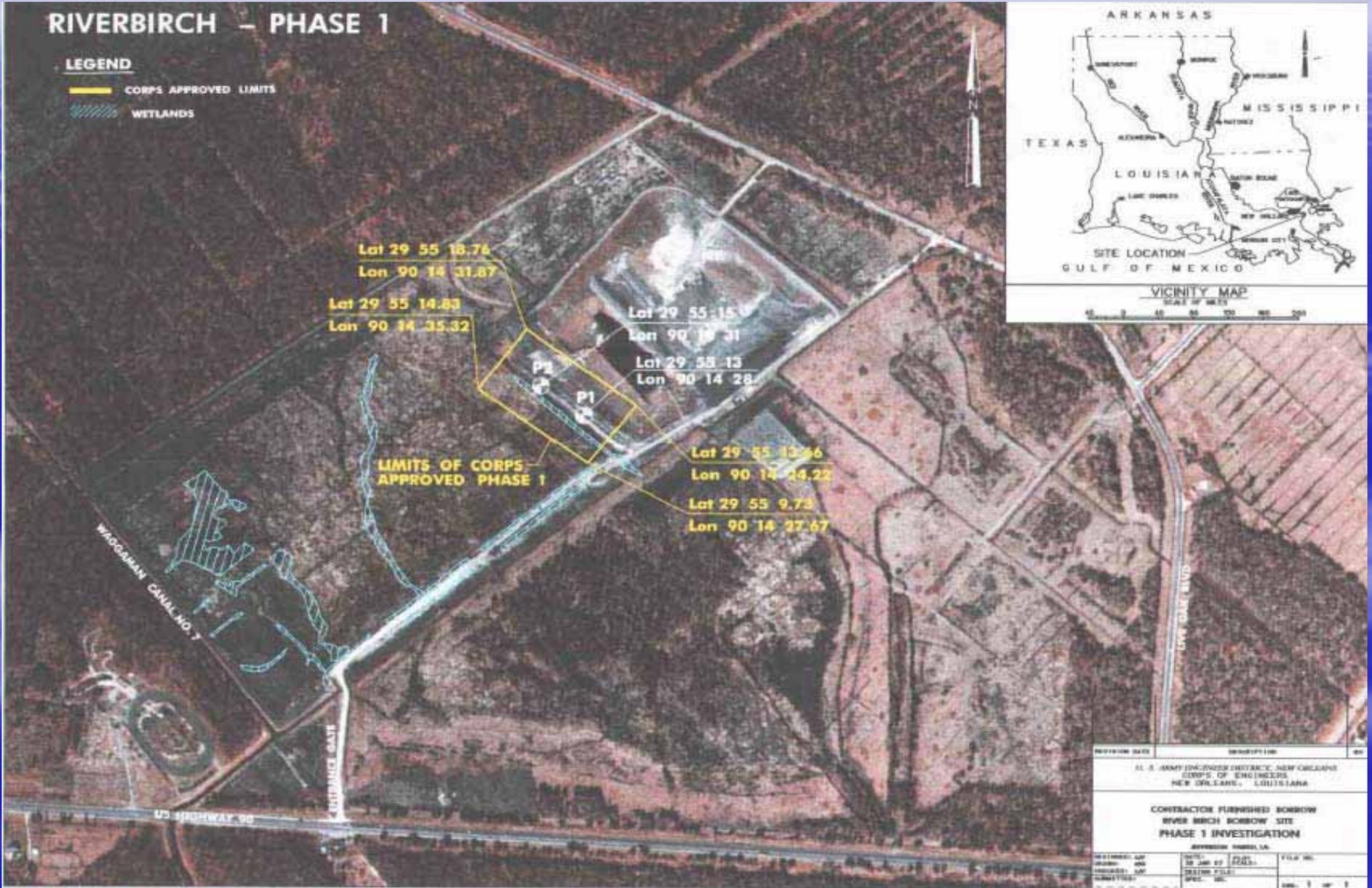
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River Birch Phase 1

RIVERBIRCH - PHASE 1

LEGEND

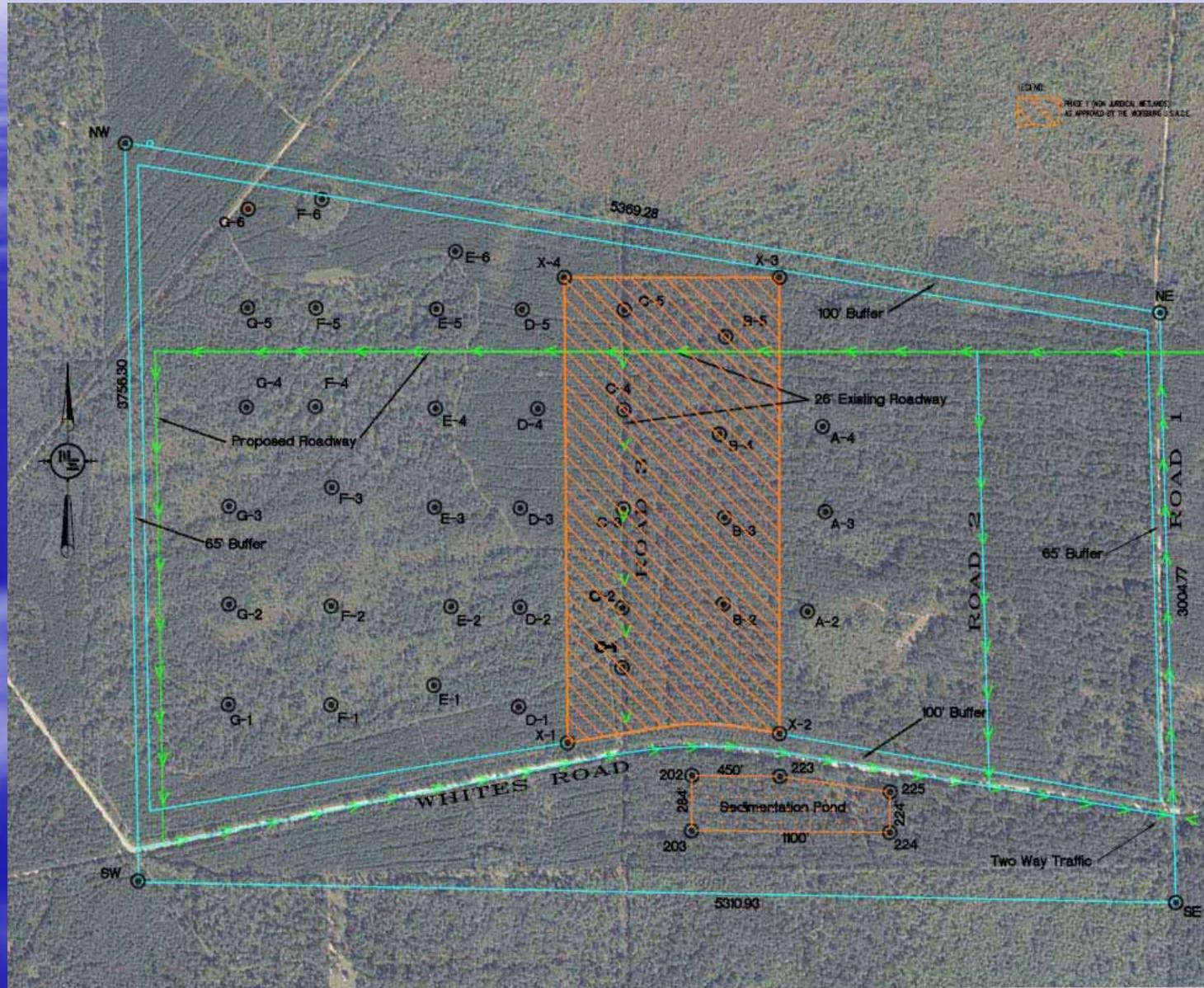
- CORPS APPROVED LIMITS
- WETLANDS





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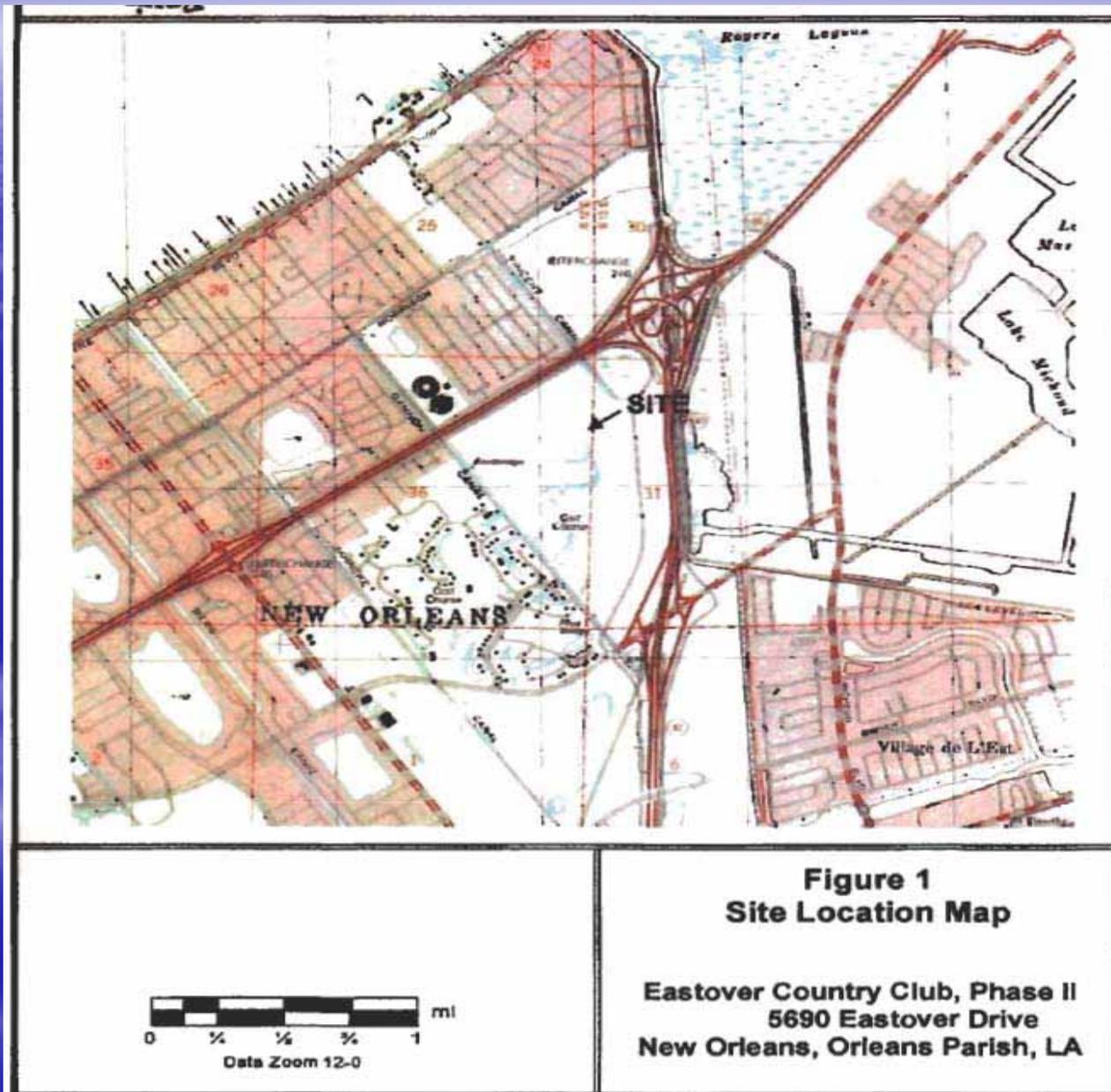
Pearlington Dirt Phase 1





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Eastover





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St. Gabriel Redevelopment



BORROW BORING LOCATIONS			
BORINGS	LATITUDE	LONGITUDE	DEPTH
B-1	30°13'50.94"	91°05'15.90"	35'
B-2	30°13'45.54"	91°05'14.76"	35'
B-3	30°13'49.38"	91°05'21.60"	35'
B-4	30°13'44.58"	91°05'20.82"	35'
B-5	30°13'50.64"	91°05'30.06"	35'
B-7	30°13'41.46"	91°05'25.32"	35'

REVISION DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA		
ST. GABRIEL		
BORROW SITE INVESTIGATION		
IBERVILLE PARISH, LA		
DESIGNER FRANK CHECKED TUBITTEN	DATE 27 JUN 07 SCALE AS SHOWN SHEET NO.	FILE NO. 1 OF 1



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IER 18 and 19 Proposed Borrow Sites by Parish

Parish	Size (acres)	Approx. Cubic Yards
St. Bernard	239	3,804,000
Plaquemines	21	360,000
Orleans	263	5,338,000
Jefferson	200	4,850,000
St. Charles	680	16,932,000
Iberville	122	800,000
Hancock County, MS	98	1,000,000
Total	1623	33,084,000



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IER 22: Government Furnished Borrow #2



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IER 22 Government Furnished #2 Sites Proposed for Borrow (6)

Name	Parish	HPS Use	Initial Site Investigated (acres)	Size After Avoidance	Approx. Cubic Yards
Brad Buras	Plaquemines	NOV	9	9	224,000
Chauvin	Plaquemines	NOV	28	28	872,000
Tabony	Plaquemines	NOV	171	171	3,735,000
Westbank F	Jefferson	WBV	155	152	3,962,000
Westbank I	Jefferson	WBV	79	33	806,000
Westbank N	Jefferson	WBV	145	69	1,949,000
		Total	587	462	11,548,000



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IER 23: Contractor Furnished Borrow #2



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IER 23 Contractor Furnished #2 Sites Proposed for Borrow (5)

Name	Parish	HPS Use	Initial Site Investigated (acres)	Approx. Cubic Yards
Acosta	St. Bernard	LPV	29	1,000,000
1025 Florissant	St. Bernard	LPV	3	100,000
3C Riverside	St. Charles	WBV	258	6,000,000
Myrtle Grove	Plaquemines	NOV	271	6,750,000
Pearlington Dirt Phase 2	Hancock County, MS	LPV	110	2,500,000
		Total	671	16,350,000



US Army Corps
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New Orleans District

Opportunities for Public Input

- Monthly Public Meetings throughout New Orleans Metro 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
- Individual Environmental Reports (IER) 30-day Public Review

Questions and comments regarding Hurricane Protection Projects

should be addressed to:

Gib Owen

PM-RS

P.O. Box 60267

New Orleans, LA 70160-0267

Phone: 504-862-1337

E-mail: mvnenvironmental@usace.army.mil



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New Orleans District

NOLA
Environmental

NEW ORLEANS, LOUISIANA
Environmental Compliance Data Bank



www.nolaenvironmental.gov

PROJECTS

MEETINGS

LIBRARY

DATA VIEWER

GET INVOLVED

RELATED LINKS



Environmental Processes and NEPA Compliance

[What is NEPA?](#)

FEATURED PROJECT



USACE-MVN Emergency Alternative Arrangements
West Bank & Vicinity & Lake Pontchartrain & Vicinity
Hurricane Protection Projects

[USACE NEPA Questions & Answers](#)

[USACE Alternative Arrangements NEPA Process](#)

[USACE Alternative Arrangements NEPA Process Appendix](#)

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 Protection 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). This process was implemented in order to expeditiously complete environmental analysis for the 100-year level of Hurricane and Storm Damage Reduction effort authorized and funded by the Administration and the Congress. The proposed actions are located in southern Louisiana area and relate to the Federal effort to rebuild the Hurricane and Storm Damage Reduction system in the New Orleans Metropolitan area as a result of Hurricanes Katrina and Rita. [\(Learn More\)](#)

[IER 18 Government Furnished Borrow Draft Report](#) Public [Comment](#) Period: Oct. 28, 2007 - Dec. 04, 2007

[IER 19 Contractor Furnished Borrow Draft Report](#) Public [Comment](#) Period: Nov. 2, 2007 - Dec. 6, 2007

UPCOMING EVENTS: [Public Meetings](#)

Nov. 29, 2007 7:00 - 9:00 pm (Open House: 6:00 - 7:00 pm), Orleans East Bank (IER 5)

Dec. 06, 2007 7:00 - 9:00 pm (Open House: 6:00 - 7:00 pm), St. Charles (IER 1, 2, 3)

Dec. 11, 2007 7:00 - 9:00 pm (Open House: 6:00 - 7:00 pm), Environmental Justice





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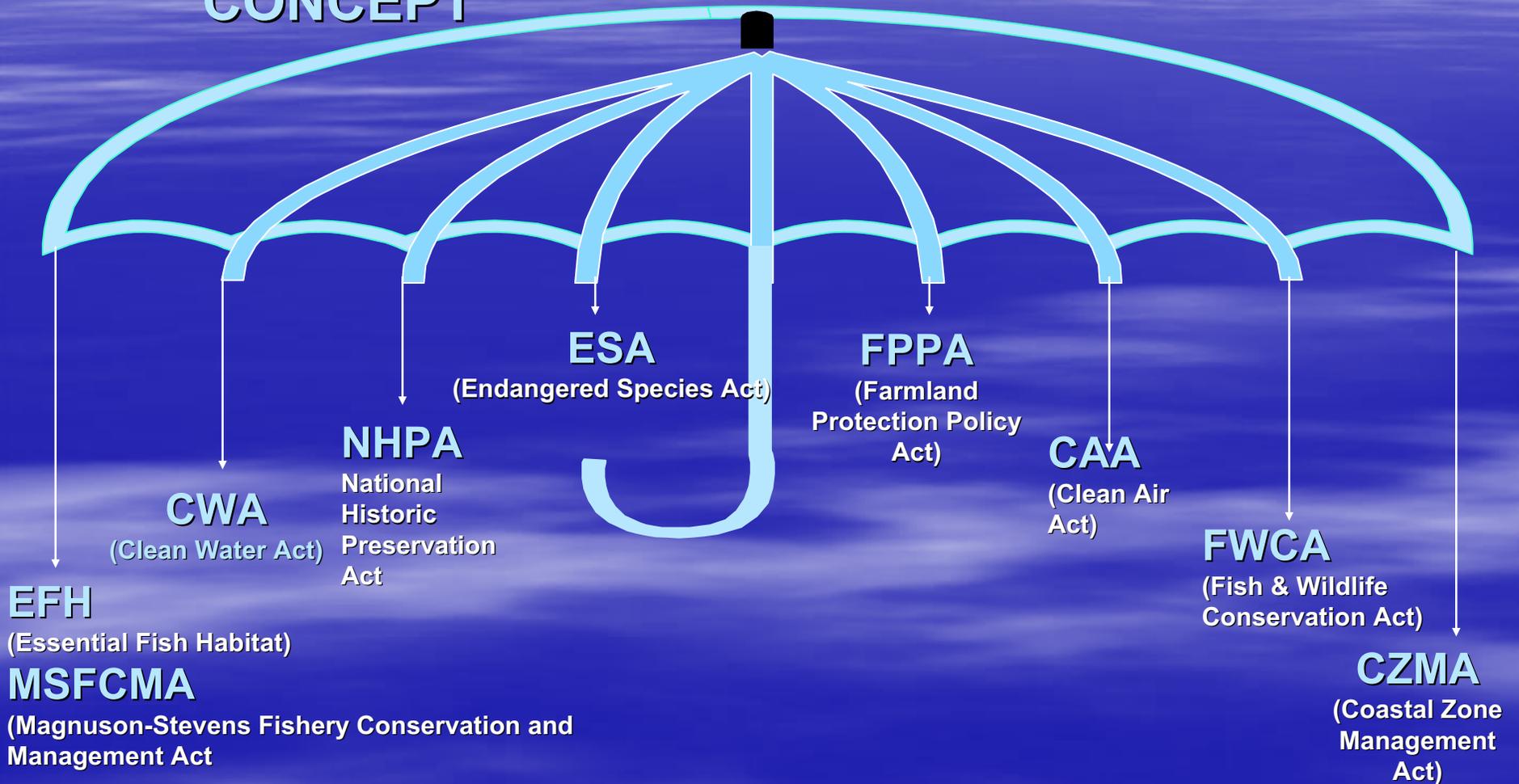




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National Environmental Policy Act (NEPA)

OVERARCHING CONCEPT



One Team: Relevant, Ready, Responsive, Reliable



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National Environmental Policy Act (NEPA)

Impact Analysis

- Direct Impacts
- Indirect Impacts
- Cumulative Impacts



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U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

PUBLIC MEETING LEVEE BORROW MATERIAL

GEOTECHNICAL DISCUSSION



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WHAT IS LEVEE BORROW?



- Levee borrow is any soil taken from one place and used to construct a new earthen levee.
- A borrow pit is the “hole” dug during the process of excavating the borrow soil.
- For New Orleans area levees, this material must be classified as **CLAY**.



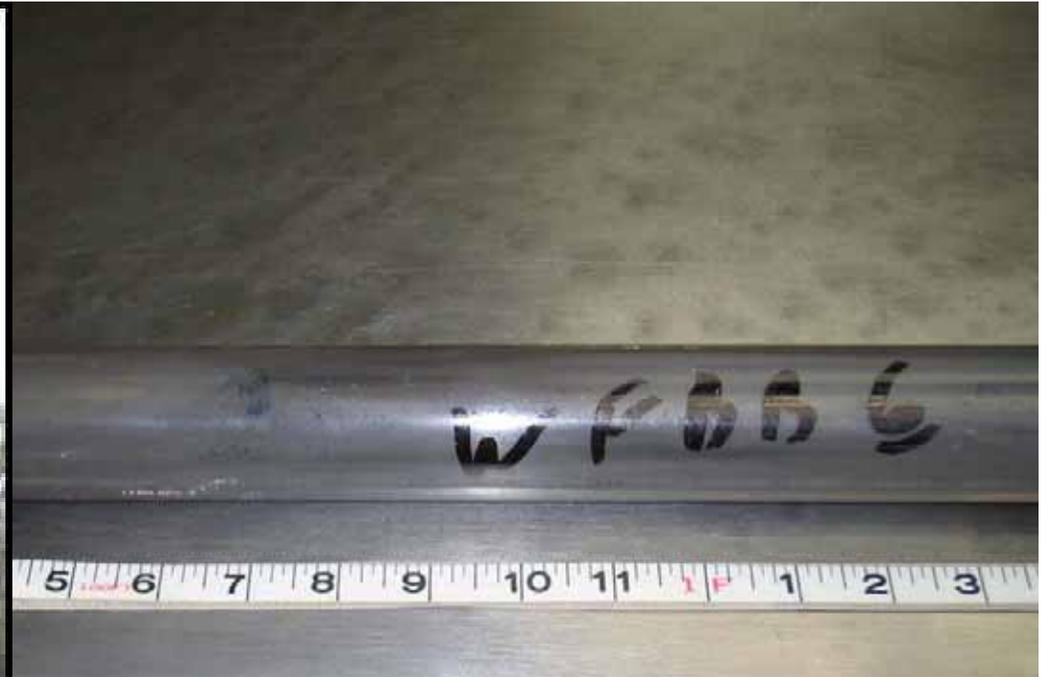
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HOW ARE BORROW SITES SELECTED?

- Proximity to new levee location
- Utilization of site specific borrow borings
 - Spaced every 500 ft, Typically 25-30 ft deep
 - Utilize geoprobes (1 1/4" diameter)
- Adequate engineering properties determined from lab testing of borings
 - Soil classification (clay vs silt or sand)
 - Moisture content
 - Atterberg limits
 - Organic content
 - Sand content
- Amount of acceptable soil in the borrow site
- Depth of acceptable soil in the borrow site
- Environmental concerns
 - HTRW
 - Wetlands









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TYPICAL BORROW PIT INVESTIGATION RESULTS





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TYPICAL BORING LOG FROM APPROVED SITE

Organic Content			<u>w%</u>	<u>PI</u>
43%		So, Ox	103	80
28%		SIS, vSo, Wd, O	75	
		CS, Ox	98	
		vSo, Ox, cc	95	
		vSo, cc	53	
		vSo, cc	67	
5.9%		SIS	75	52
		vSo, Ox, sIf	59	
		vSo, Ox	70	
		CS, sIf	80	
		vSo	74	
		vSo, Ox	73	
6.9%	SIS	76	64	
	vSo			

- High Organic Content Only In Upper 5 feet
- Unsuitable Material Can Be Wasted
- Few Areas of Silts
- Little Objectionable Material Below Top 5 feet.



TYPICAL BORING LOG FROM DISAPPROVED SITE

Organic Content		<u>w%</u>	<u>PI</u>
73.5%	GROUND EL.  St, SIS, rt, Wd	197	
8.5%	 So, Ox	86	
9.8%	 vSo, Ox, rt	60	
	 SIS, vSo	64	
57.5%	 SIS, vSo, Wd, rt	366	
24.1%	 SIS, vSo, Ox, Wd, rt	210	
6.8%	 vSo, rt, cc	56	31
	 vSo, O	181	
8.5%	 vSo, cc, sl f	75	47
10.2%	 SIS, vSo, Wd	92	
	 SIS, vSo, cc	62	30
	 O, vSo, SIS	115	
7.5%	 SIS, vSo, Wd	85	

- High Organic Content Throughout Boring
- Areas of Silts
- No Samples
- Objectionable Material Throughout Boring



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ENGINEERING DURING CONSTRUCTION

- Contractor's QC includes In-Place Testing (Conducted every 1,500 cubic yards of placed soil per 12 inch lift)
 - Classification
 - Moisture Content (must be within +5 to -3% of optimum)
 - Organic Content
 - Sand Content
 - Density (requirement – 90% Standard Proctor Density)
- Post-Construction borings will be taken to verify that construction procedures validate design assumptions and meet project specifications
- Under the Government Quality Assurance (QA), the Government performs periodic field and lab tests to document the Contractor QC findings. If any discrepancies are found, corrective action is taken to meet the contract specifications.